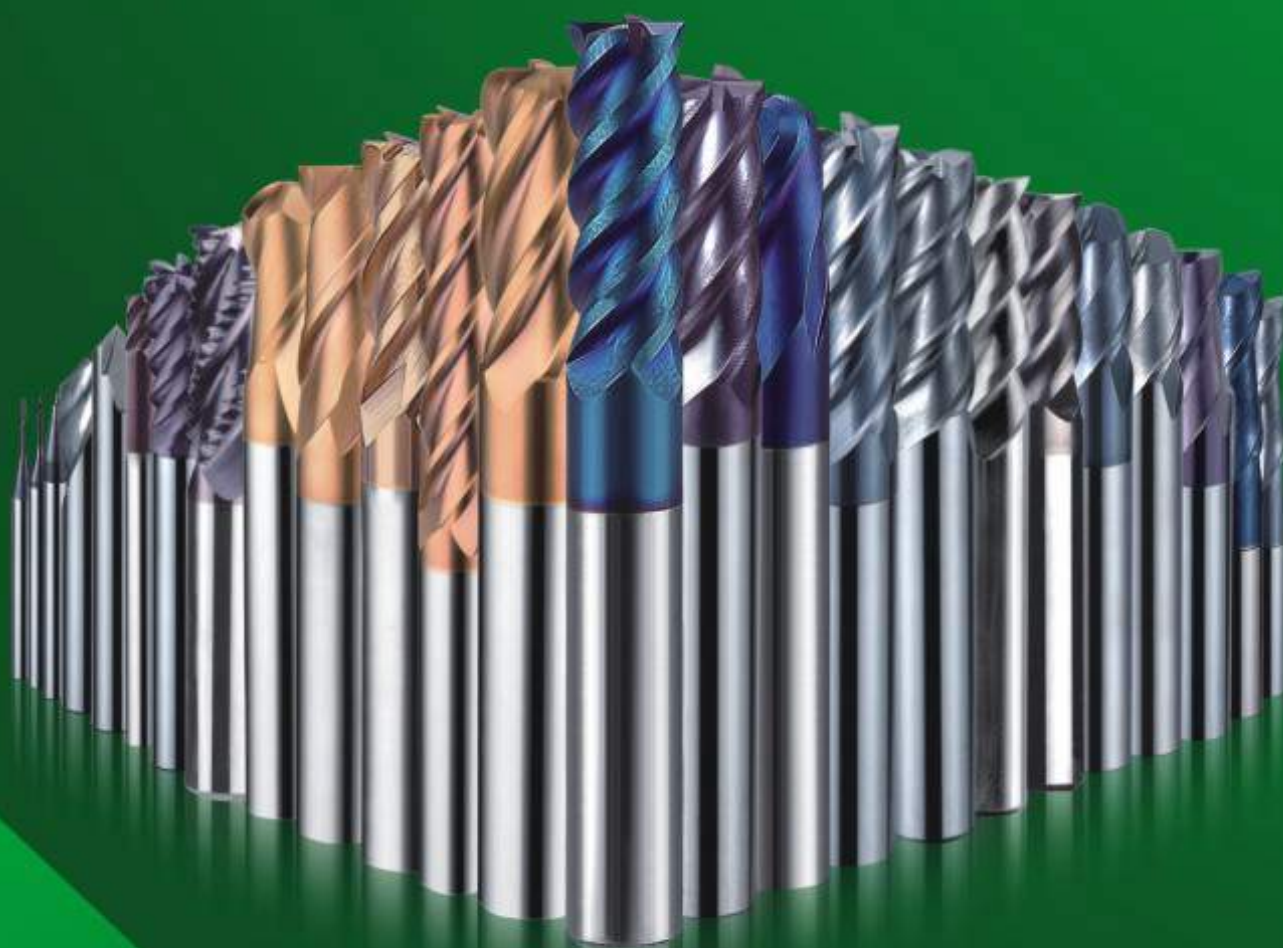


SUKEN

东莞市速肯五金科技有限公司

DONGGUAN SUKEN PRECISION TOOL TECHNOLOGY CO.,LTD



2017~2019

Tungsten carbide end mill

钨钢切削刀具



DONGGUAN
SUKEN
PRECISION TOOL TECHNOLOGY CO.,LTD

东莞市速肯五金科技有限公司



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SE550超微粒碳化錳鋼二刃立銑刀

SE550-X Tungsten carbide square end mill with 2 flutes



SE550-X-2 series

SE550-X-2系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE550-2010	1	3	50	4/6
SE550-2015	1.5	4.5	50	4/6
SE550-2020	2	6	50	4/6
SE550-2025	2.5	7.5	50	4/6
SE550-2030	3	9	50	3/4/6
SE550-2035	3.5	10.5	50	4/6
SE550-2040	4	12	50	4/6
SE550-2050	5	15	50	5/6
SE550-2060	6	18	50	6
SE550-2080	8	24	60	8
SE550-2100	10	30	75	10
SE550-2120	12	36	75	12
SE550-2140	14	40	100	14
SE550-2160	16	45	100	16
SE550-2200	20	45	100	20



Co
10%

Wc
90%

Dia
0.6 μm

SE550-X-2 Longer shank series

SE550L-X-2長柄系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE550L-2040A	4	16	75	4
SE550L-2040B	4	16	100	4
SE550L-2060A	6	24	75	6
SE550L-2060B	6	24	100	6
SE550L-2080	8	32	100	8
SE550L-2100	10	40	100	10
SE550L-2120	12	48	100	12
SE550L-2140	14	50	150	14
SE550L-2160	16	60	150	16
SE550L-2200	20	60	150	20



產品特點:

1. 適用於加工材質硬度低於HRC55 ° 的碳素鋼，合金鋼，不銹鋼，鈦合金
2. 刀刃光滑，排屑順暢，加工高效
3. 精度佳，刀具壽命長

Product Feature:

1. Suitable for machining material hardness less than HRC55 ° , such as carbon steel, alloy steel, stainless steel, titanium alloy steel.
2. Sharp cutting edge with smooth metal evacuation ensures high efficiency machining.
3. High precision with longer life

注：柄徑4/6 所對應的下單編號如：SE550-2010-4 SE550-2010-6



SE550-X-4 series

SE550-X-4系列

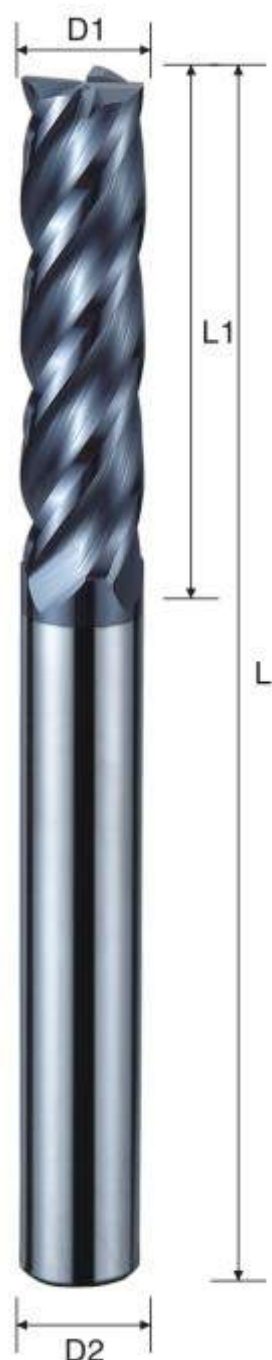


產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE550-4010	1	3	50	4/6
SE550-4015	1.5	4.5	50	4/6
SE550-4020	2	6	50	4/6
SE550-4025	2.5	7.5	50	4/6
SE550-4030	3	9	50	3/4/6
SE550-4035	3.5	10.5	50	4/6
SE550-4040	4	12	50	4/6
SE550-4050	5	15	50	5/6
SE550-4060	6	18	50	6
SE550-4080	8	24	60	8
SE550-4100	10	30	75	10
SE550-4120	12	36	75	12
SE550-4140	14	40	100	14
SE550-4160	16	45	100	16
SE550-4200	20	45	100	20

Co
10%

Wc
90%

Dia
0.06 μm



SE550-X Longer shank series

SE550L-X-4長柄系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE550L-4040A	4	16	75	4
SE550L-4040B	4	16	100	4
SE550L-4060A	6	24	75	6
SE550L-4060B	6	24	100	6
SE550L-4080	8	32	100	8
SE550L-4100	10	40	100	10
SE550L-4120	12	48	100	12
SE550L-4140	14	50	150	14
SE550L-4160	16	60	150	16
SE550L-4200	20	60	150	20

產品特點:

1. 適用於加工材質硬度低於HRC55 ° 的碳素鋼，合金鋼，不銹鋼，鈦合金
2. 刀刃光滑，排屑順暢，加工高效
3. 精度佳，刀具壽命長

Product Feature:

1. Suitable for machining material hardness less than HRC55 ° , such as carbon steel, alloy steel, stainless steel, titanium alloy steel.
2. Sharp cutting edge with smooth metal evacuation ensures high efficiency machining.
3. High precision with longer life

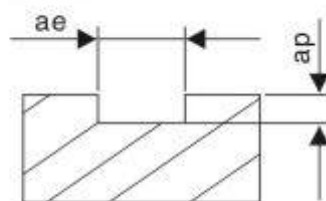
注：柄徑4/6 所對應的下單編號如：SE550-4010-4 SE550-4010-6

SE550-X Tungsten carbide square end mill

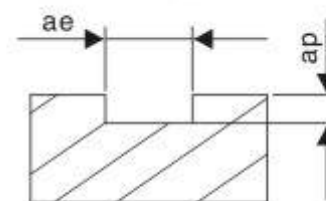
SE550-X超微粒碳化鎢鋼立銑刀

被切材料 processed material	碳素鋼、合金鋼 工具鋼、模具鋼 carbon steel, alloy steel tool steel, mold steel		合金鋼、工具鋼 模具鋼、熱處理鋼 alloy steel, tool steel, mold steel, heat-treated steel		合金鋼、工具鋼、不銹鋼 模具鋼、熱處理鋼 alloy steel, tool steel, stainless steel mold steel, heat-treated steel		熱處理鋼 鈦合金 heat-treated steel titanium alloy steel		熱處理鋼 耐熱合金、鎳基合金 heat-treated steel Ni based alloy	
被切材料硬度 material hardness	HRC30度以下		HRC30-35度		HRC35-40度		HRC40-45度		HRC45-50度	
切削速度Vc cutting speed Vc	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min
D1.0	20000	0.002	12500	0.002	11500	0.002	10000	0.002	4200	0.002
D2.0	12500	0.005	7500	0.005	6700	0.005	6000	0.005	2500	0.005
D3.0	9600	0.008	5900	0.008	5200	0.008	5000	0.008	2000	0.008
D4.0	8300	0.013	5000	0.013	4500	0.013	3900	0.013	1700	0.013
D5.0	7400	0.018	4500	0.018	4100	0.018	3600	0.018	1500	0.018
D6.0	6900	0.024	4200	0.024	3800	0.024	3300	0.024	1400	0.024
D8.0	5200	0.032	3200	0.032	2900	0.032	2500	0.032	1100	0.032
D10.0	4200	0.04	2500	0.04	2300	0.04	2000	0.04	900	0.04
D12.0	3400	0.05	2100	0.05	1900	0.05	1700	0.05	700	0.05
D16.0	2600	0.05	1600	0.05	1500	0.05	1300	0.05	550	0.05
D18.0	2300	0.05	1450	0.05	1300	0.05	1200	0.05	500	0.05
D20.0	2100	0.05	1250	0.05	1200	0.05	1000	0.05	450	0.05

最大切削量



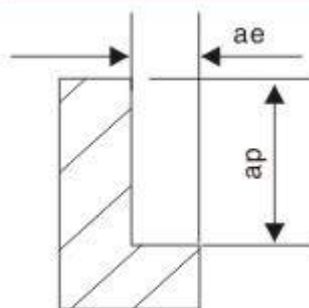
ae=3.0mm以下時, ap=0.15D以下
ae=3.0mm以上時, ap=0.25D以下



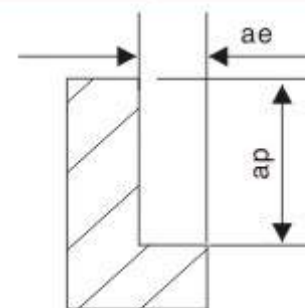
ae=3.0mm以下時, ap=0.05D以下
ae=3.0mm以上時, ap=0.10D以下

立銑刀刀徑 mm	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min
D1.0	20000	0.0025	12500	0.0025	11500	0.0025	10000	0.0025	4200	0.0025
D2.0	12500	0.006	7500	0.006	6700	0.006	6000	0.006	2500	0.006
D3.0	9600	0.01	5900	0.01	5200	0.01	5000	0.01	2000	0.01
D4.0	8300	0.016	5000	0.016	4500	0.016	3900	0.016	1700	0.016
D5.0	7400	0.022	4500	0.022	4100	0.022	3600	0.022	1500	0.022
D6.0	6900	0.03	4200	0.03	3800	0.03	3300	0.03	1400	0.03
D8.0	5200	0.04	3200	0.04	2900	0.04	2500	0.04	1100	0.04
D10.0	4200	0.05	2500	0.05	2300	0.05	2000	0.05	900	0.05
D12.0	3400	0.06	2100	0.06	1900	0.06	1700	0.06	700	0.06
D16.0	2600	0.06	1600	0.06	1500	0.06	1300	0.06	550	0.06
D18.0	2400	0.06	1450	0.06	1300	0.06	1200	0.06	500	0.06
D20.0	2100	0.06	1250	0.06	1200	0.06	1000	0.06	450	0.06

最大切削量



ap=1.5D以下時, ae=0.05D以下



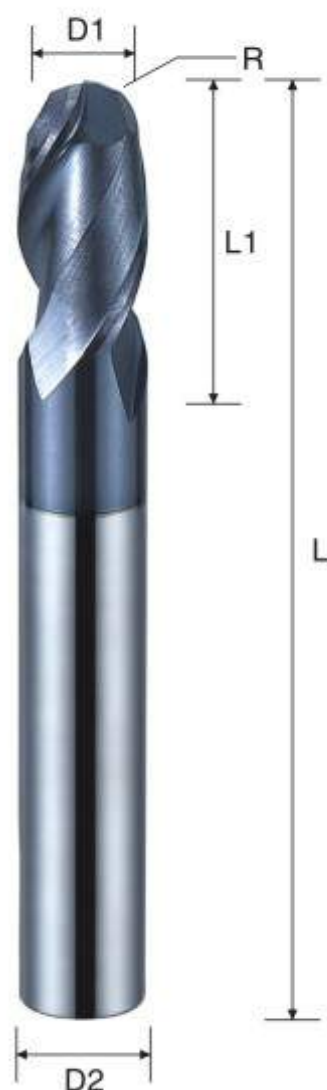
ap=1.5D以下時, ae=0.05D以下

初次使用本刀具時，進給速度依上述數據之50%試刀削，切削狀況穩定后再將切削速度、進給量逐一調升。

The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.

請採用高精度高剛性與動態平衡較佳的夾組，刀具偏擺精度超過0.01mm時，請改善后再切削。

Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.



SEB550-X series

SEB550-X-2球刀系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SEB550-2005	0.5R	2	50	4/6
SEB550-20075	0.75R	3	50	4/6
SEB550-2010	1R	4	50	4/6
SEB550-20125	1.25R	5	50	4/6
SEB550-2015	1.5R	6	50	3/4/6
SEB550-2020	2R	8	50	4/6
SEB550-2025	2.5R	10	50	5/6
SEB550-2030	3R	12	50	6
SEB550-2035	3.5R	14	60	8
SEB550-2040	4R	16	60	8
SEB550-2050	5R	20	75	10
SEB550-2060	6R	24	75	12

Co
10%

Wc
90%

Dia
0.06 μm



SEB550L-X Longer shank series

SEB550L-X-2球刀長柄系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SEB550L-2010	1R	5	75	4/6
SEB550L-2015	1.5R	7.5	75	4/6
SEB550L-2020	2R	10	75	4/6
SEB550L-2025	2.5R	12.5	75	5/6
SEB550L-2030	3R	15	100	6
SEB550L-2040	4R	20	100	8
SEB550L-2050	5R	25	100	10
SEB550L-2060	6R	30	100	12

產品特點:

1. 適用於加工材質硬度低於HRC55 ° 的碳素鋼，合金鋼，不銹鋼，鈦合金
2. 刀刃光滑，排屑順暢，加工高效
3. 精度佳，刀具壽命長

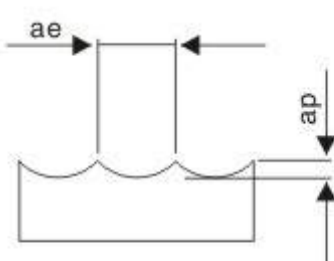
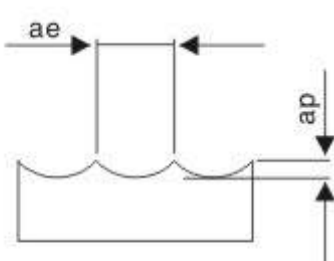
Product Feature:

1. Suitable for machining material hardness less than HRC55 ° , such as carbon steel, alloy steel, stainless steel, titanium alloy steel.
2. Sharp cutting edge with smooth metal evacuation ensures high efficiency machining.
3. High precision with longer life

注：柄徑4/6 所對應的下單編號如：SEB550-2005-4 SEB550-2005-6

SEB550-X Tungsten carbide ball end mill with 2 flutes

SEB550-X超微粒碳化鎢鋼球形銑刀

被切材料 processed material	碳素鋼、合金鋼、工具鋼 carbon steel, alloy steel, tool steel				合金鋼、工具鋼、不銹鋼、熱處理鋼 alloy steel, tool steel, stainless steel, heat-treated steel				熱處理鋼 heat-treated steel			
被切材料硬度 material hardness	HRC30度以下				HRC35-45度				HRC45-50度			
立銑刀R徑	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min	轉速 轉/分 rpm/min	進給 mm/齒 feeding/min
R0.5	45000	0.01	31000	0.01	35700	0.008	25000	0.008	19000	0.006	13300	0.006
R1.0	22000	0.02	15500	0.02	17800	0.016	12500	0.016	9500	0.011	6600	0.011
R1.5	15000	0.03	10600	0.03	12100	0.024	8500	0.024	6400	0.016	4500	0.016
R2.0	11400	0.04	8000	0.04	9100	0.035	6400	0.035	4800	0.028	3400	0.028
R2.5	9100	0.05	6400	0.05	7100	0.045	5000	0.045	3800	0.038	2700	0.038
R3.0	7600	0.06	5300	0.06	6000	0.056	4200	0.056	3200	0.047	2200	0.047
R4.0	5700	0.1	4000	0.1	4600	0.086	3200	0.086	2300	0.07	1600	0.07
R5.0	4600	0.12	3200	0.12	3600	0.1	2500	0.1	1900	0.087	1300	0.087
R6.0	3900	0.13	2700	0.13	3000	0.12	2100	0.12	1600	0.097	1100	0.097
最大切削量	 ap=0.06R以下 粗銑切削時，H=0.2R以下，P=0.5R以下 ae=3.0mm以上時，ap=0.25D以下								 ap=0.05D以下 ap=0.10D以下			

初次使用本刀具時，進給速度依上述數據之50%試刀削，切削狀況穩定后再將切削速度、進給量逐一調升。

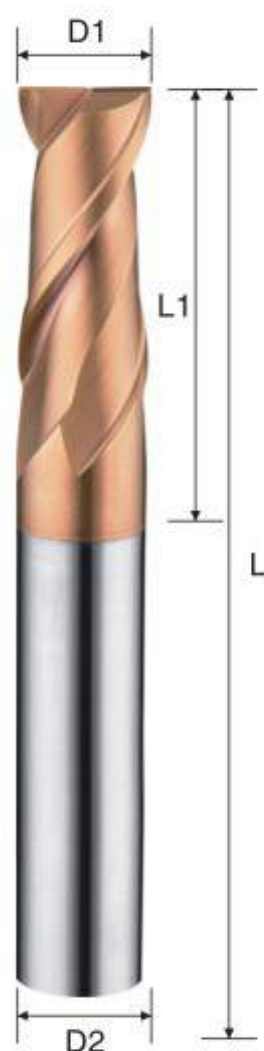
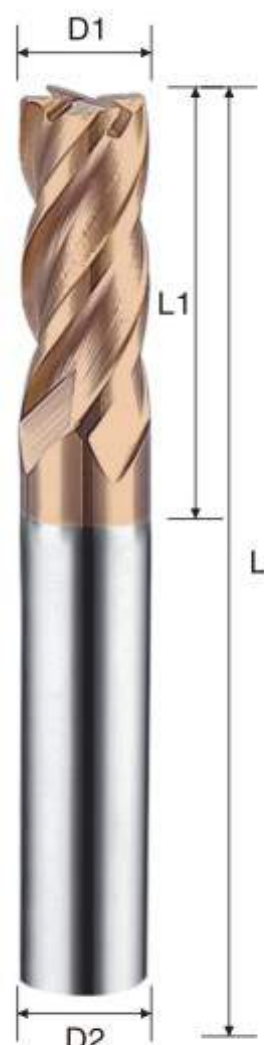
The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.

請採用高精度高剛性與動態平衡較佳的夾組，刀具偏擺精度超過0.01mm時，請改善后再切削。

Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.

WF550L-2-4 series

WF550-2-4系列



Co
12%

Wc
88%

Dia
0.4 μm

產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
WF550-2010	1	3	50	4
WF550-2015	1.5	4	50	4
WF550-2020	2	5	50	4
WF550-2025	2.5	6.5	50	4
WF550-2030	3	8	50	3/4
WF550-2035	3.5	9	50	4
WF550-2040	4	10	50	4
WF550-2045	4.5	11	50	6
WF550-2050	5	13	50	5/6
WF550-2055	5.5	14	50	6
WF550-2060	6	15	50	6
WF550-2065	6.5	16	60	8
WF550-2070	7	18	60	8
WF550-2075	7.5	19	60	8
WF550-2080	8	20	60	8
WF550-2085	8.5	22	75	10
WF550-2090	9	23	75	10
WF550-2095	9.5	24	75	10
WF550-2100	10	25	75	10
WF550-2110	11	28	75	12
WF550-2120	12	30	75	12
WF550-2160	16	40	100	16
WF550-2180	18	45	100	20
WF550-2200	20	45	100	20

產品特點:

- 1、適用於加工材質硬度低於HRC55 ° 的碳素鋼，合金鋼，不銹鋼，鈦合金
- 2、刀刃光滑，排屑順暢，加工高效
- 3、精度佳，刀具壽命長

Product Feature:

- 1.Suitable for machining material hardness less than HRC55 ° , such as carbon steel, alloy steel, stainless steel, titanium alloy steel.
- 2.Sharp cutting edge with smooth metal evacuation ensures high efficiency machining.
- 3.High precision with longer life

注：柄徑4/6 所對應的下單編號如：WF550-2010-4 WF550-2010-6

刃數下單編號如：WF550-2010-6（為6柄2刃）

WF550-4010-4（為4柄4刃）

WF550L-2-4 Longer shank series

WF550L-2-4長柄系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
WF550L-2040A	4	10	75	4
WF550L-2040B	4	10	100	4
WF550L-2060A	6	15	75	6
WF550L-2060B	6	15	100	6
WF550L-2080A	8	20	100	8
WF550L-2080B	8	20	150	8
WF550L-2100A	10	25	100	10
WF550L-2100B	10	25	150	10
WF550L-2120A	12	30	100	12
WF550L-2120B	12	30	150	12
WF550L-2160	16	40	150	16
WF550L-2200	20	45	150	20

產品特點:

- 1. 適用於加工材質硬度低於HRC55 ° 的碳素鋼，合金鋼，不銹鋼，鈦合金
- 2. 刀刃光滑，排屑順暢，加工高效
- 3. 精度佳，刀具壽命長

Product Feature:

- 1.Suitable for machining material hardness less than HRC55 ° , such as carbon steel, alloy steel, stainless steel, titanium alloy steel.
- 2.Sharp cutting edge with smooth metal evacuation ensures high efficiency machining.
- 3.High precision with longer life

刃數下單編號如：WF550-2040A（為2刃）
WF550-4040A（為4刃）



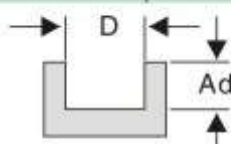
Co
12%

Wc
88%

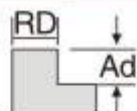
Dia
0.4 μm

WF550超微粒碳化鎢鋼立銑刀

加工材質 processed material	合金鋼/工具鋼 alloy steel/tool steel	合金鋼/工具鋼 alloy steel/tool steel	合金鋼/工具鋼 alloy steel/tool steel	調質鋼 tempered steel	不銹鋼 stainless steel	鑄鐵 cast iron
被切削材料代號 processed material code	(S45C,S50C,SCM)	(SCM,SKT,SKD)	(SCM,SKT,SKD)	(SKT,SKD)	(SUS304)	(FC/FCD)
被切削材料硬度 processed material hardness	HRC<20	HRC20~30	HRC30~40	HRC45~55		
切削速度Vc milling speed	68M/min	54M/min	45M/min	27M/min	54M/min	79M/min
外徑 diameter	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1MM	20000	120	17100	100	14400	65
2MM	10800	155	8640	120	7200	85
3MM	7560	155	5760	135	4680	90
4MM	5400	165	4320	135	3600	100
5MM	4500	180	3420	135	2880	100
6MM	3600	180	2880	135	2340	100
8MM	2700	180	2160	155	1800	110
10MM	2160	180	1710	155	1440	120
12MM	1800	180	1440	155	1200	120
14MM	1800	200	1360	170	1140	130
16MM	1560	220	1100	180	1000	140
18MM	1560	220	1060	180	880	140
20MM	1200	220	960	180	800	140
切削量 Milling Amount (mm)	Ad=0.5D(D<3,Ad<=0.25D)			Ad=0.1D (D,3,Ad<=0.25D)		Ad=0.5D(D<3,Ad<=0.25D)



加工材質 processed material	合金鋼/工具鋼 alloy steel/tool steel	合金鋼/工具鋼 alloy steel/tool steel	合金鋼/工具鋼 alloy steel/tool steel	調質鋼 tempered steel	不銹鋼 stainless steel	鑄鐵 cast iron
被切削材料代號 processed material code	(S45C,S50C,SCM)	(SCM,SKT,SKD)	(SCM,SKT,SKD)	(SKT,SKD)	(SUS304)	(FC/FCD)
被切削材料硬度 processed material hardness	HRC<20	HRC20~30	HRC30~40	HRC45~55		
切削速度Vc milling speed	68M/min	54M/min	45M/min	27M/min	54M/min	79M/min
外徑 diameter	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
3MM	7560	490	5760	345	4680	165
4MM	5400	490	4320	345	3600	165
5MM	4500	490	3420	345	2880	165
6MM	3600	490	2880	345	2340	165
8MM	2700	490	2160	345	1800	175
10MM	2160	505	1710	360	1440	175
12MM	1800	505	1440	360	1200	175
14MM	1800	560	1360	400	1140	190
16MM	1560	600	1100	420	1000	200
18MM	1560	600	1060	420	880	200
20MM	1200	600	960	420	800	200
切削量 Milling Amount (mm)	Ad=1.5D Rd<=0.1D			Ad=1.5D Rd<=0.05D		Ad=1.5D Rd<=0.1D



- 初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
 - 請採用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
 - 刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
 - 在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
 - 為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況發生，請採用順銑方式切削。
- The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
 - Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
 - The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
 - When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
 - In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting.

WFELL超微粒鎢鋼泛用型長柄長刃立銑刀

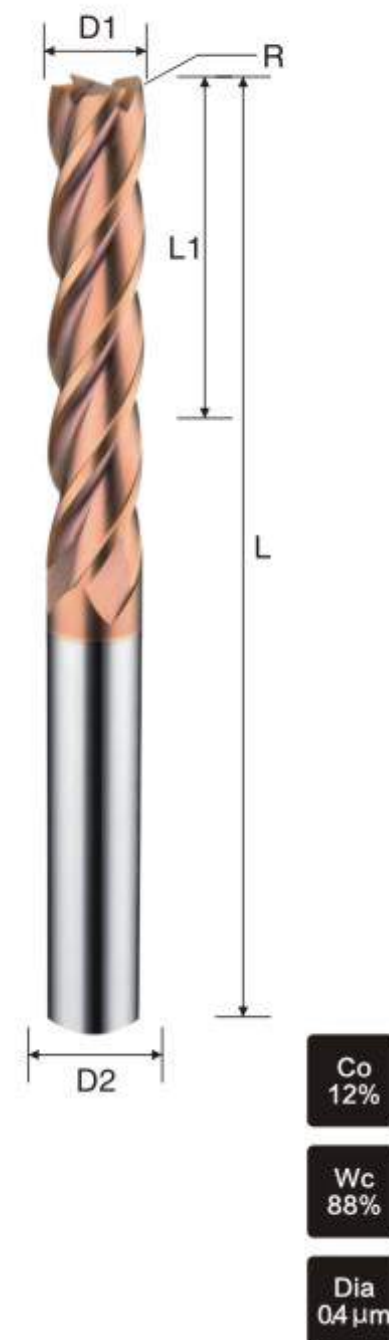
WFELL Long shank with longer flute length for universal cutting



WFELL-4 Long shank with longer flute length for universal cutting

WFELL-4超微粒鎢鋼泛用型長柄長刃立銑刀

產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
WFELL-4040-75L-HT/AL	4	20	75	4
WFELL-4040-100L-HT/AL	4	20	100	4
WFELL-4060-75L-HT/AL	6	30	75	6
WFELL-4060-100L-HT/AL	6	30	100	6
WFELL-4080-100L-HT/AL	8	40	100	8
WFELL-4080-150L-HT/AL	8	40	150	8
WFELL-4100-100L-HT/AL	10	45/50	100	10
WFELL-4100-150L-HT/AL	10	45/50	150	10
WFELL-4120-100L-HT/AL	12	50/60	100	12
WFELL-4120-150L-HT/AL	12	50/60	150	12
WFELL-4160-150L-HT/AL	16	80	150	16
WFELL-4200-150L-HT/AL	20	90	150	20



一般切削參數 Common cutting parameters

切削速度(cutting speed): $V_c=80m(60-120m)/min$

切深(cutting depth): $a_p=1/3D(1/8-1/2D)$

單刀進給(feeding): $f_z=0.1mm(0.02-0.2)$

按照不同的被加工材質和硬度，切削參數做適當調整。

The cutting parameters should be adjusted according to different material grade and hardness

- 1、材質：超微粒鎢鋼
- 2、刃數：4刃
- 3、螺旋角 35°
- 4、獨特圓弧間隙角設計。
- 5、適用於硬度HRC55℃以下鋼材鑄鐵，合金鋼高韌性素材。
- 6、刀刃越近於鏡面，刃口光滑，排屑順暢，刀具壽命佳，精度佳。
- 7、高速加工之刀具最佳選擇。
- 8、適應切削材料：A3、S45C、S50C、40Cr、42CrMo、20Cr、Cr12
- 9、H13、NAK80、718等碳素結構鋼、合金結構鋼、鑄鋼、鑄鐵、模具鋼等。

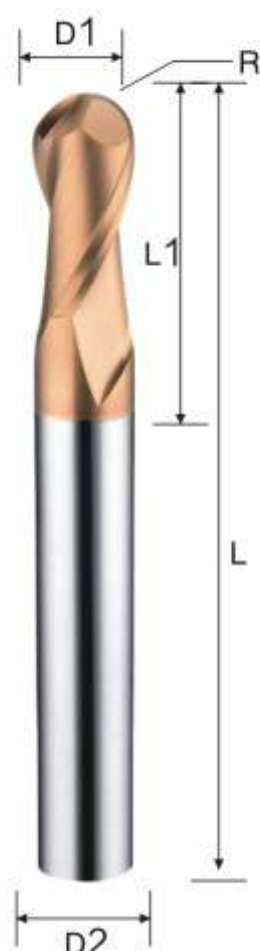
- 1、Material: tungsten steel
- 2、Flute: 4
- 3、Helix angle: 35°
- 4、Special design for round corner gap
- 5、Suitable for machining material hardness less than HRC55 $^\circ$, such as carbon steel, alloy steel
- 6、Sharp cutting edge with smooth metal evacuation ensures high efficiency machining.
- 7、Best choice for high speed machining
- 8、Suitable machining material: A3、S45C、S50C、40Cr、42CrMo、20Cr、Cr12
- 9、H13..718 carbon steel, alloy steel, cast iron, tool steel, etc.

WFB550球形銑刀

WFB550 Ball end mill

WFB550 Ball end mill series

WFB550-2球刀系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L. L	柄徑 Shank Dia D2
WFB550-2005	0.5R	2	50	4/6
WFB550-20075	0.75R	3	50	4/6
WFB550-2010	1R	4	50	4/6
WFB550-20125	1.25R	5	50	4/6
WFB550-2015	1.5R	6	50	3/4/6
WFB550-2020	2R	8	50	4/6
WFB550-2025	2.5R	10	50	5/6
WFB550-2030	3R	12	50	6
WFB550-2035	3.5R	14	60	8
WFB550-2040	4R	16	60	8
WFB550-2050	5R	20	75	10
WFB550-2060	6R	24	75	12
WFB550-2080	8R	32	100	16
WFB550-2100	10R	40	100	20

WFB550 Longer shank series

WFB550L-2球刀長柄系列



Co
12%

Wc
88%

Dia
0.4 μm



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L. L	柄徑 Shank Dia D2
WFB550L-2005	0.5R	2	75	4/6
WFB550L-2075	0.75R	3	75	4
WFB550L-2010	1R	4	75	4/6
WFB550L-2015	1.5R	6	75	3/4/6
WFB550L-2020A	2R	8	75	4/6
WFB550L-2020B	2R	8	100	4/6
WFB550L-2025A	2.5R	10	75	6
WFB550L-2025B	2.5R	10	100	6
WFB550L-2030A	3R	12	75	6
WFB550L-2030B	3R	12	100	6
WFB550L-2040A	4R	16	75	8
WFB550L-2040B	4R	16	100	8
WFB550L-2040C	4R	16	150	8
WFB550L-2050A	5R	20	100	10
WFB550L-2050B	5R	20	150	10
WFB550L-2060A	6R	24	100	12
WFB550L-2060B	6R	24	150	12
WFB550L-2080	8R	32	150	16
WFB550L-2100	10R	40	150	20

產品特點:

適用於加工材質硬度低於HRC55 ° 的碳素鋼，合金鋼，不銹鋼，鈦合金。

Product Feature:

1.Suitable for machining material hardness less than HRC55 ° , such as carbon steel, alloy steel, stainless steel, titanium alloy steel.

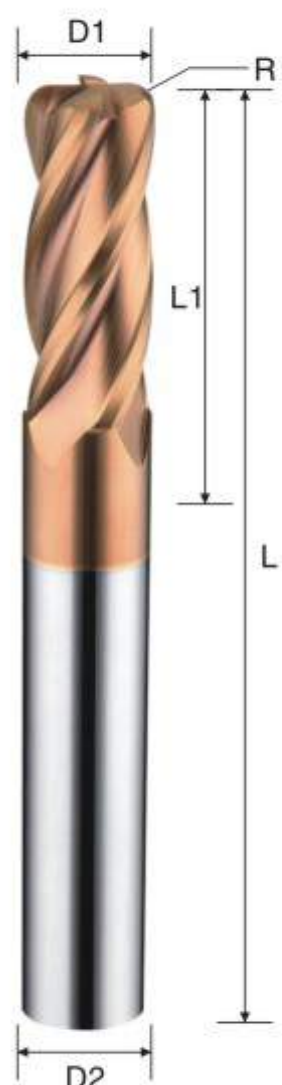
注：柄徑4/6 所對應的下單編號如：WFB550-2005-4 WFB550-2005-6

加工材質 processed material	合金鋼/工具鋼 alloy steel/tool steel	合金鋼/工具鋼 alloy steel/tool steel	合金鋼/工具鋼 alloy steel/tool steel	調質鋼 tempered steel	不銹鋼 stainless steel	鑄鐵 cast iron						
被切削材料代號 processed material code	(S45C,S50C,SCM)	(SCM,SKT,SKD)	(SCM,SKT,SKD)	(SKT,SKD)	(SUS304)	(FC/FCD)						
被切削材料硬度 processed material hardness	HRC<20	HRC20~30	HRC30~40	HRC45~55								
切削速度Vc milling speed	72M/min	54M/min	34M/min	29M/min	54M/min	72M/min						
外徑 diameter	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)		
0.5R	36000	450	32400	380	21600	290	14400	180	32400	380	45000	740
1.0R	20520	600	16200	490	11700	380	8200	240	16200	490	22860	900
2.0R	11520	720	8640	560	6300	435	4600	290	8640	560	11520	1030
3.0R	7560	900	5760	600	3780	450	3020	360	5760	600	7560	1260
4.0R	5760	900	4320	600	2880	450	2300	360	4320	600	5760	1260
5.0R	4590	900	3420	600	2160	450	1830	360	3420	600	4590	1260
6.0R	3780	900	2880	620	1800	470	1520	360	2880	620	3780	1350

切削量
Milling Amount
(mm)

Ad=0.5D,Pf<=0.1D

1. 初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
 2. 請采用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
 3. 刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
 4. 在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
 5. 為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況發生，請采用順銑方式切削。
1. The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
 2. Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
 3. The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
 4. When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
 5. In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting.



Co
12%

Wc
88%

Dia
0.4 μm



SER550-2-4 series

SER550-2-4系列



產品編號 Product NO.	先端徑 Diameter D1	R角 R angle R	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SER550-4010-0.2R	1	0.2	2.5	50	4
SER550-4010-0.3R	1	0.3	2.5	50	4
SER550-4015-0.2R	1.5	0.2	4	50	4
SER550-4015-0.3R	1.5	0.3	4	50	4
SER550-4020-0.2R	2	0.2	5	50	4
SER550-4020-0.3R	2	0.3	5	50	4
SER550-4020-0.5R	2	0.5	5	50	4
SER550-4025-0.2R	2.5	0.2	6.5	50	4
SER550-4025-0.3R	2.5	0.3	6.5	50	4
SER550-4025-0.5R	2.5	0.5	6.5	50	4
SER550-4030-0.2R	3	0.2	8	50	3/4
SER550-4030-0.3R	3	0.3	8	50	3/4
SER550-4030-0.5R	3	0.5	8	50	3/4
SER550-4030-1R	3	1	8	50	3/4
SER550-4040-0.2R	4	0.2	10	50	4
SER550-4040-0.3R	4	0.3	10	50	4
SER550-4040-0.5R	4	0.5	10	50	4
SER550-4040-1R	4	1	10	50	4
SER550-4060-0.2R	6	0.2	15	50	6
SER550-4060-0.5R	6	0.5	15	50	6
SER550-4060-1R	6	1	15	50	6
SER550-4080-0.2R	8	0.2	20	60	8
SER550-4080-0.5R	8	0.5	20	60	8
SER550-4080-1R	8	1	20	60	8
SER550-4100-0.5R	10	0.5	25	60	10
SER550-4100-1R	10	1	25	75	10
SER550-4100-1.5R	10	1.5	25	75	10
SER550-4100-2R	10	2	25	75	10
SER550-4120-0.5R	12	0.5	30	75	12
SER550-4120-1R	12	1	30	75	12
SER550-4120-1.5R	12	1.5	30	75	12
SER550-4120-2R	12	2	30	75	12

- 材質：超微粒鎢鋼
- 刃數：4刃
- 螺旋角35°
- 獨特圓弧間隙角設計。
- 適用於硬度HRC55℃以下鋼材鑄鐵，合金鋼高韌性素材。
- 刀刃越近於鏡面，刃口光滑，排屑順暢，刀具壽命佳，精度佳。
- 高速加工之刀具最佳選擇。
- 適應切削材料：A3、S45C、S50C、40Cr、42CrMo、20Cr、Cr12
- H13、NAK80、718等碳素結構鋼、合金結構鋼、鑄鋼、鑄鐵、模具鋼等。

- Material: tungsten steel
- Flute: 4
- Helix angle: 35°
- Special design for round corner gap
- Suitable for machining aluminum alloy material, Copper-magnesium alloy material
- Sharp cutting edge with smooth metal evacuation ensures high efficiency machining and longer life.
- Best choice for high speed machining
- Suitable machining material: A3、S45C、S50C、40Cr、42CrMo、20Cr、Cr12
- H13、NAK80、718 carbon steel, alloy steel, cast iron, tool steel, etc.

刃數下单编号如：SER550-2010-2（为2刃）
SER550-4010-4（为4刃）

SERL550超微粒鎢鋼R角長柄銑刀

SERL550 Tungsten carbide corner radius end mill



SERL550-2-4 series

SERL550-2-4 長柄系列



產品編號 Product NO.	先端徑 Diameter D1	R角 R angle R	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SERL550-4030-0.5R	3	0.5	8	100	3/4
SERL550-4030-1R	3	1	8	100	3/4
SERL550-4040-0.5RA	4	0.5	10	75	4
SERL550-4040-0.5RB	4	0.5	10	100	4
SERL550-4040-1RA	4	1	10	75	4
SERL550-4040-1RB	4	1	10	100	4
SERL550-4050-0.5R	5	0.5	13	100	6
SERL550-4050-1R	5	1	13	100	6
SERL550-4060-0.2RA	6	0.2	15	75	6
SERL550-4060-0.2RB	6	0.2	15	100	6
SERL550-4060-0.3R	6	0.3	15	75	6
SERL550-4060-0.5RA	6	0.5	15	75	6
SERL550-4060-0.5RB	6	0.5	15	100	6
SERL550-4060-1RA	6	1	15	75	6
SERL550-4060-1RB	6	1	15	100	6
SERL550-4080-0.2R	8	0.2	20	100	8
SERL550-4080-0.5RA	8	0.5	20	75	8
SERL550-4080-0.5RB	8	0.5	20	100	8
SERL550-4080-1R	8	1	20	75	8
SERL550-4080-1RA	8	1	20	100	8
SERL550-4080-1RB	8	1	20	150	8
SERL550-4080-2RA	8	2	20	75	8
SERL550-4080-2RB	8	2	20	100	8
SERL550-4100-0.5RA	10	0.5	25	100	10
SERL550-4100-0.5RB	10	0.5	25	150	10
SERL550-4100-1RA	10	1	25	100	10
SERL550-4100-1RB	10	1	25	150	10
SERL550-4100-2R	10	2	25	100	10
SERL550-4120-0.5RA	12	0.5	30	100	12
SERL550-4120-0.5RB	12	0.5	30	150	12
SERL550-4120-1RA	12	1	30	100	12
SERL550-4120-1RB	12	1	30	150	12
SERL550-4120-2R	12	2	30	100	12

一般切削參數

切削速度(cutting speed): $V_c=130m(100-800m)/min$

切深(cutting depth): $a_p=1D(1/2-1.5D)$

切寬(cutting width): $a_e=1/2D(1/4-1D)$

單刀進給(feeding): $f_z=0.15mm(0.02-0.2)$

按照不同的被加工材質和硬度，切削參數做適當調整。

The cutting parameters should be adjusted according to different material grade and hardness

$V_c=100m(60-150m)/min$

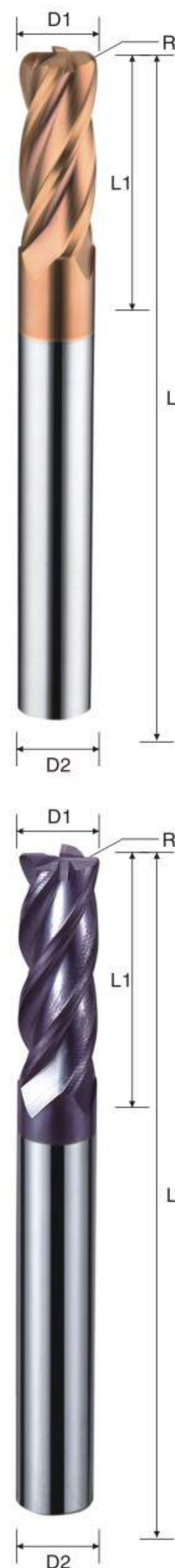
$a_p=1/2D(1/8-1D)$

$a_e=1/4D(1/16-1D)$

$f_z=0.1mm(0.05-0.15)$

刃數下單編號如: SERL550-2030-0.5 (為2刃)

SERL550-4030-0.5 (為4刃)



SE550LY超微粒碳化鎢鋼銅鋁專用銑刀

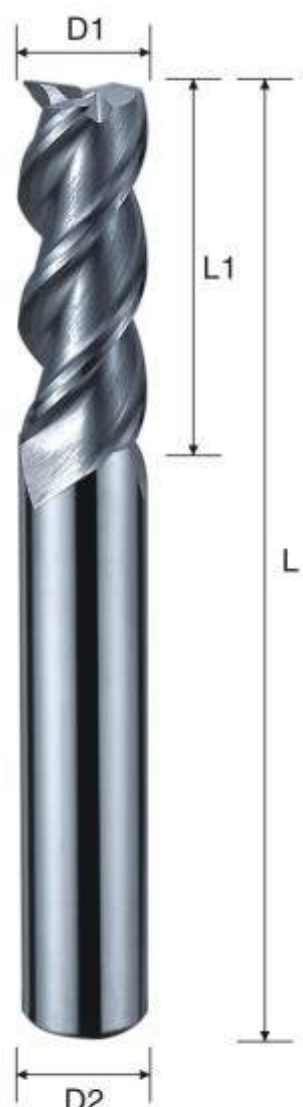
SE550LY Tungsten carbide end mill for aluminum

SE550LYL series

SE550LY-2-3-4系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE550LY-3010	1	3	50	4
SE550LY-3015	1.5	4.5	50	4
SE550LY-3020	2	6	50	4
SE550LY-3025	2.5	8	50	4
SE550LY-3030	3	9	50	3/4
SE550LY-3035	3.5	11	50	4
SE550LY-3040	4	12	50	4
SE550LY-3050	5	15	50	5/6
SE550LY-3060	6	18	50	6
SE550LY-3080	8	24	60	8
SE550LY-3100	10	30	75	10
SE550LY-3120	12	34	75	12
SE550LY-3160	16	45	100	16
SE550LY-3200	20	50	100	20



Co
12%

Wc
88%

Dia
0.4 μm



SE550LYL Longer shank series

SE550LYL-2-3-4長柄系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE550LYL-3040	4	20	75	4
SE550LYL-3060	6	30	100	6
SE550LYL-3080	8	40	100	8
SE550LYL-3100	10	50	100	10
SE550LYL-3120	12	50	100	12
SE550LYL-3160	16	70	150	16
SE550LYL-3200	20	75	150	20

一般切削參數 Common cutting parameters

切削速度(cutting speed): $V_c=130m(100-800m)/min$

切寬(cutting width): $a_e=1/2D(1/4-1D)$

按照不同的被加工材質和硬度，切削參數做適當調整。

The cutting parameters should be adjusted according to different material grade and hardness

1、材質：超微粒鎢鋼

3、螺旋角45°

5、適用於鋁合金、銅鎂合金高韌性素材。

6、刀刃越近於鏡面，刃口光滑，排屑順暢，刀具壽命佳，精度佳。

7、高速加工之刀具最佳選擇。

8、適應切削材料：高螺旋45°角設計，為了適應不同的材質而設計。

1、Material: tungsten steel

3、Helix angle:45°

5、Suitable for machining aluminum alloy material, Copper-magnesium alloy material

6、Sharp cutting edge with smooth metal evacuation ensures high efficiency machining and longer life.

7、Best choice for high speed machining

8、Helix angle is suitable for different type material

切深(cutting depth): $a_p=1/2D(1/8-3/4D)$

單刀進給(feeding): $f_z=0.15mm(0.02-0.2)$

2、刃數：2刃 1刃過中心/3刃1刃過中心

4、獨特圓弧間隙角設計。

2、Flute: 2 3

4、Special design for round corner gap

注：柄徑4/6 所对应的下单编号如：SE550LY-3010-4 SE550LY-3010-6

注：3010-(3表示刃数，下单请注意)

SE550GLY超細微粒3刃高光鋁用刀

SE550GLY 3 Flutes Finish machining for aluminum material

SE550GLY 3 Flutes Finish machining for aluminum material

SE550GLY超細微粒3刃高光鋁用刀



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE550GLY-3010	1	3	50	4
SE550GLY-3015	1.5	4.5	50	4
SE550GLY-3020	2	6	50	4
SE550GLY-3025	2.5	7.5	50	4
SE550GLY-3030	3	9	50	4
SE550GLY-3040	4	12	50	4
SE550GLY-3050	5	15	50	6
SE550GLY-3060	6	18	50	6
SE550GLY-3080	8	20	60	8
SE550GLY-3100	10	30	75	10
SE550GLY-3120	12	30	75	12

一般切削參數 Common cutting parameters

切削速度(cutting speed): $V_c=130m(100-800m)/min$

切寬(cutting width): $a_e=1/2D(1/4-1D)$

按照不同的被加工材質和硬度，切削參數做適當調整。

The cutting parameters should be adjusted according to different material grade and hardness

1. 材質: 超細微粒鎢鋼
2. 刃數: 3刃
3. 螺旋角 45°
4. 獨特發絲綫鏡面刃口處理。
5. 適用於鋁件加工要求高精度，表面高光處理之鋁材外觀件。

1. Material: tungsten steel
2. Flute: 3
3. Helix angle: 45°
4. Special treatment for mirror finish flutes
5. Suitable for high precision machining of copper and aluminum material with finish surface.



SE550QL Heavy duty machining for aluminum alloy material

SE550QL超微粒鎢鋼鋁用銑刀(重切削)



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE550QL-3040	4	12	50	6
SE550QL-3060	6	18	50	6
SE550QL-3080	8	24	60	8
SE550QL-3100	10	30	75	10
SE550QL-3120	12	34	75	12
SE550QL-3160	16	35	100	16
SE550QL-3200	20	45	100	20

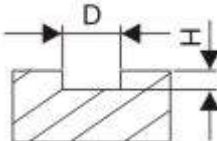
1. 材質: 超微粒鎢鋼
1. Material: tungsten steel
2. 刃數: 3刃
2. Flute: 3
3. 獨特圓弧間隙角設計
3. Special design for round corner gap
4. 獨特圓溝加大排屑設計
4. Large chip evacuation design
5. 高度提升工作效率
5. Improved processing efficiency



SE550LY Tungsten carbide end mill for aluminum

SE550LY超微粒碳化鎢鋼銅鋁專用銑刀

切削條件：超微粒碳化鎢 鋁合金專用立銑刀 2~3刃

被切削材 processed material code	純品 Pure aluminum 1070	鋁合金 Aluminum alloy Gu-Mg系 2014	鋁合金 Aluminum alloy Si系 4032	鋁合金 Aluminum alloy Mg系 5052	鋁合金 Aluminum alloy Mg-Si系 6061	鋁合金 Aluminum alloy Zn-Mg系 7075	鋁造鋁合金 Aluminum alloy Ac85							
立銑刀刃徑 mm	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min		
D 3.0	32000	800	27000	800	2700	150	13000	400	21600	500	27000	640	16000	500
D 4.0	24000	1000	20000	1000	2000	200	10000	500	16000	640	20000	800	12000	600
D 5.0	19000	1000	16000	1000	1600	200	8000	500	12800	640	16000	800	9600	600
D 6.0	16000	1000	13500	1000	1350	200	6500	500	10800	640	13500	800	8000	600
D 8.0	12000	1000	10000	1000	1000	300	5000	600	8000	640	10000	800	6000	700
D 10.0	9600	1200	8000	1200	800	300	4000	600	6400	780	8000	960	4800	700
D 12.0	8000	1200	6600	1200	660	250	3300	700	5300	780	6600	960	4000	700
D 16.0	6000	1000	5000	1000	500	150	2700	500	4000	640	5000	800	3000	800
D 20.0	4800	1000	4000	100	400	150	2000	500	3200	640	4000	800	2400	600
最大 切削量	 H=1.0D													

切削條件：超微粒碳化鎢 鋁合金專用立銑刀 2~3刃

被切削材 processed material code	純品 of the purest quality 1070		鋁合金 ni based alloy Gu-Mg系 2014		鋁合金 ni based alloy Si系 4032		鋁合金 ni based alloy Mg系 5052		鋁合金 ni based alloy Mg-Si系 6061		鋁合金 ni based alloy Zn-Mg系 7075		鋁造鋁合金 ni based alloy Ac85	
立銑刀刃徑 mm	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min
D 3.0	32000	1900	27000	1600	2700	150	13000	800	21600	880	27000	1080	16000	1000
D 4.0	24000	1900	20000	1600	2000	200	10000	800	16000	880	20000	1080	12000	1000
D 5.0	19000	1900	16000	1600	1600	200	8000	800	12800	880	16000	1080	9600	1000
D 6.0	16000	1900	13500	1600	1350	200	6500	800	10800	880	13500	1080	8000	1000
D 8.0	12000	1900	10000	1600	1000	300	5000	800	8000	880	10000	1080	6000	1000
D 10.0	9600	1900	8000	1600	800	300	4000	800	6400	880	8000	1080	4800	1000
D 12.0	8000	1900	6600	1600	660	250	3300	800	5300	880	6600	1080	4000	1000
D 16.0	6000	1900	5000	1600	500	150	2700	800	4000	880	5000	1080	3000	1000
D20.0	4800	1900	4000	1600	400	150	2000	800	3200	880	4000	1080	2400	1000
最大 切削量	<													

- 1、初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
- 2、請採用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
- 3、刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
- 4、在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
- 5、為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況發生，請採用順銑方式切削。

- 1、The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
- 2、Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
- 3、The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
- 4、When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
- 5、In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting.

SEB550LY超微粒碳化鎢鋼鋁專用二刃球形銑刀

SEB550LY Tungsten carbide ball end mill for aluminum

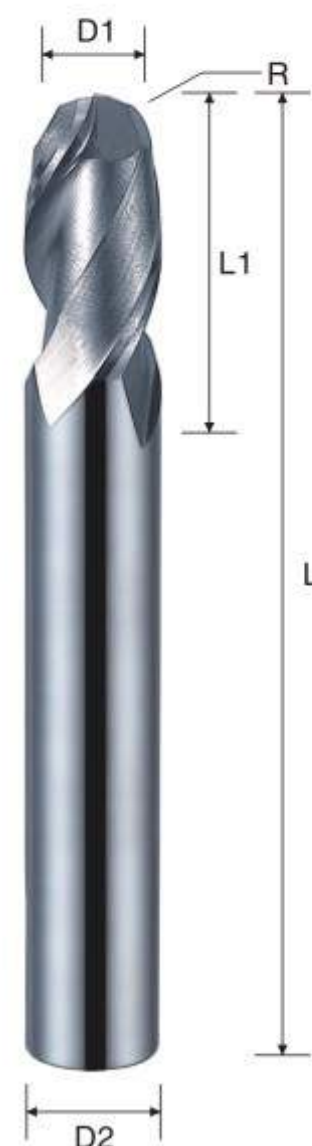


SEB550LY-2 series

SEB550LY-2系列



產品編號 Product NO.	先端徑 Diameter	刃長 Flute Length	全長 O.A.L	柄徑 Shank Dia
	D1	L1	L	D2
SEB550LY-2005	0.5R	2	50	4
SEB550LY-20075	0.75R	3	50	4
SEB550LY-2010	1R	4	50	4
SEB550LY-2015	1.5R	6	50	4
SEB550LY-2020	2R	8	50	4
SEB550LY-2025	2.5R	10	50	6
SEB550LY-2030	3R	12	50	6
SEB550LY-2035	3.5R	14	60	8
SEB550LY-2040	4R	16	60	8
SEB550LY-2045	4.5R	18	75	10
SEB550LY-2050	5R	20	75	10
SEB550LY-2055	5.5R	22	75	12
SEB550LY-2060	6R	24	75	12



Co
12%

Wc
88%

Dia
0.4 μm

產品特點:

- 1.適用於鋁鎂合金、銅等素材
- 2.獨特圓弧離隙角設計，超高螺旋角，近于鏡面加工。
- 3.刀緣有鋒利切面可輕易切削任何工件。
- 4.排屑順暢，刀具壽命長，精度佳，是高速加工刀具最佳選擇。

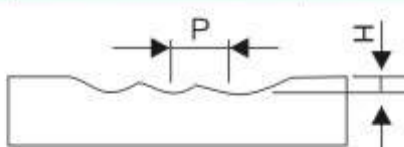
Product Feature:

1. Apply for aluminum alloy and copper machining.
2. Special corner rounding design with high helix angel for precision finish machining.
3. Thanks to sharp cutting edge the work pieces can be processed easily.
4. This serie achieves high accuracy with metal removal rate and long life which make it as best choice for high speed machining.

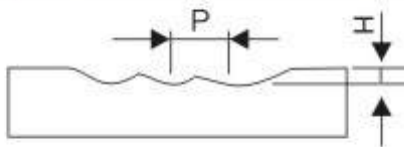
SEB550LY Tungsten carbide ball end mill for aluminum

SEB550LY超微粒碳化鎢鋼鋁專用二刃球形銑刀

切削條件：超微粒碳化鎢 鋁合金專用 2刃球型立銑刀（一般M/C使用）

被切削材名稱 processed material code	純品 Pure aluminum	鋁合金 Aluminum alloy	鋁合金 Aluminum alloy	鋁合金 Aluminum alloy	鋁合金 Aluminum alloy	鋁合金 Aluminum alloy
立銑刀	1070	2014,7075	4032	5052,AC85	6061	C1100
R徑 mm	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min
R 1.0	24000	1900	20000	1600	2000	160
R 2.0	12000	1900	10000	1600	1000	160
R 2.5	10000	1900	8000	1600	800	160
R 3.0	8000	1900	6600	1600	660	160
R 4.0	6000	1900	5000	1600	500	160
R 5.0	5000	1900	4000	1600	400	160
R 6.0	4000	1900	3000	1600	330	160
最大 切削量	 H=0.2R以下,P=0.4R以下					

切削條件：超微粒碳化鎢 鋁合金專用 2刃球型立銑刀（高速M/C使用）

被切削材名稱 processed material code	純品 of the purest quality	鋁合金 ni based alloy	鋁合金 ni based alloy	鋁合金 ni based alloy	鋁合金 ni based alloy	鋁合金 ni based alloy
立銑刀	1070	2014,7075	4032	5052,AC85	6061	C1100
R徑 mm	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min
R 1.0	48000	3840	40000	3200	4000	320
R 2.0	24000	3840	20000	3200	2000	320
R 2.5	20000	3840	16000	3200	1600	320
R 3.0	16000	3840	13200	3200	1320	320
R 4.0	12000	3840	1000	3200	1000	320
R 5.0	10000	3840	8000	3200	8000	320
R 6.0	8000	3840	6600	3200	660	320
最大 切削量	 H=0.2R以下,P=0.4R以下					

- 初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
 - 請採用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
 - 刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
 - 在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
 - 為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況發生，請採用順銑方式切削。
- The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
 - Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
 - The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
 - When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
 - In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting.

SDR-6-8超細微粒碳化鎢鋼強力型精銑刀

SDR Powerful finishing end mill



SDR Powerful finishing end mill

SDR-6-8系列強力型精銑刀

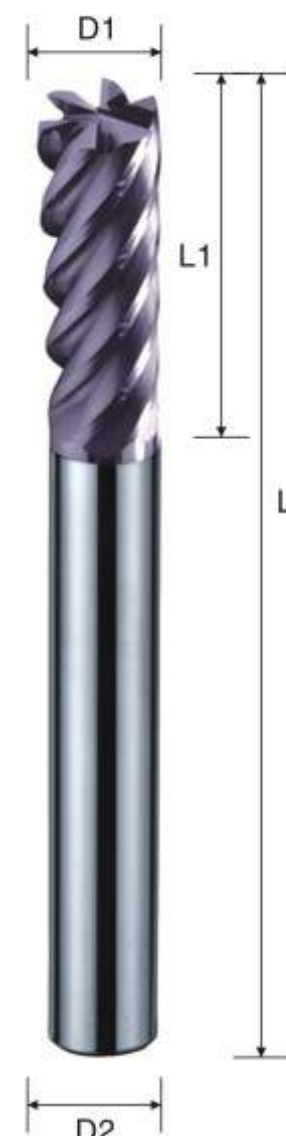
產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SDR-4160	6	18	50	6
SDR-4180	8	22	60	8
SDR-4100	10	28	75	10
SDR-4120	12	32	75	12
SDR-4160	16	42	100	16
SDR-4120	20	50	100	20

產品特點:

多刃型強力立銑刀，最適宜淬火鋼加工與高速加工中心上進行高效高精加工。

Product Feature:

Multi-flutes powerful end mill is optimized to fine milling for hardened steel and high speed machining in CNC machine center.



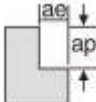
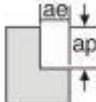
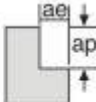
Co
12%

Wc
88%

Dia
0.4 μm

SDR Powerful finishing end mill

SDR-6-8系列強力型精銑刀切削參數

加工材質 processed material	合金鋼/工具鋼 alloy steel/tool steel		調質鋼 tempered steel		調質鋼 tempered steel	
被切削材料代號 processed material code	(SCM,SKT,SKD)		(SKT,SKD)		(SKT,SKD)	
被切削材料硬度 processed material hardness	HRC30～40		HRC45～55		HRC55～60	
切削速度Vc milling speed	150M/min		117M/min		85M/min	
外徑 DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
6MM	7950	1875	6300	1305	4800	900
8MM	6000	1890	4800	1335	3600	900
10MM	4800	1815	3750	1245	2850	855
12MM	4050	1695	3150	1170	2400	810
16MM	3000	1620	2400	1140	1800	780
20MM	2400	1515	1950	1080	1500	750
切削量 Milling Amount (mm)	ap=1.5D ae=0.1D 		ap=1.5D ae=0.06D 		ap=1.5D ae=0.04D 	

SE550S 不銹鋼專用鎢鋼立銑刀

SE550S Tungsten carbide square end mill for stainless steel

SE550S Tungsten carbide square end mill for stainless steel

SE550S 不銹鋼專用鎢鋼立銑刀



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length			全長 O.A.L L	柄徑 Shank Dia D2
		1.5倍	2倍	3倍		
SE550S-01004	1	1.5	2	3	50	4
SE550S-01504	1.5	2.3	3	4.5	50	4
SE550S-02004	2	3	4	6	50	4
SE550S-02504	2.5	3.8	5	7.5	50	4
SE550S-03004	3	4.5	6	9	50	4
SE550S-04004	4	6	8	12	50	6
SE550S-05006	5	7.5	10	15	50	6
SE550S-06006	6	9	9	18	50	6
SE550S-08008	8	12	16	20	60	8
SE550S-10010	10	15	20	30	75	10
SE550S-12012	12	18	20	30	75	12



產品特點:

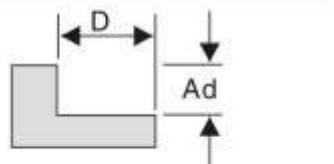
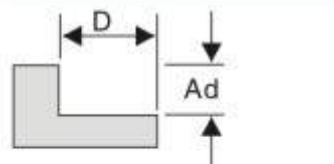
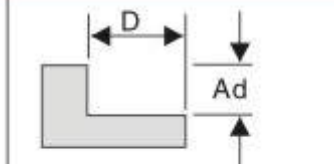
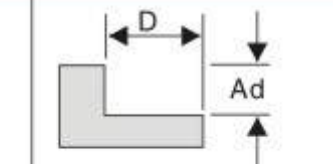
- 1、适用于加工不锈钢、钛合金等难加工材料。
- 2、高螺旋角保证优加工性能卓越
- 3、刀刃光滑，排屑顺畅，加工表面光洁度高
- 4、切削精度佳，适合高速高效加工。

Product Feature:

- 1、Apply for stainless steel ,titanium alloy and difficult materials.
- 2、Special designed high helix angle promises excellent cutting performance.
- 3、Sharp cutting edge with smooth metal evacuation ensures high surface finish.
- 4、High processing accuracy with efficient working.

SE550S Tungsten carbide end mill for stainless steel

SE550S超細微粒碳化鎢鋼不銹鋼專用銑刀

加工材質 processed material	不銹鋼 stainless steel		鈦合金 titanium alloy steel		鈦合金 titanium alloy steel		鋁合金 (含矽) Aluminum alloy	
被切削材料代號 processed material code	(sus304)		TiAl6V4(DIN)		TiAl5Sn2(DIN)		(Si-10%)	
被切削材料硬度 processed material hardness	—		HRC30>32		HRC≈32		—	
切削速度Vc milling speed	54M/min		40M/min		60M/min		120M/min	
外徑 DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
2MM	10320	620	7640	360	11460	540	22930	220
3MM	6910	410	5100	240	7640	360	15290	280
4MM	5180	410	3820	180	5740	270	11460	200
5MM	4100	410	3060	140	4580	220	9170	280
6MM	3460	410	2540	120	3820	180	7640	230
8MM	2590	410	1910	150	2870	220	5740	240
10MM	2050	430	1520	170	2290	250	4580	280
12MM	1730	430	1270	190	1910	280	3820	230
16MM	1440	500	950	170	1430	250	2870	280
切削量 Milling Amount (mm)	 $Ad=0.6D, Rd\leq 0.1D$		 $Ad=0.6D, Rd\leq 0.1D$		 $Ad=0.6D, Rd\leq 0.1D$		 $Ad=0.6D, Rd\leq 0.1D$	

- 初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
 - 請採用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
 - 刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
 - 在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
 - 為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況發生，請採用順銑方式切削。
- The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
 - Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
 - The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
 - When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
 - In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting.



SE650-2 series

SE650-2系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L. L	柄徑 Shank Dia D2
SE650-2010	1	2.5	50	4/6
SE650-2015	1.5	4	50	4/6
SE650-2020	2	5	50	4/6
SE650-2025	2.5	7	50	4/6
SE650-2030	3	8	50	4/6
SE650-2035	3.5	9	50	4/6
SE650-2040	4	10	50	4/6
SE650-2050	5	13	50	5/6
SE650-2060	6	15	50	6
SE650-2080	8	20	60	8
SE650-2100	10	25	75	10
SE650-2120	12	30	75	12
SE650-2140	14	35	100	14
SE650-2160	16	40	100	16
SE650-2200	20	40	100	20

Co
9%

Wc
91%

Dia
0.2μm



SE650 Longer shank series

SE650L-2長柄系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L. L	柄徑 Shank Dia D2
SE650L-2040A	4	12	75	4
SE650L-2040B	4	12	100	4
SE650L-2060A	6	18	75	6
SE650L-2060B	6	18	100	6
SE650L-2080	8	24	100	8
SE650L-2100	10	25	100	10
SE650L-2120	12	30	100	12

產品特點:

此刀具可加工從一般未處理材料到淬火鋼，適用範圍廣，可切削HRC65°以下鋼材。

Product Feature:

This type apples for wide processing range from normal material to hardened steel with material HRC up to 65 °

注：柄徑4/6 所对应的下单编号如：SE650-2010-4 SE650-2010-6

SE650極細微粒碳化鎢鋼高速四刃立銑刀

SE650 Tungsten carbide square end mill with 4 flutes

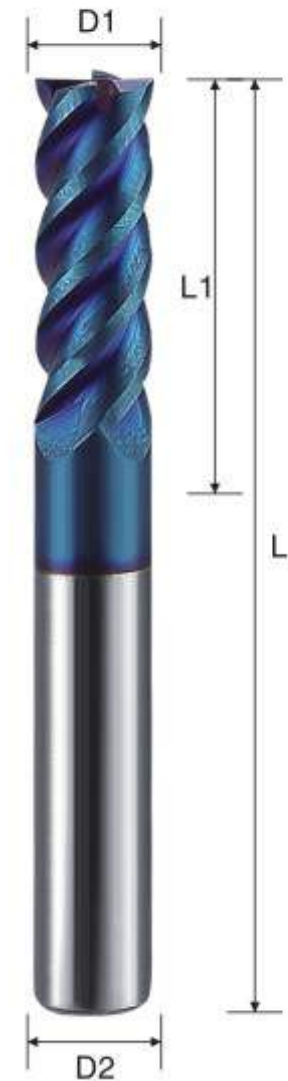


SE650-4 series

SE650-4系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE650-4010	1	2.5	50	4/6
SE650-4015	1.5	4	50	4/6
SE650-4020	2	5	50	4/6
SE650-4025	2.5	7	50	4/6
SE650-4030	3	8	50	4/6
SE650-4035	3.5	9	50	4/6
SE650-4040	4	10	50	4/6
SE650-4050	5	13	50	5/6
SE650-4060	6	15	50	6
SE650-4080	8	20	60	8
SE650-4100	10	25	75	10
SE650-4120	12	30	75	12
SE650-4140	14	35	100	14
SE650-4160	16	40	100	16
SE650-4200	20	40	100	20



Co
9%

Wc
91%

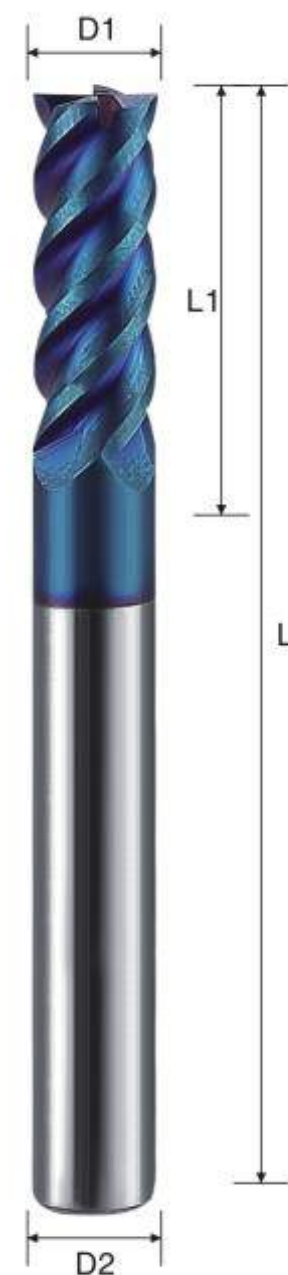
Dia
0.2μm

SE650L-4 Longer shank series

SE650L-4長柄系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SE650L-4040A	4	12	75	4
SE650L-4040B	4	12	100	4
SE650L-4060A	6	18	75	6
SE650L-4060B	6	18	100	6
SE650L-4080	8	24	100	8
SE650L-4100	10	25	100	10
SE650L-4120	12	30	100	12



產品特點:

此刀具可加工從一般未處理材料到淬火鋼，適用範圍廣，可切削HRC65°以下鋼材。

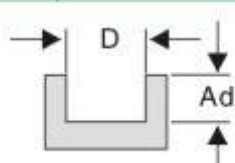
Product Feature:

This type applies for wide processing range from normal material to hardened steel with material HRC up to 65 °

注：柄徑4/6 所对应的下单编号如：SE650-4010-4 SE650-4010-6

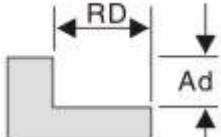
SE650 with 2 flutes

SE650-2極細微粒碳化鎢鋼高速立銑刀

加工材質 processed material	合金鋼/工具鋼 alloy steel/tool steel		合金鋼/工具鋼 alloy steel/tool steel		合金鋼/工具鋼 alloy steel/tool steel		調質鋼 tempered steel		調質鋼 tempered steel		不銹鋼 stainless steel		鑄鐵 cast iron			
被切削材料代號 processed material code	(S45C,S50C,SCM)		(SCM,SKT,SKD)		(SCM,SKT,SKD)		(SKT,SKD)		(SKT,SKD)		(SUS304)		(FC/FCD)			
被切削材料硬度 processed material hardness	HRC<20		HRC20~30		HRC30~40		HRC40~50		HRC50~60							
切削速度Vc milling speed	1364M/min		107M/min		90M/min		55M/min		41M/min		107M/min		158M/min			
外徑 diameter	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)	R.P.M	FEED (mm/min)		
1MM	40000	180	34200	150	28800	97	16000	75	12000	52	34200	150	50400	405		
2MM	21600	232	17280	180	14400	127	8640	97	6480	67	17280	180	25200	435		
3MM	15120	232	11520	202	9360	135	6000	97	4460	67	11520	202	17280	435		
4MM	10800	247	8640	202	7200	150	4320	97	3240	75	8640	202	12960	435		
5MM	9000	270	6840	202	5760	150	3600	112	2700	82	6840	202	10080	487		
6MM	7200	270	5760	202	4680	150	2880	112	2160	82	5760	202	8640	540		
8MM	5400	270	4320	232	3600	165	2160	112	1620	82	4320	232	6480	540		
10MM	4320	270	3420	232	2880	180	1740	112	1300	82	3420	232	5040	570		
12MM	3600	270	2880	232	2400	180	1440	112	1080	82	2880	232	4320	600		
14MM	3600	300	2720	255	2280	195	1440	120	1080	90	2720	255	4000	660		
16MM	3120	330	2400	270	2000	210	1260	135	940	97	2400	270	3600	720		
18MM	3120	330	2120	270	1760	210	1260	135	940	97	2120	270	3200	720		
20MM	2400	330	1920	270	1600	210	960	135	720	97	1920	270	2800	720		
切削量 Milling Amount (mm)	Ad=0.3D(D<3,Ad<=0.15D)								Ad=0.06D(D<3,Ad<=0.03D)				Ad=0.3D(D<3,Ad<=0.15D)			

SE650 With 4 flutes

SE650-4極細微粒碳化鎢鋼高速立銑刀

加工材質 processed material	合金鋼/工具鋼 alloy steel/tool steel	合金鋼/工具鋼 alloy steel/tool steel	合金鋼/工具鋼 alloy steel/tool steel	調質鋼 tempered steel	調質鋼 tempered steel	不銹鋼 stainless steel	鑄鐵 cast iron							
被切削材料代號 processed material code	(S45C,S50C,SCM)	(SCM,SKT,SKD)	(SCM,SKT,SKD)	(SKT,SKD)	(SKT,SKD)	(SUS304)	(FC/FCD)							
被切削材料硬度 processed material hardness	HRC<20	HRC20~30	HRC30~40	HRC45~55	HRC50~60									
切削速度Vc milling speed	136M/min	107M/min	90M/min	54M/min	41M/min	107M/min	158M/min							
外徑 diameter	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)		
3MM	15120	735	11520	517	9360	247	6040	300	4600	225	11520	517	17280	1350
4MM	10800	735	8640	517	7200	247	4320	300	3240	225	8640	517	12960	1620
5MM	9000	735	6840	517	5760	247	3600	300	2700	225	6840	517	10080	1620
6MM	7200	735	5760	517	4680	247	2880	300	2160	225	5760	517	8640	1620
8MM	5400	735	4320	517	3600	262	2160	300	1620	225	4320	517	6480	1620
10MM	4320	757	3420	540	2880	262	1720	315	1300	232	3420	540	5040	1755
12MM	3600	757	2880	540	2400	262	1440	315	1080	232	2880	540	4320	1890
14MM	3600	840	2720	600	2280	285	1440	345	1080	255	2720	600	4000	2100
16MM	3120	900	2400	630	2000	300	1240	360	940	270	2400	630	3600	2250
18MM	3120	900	2120	630	1760	300	1120	360	940	270	2120	630	3200	2250
20MM	2400	900	1920	630	1600	300	960	360	720	270	1920	630	2800	2400
切削量 Milling Amount (mm)	Ad=1.5D,RD<=0.06D				Ad=1D,RD<=0.03D				Ad=1.5D,RD<=0.06D					
														

SEB650極細微粒碳化鎢鋼高速二刃球形銑刀

SEB650 Tungsten carbide ball end mill with 2 flutes



SEB650-2 Series

SEB650-2系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SEB650-2005	0.5R	2	50	4/6
SEB650-20075	0.75R	3	50	4/6
SEB650-2010	1R	4	50	4/6
SEB650-20125	1.25R	5	50	4/6
SEB650-2015	1.5R	6	50	3/4/6
SEB650-2020	2R	8	50	4/6
SEB650-2025	2.5R	10	50	5/6
SEB650-2030	3R	12	50	6
SEB650-2035	3.5R	14	60	8
SEB650-2040	4R	16	60	8
SEB650-2050	5R	20	75	10
SEB650-2060	6R	24	75	12



Co
9%

Wc
91%

Dia
0.2μm

SEB650L-2 Longer Shank Series

SEB650L-2長柄系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SEB650L-2010	1R	4	75	4/6
SEB650L-2015	1.5R	6	75	4/6
SEB650L-2020	2R	8	75	4/6
SEB650L-2025	2.5R	10	75	5/6
SEB650L-2030	3R	12	100	6
SEB650L-2040	4R	16	100	8
SEB650L-2050	5R	20	100	10
SEB650L-2060	6R	24	100	12



產品特點:

1. 適用於加工材質硬度低於HRC55 ° 的碳素鋼，合金鋼，不銹鋼，鈦合金
2. 刀刃光滑，排屑順暢，加工高效
3. 精度佳，刀具壽命長

Product Feature:

1. Suitable for machining material hardness less than HRC55 ° , such as carbon steel, alloy steel, stainless steel, titanium alloy steel.
2. Sharp cutting edge with smooth metal evacuation ensures high efficiency machining.
3. High precision with longer life

注：柄徑4/6 所对应的下单编号如：SB630-2005-4 SB630-2005-6

SEB650 Tungsten carbide ball end mill

SEB650極細微粒碳化鎢鋼高速球形銑刀

加工材質 processed material	合金鋼/工具鋼 alloy steel/tool steel		合金鋼/工具鋼 alloy steel/tool steel		合金鋼/工具鋼 alloy steel/tool steel		調質鋼 tempered steel		調質鋼 tempered steel		不銹鋼 stainless steel		鑄鐵 cast iron	
被切削材料代號 processed material code	(S45C,S50C,SCM)		(SCM,SKT,SKD)		(SCM,SKT,SKD)		(SKT,SKD)		(SKT,SKD)		(SUS304)		(FC/FCD)	
被切削材料硬度 processed material hardness	HRC<20		HRC20~30		HRC30~40		HRC40~50		HRC50~60					
切削速度Vc milling speed	144M/min		107M/min		68M/min		57M/min		43M/min		107M/min		144M/min	
外徑 diameter	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)	R.P.M	FEED (mm/min)
0.5R	72000	675	64800	570	43200	435	28800	180	21600	202	64800	570	90000	1110
1.0R	41040	900	32400	735	23400	570	16400	240	12320	270	32400	735	45720	1350
2.0R	23040	1080	17280	840	12600	652	9200	290	6920	324	17280	840	23040	1545
3.0R	15120	1350	11520	900	7560	675	6040	360	1540	405	11520	900	15120	1890
4.0R	11520	1350	8640	900	5760	675	4600	360	3460	405	8640	900	11520	1890
5.0R	9180	1350	6840	900	4320	675	3660	360	2760	405	6840	900	9180	1890
6.0R	7560	1350	5760	930	3600	705	3040	360	2280	405	5760	930	7560	2025
切削量 Milling Amount (mm)	Ad=0.03D,Pf<=0.06D													

- 初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
 - 請採用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
 - 刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
 - 在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
 - 為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況發生，請採用順銑方式切削。
- The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
 - Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
 - The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
 - When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
 - In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting .

SX650極細微粒碳化鎢鋼斜度銑刀

SX650 Tungsten carbide slope end mill

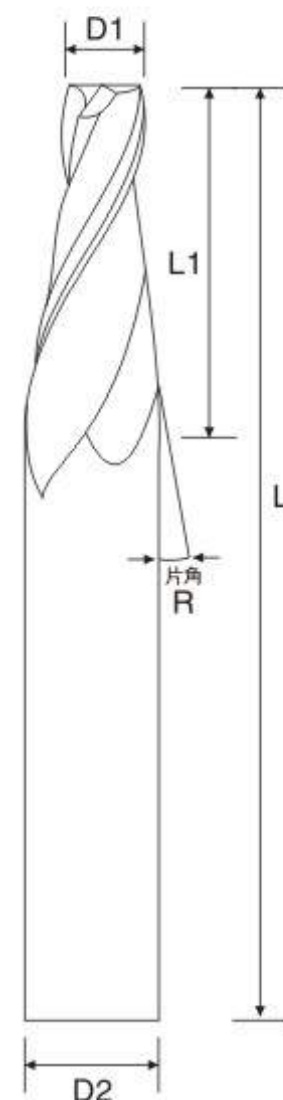
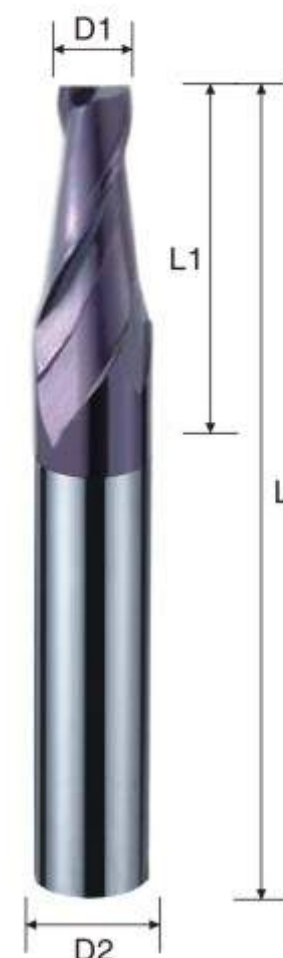


SX650-2-4 Series

SX650-2-4系列



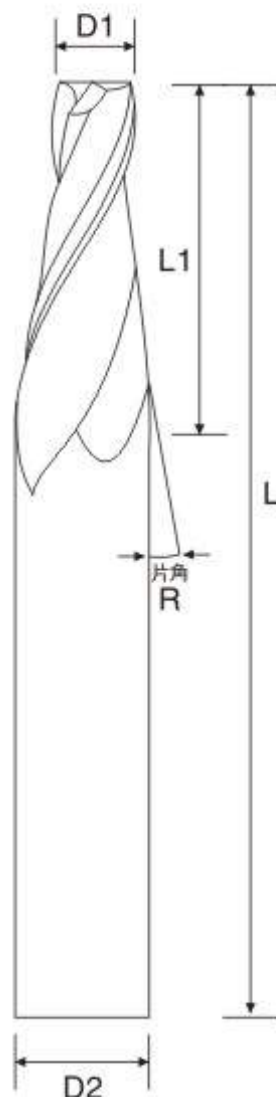
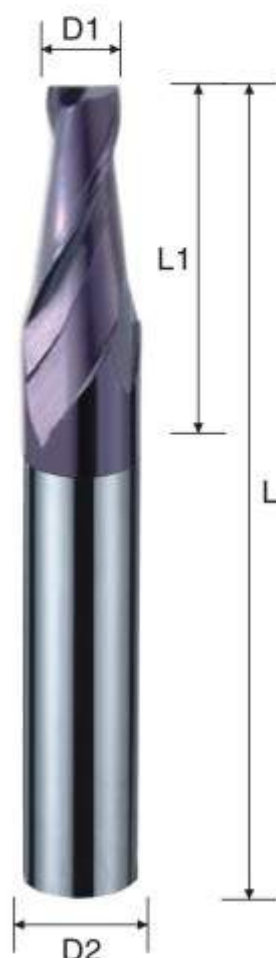
產品編號 Product NO.	先端徑 Diameter D1	單角 Single Angle R	刃長 Flute Length L1	全長 O.A.L. L	柄徑 Shank Dia D2
SX650-1-0.5	1	0.5	4	50	4
SX650-1-1	1	1	4	50	4
SX650-1-1.5	1	1.5	4	50	4
SX650-1-2	1	2	4	50	4
SX650-1-2.5	1	2.5	4	50	4
SX650-1-3	1	3	4	50	4
SX650-1-5	1	5	4	50	4
SX650-1-7	1	7	4	50	4
SX650-1-10	1	10	4	50	4
SX650-1.5-0.5	1.5	0.5	5	50	4
SX650-1.5-1	1.5	1	5	50	4
SX650-1.5-1.5	1.5	1.5	5	50	4
SX650-1.5-2	1.5	2	5	50	4
SX650-1.5-2.5	1.5	2.5	5	50	4
SX650-1.5-3	1.5	3	5	50	4
SX650-1.5-5	1.5	5	5	50	4
SX650-1.5-7	1.5	7	5	50	4
SX650-2-10	2	10	6	50	4
SX650-2-0.5	2	0.5	6	50	4
SX650-2-1	2	1	6	50	4
SX650-2-1.5	2	1.5	6	50	4
SX650-2-2	2	2	6	50	4
SX650-2-2.5	2	2.5	6	50	4
SX650-2-3	2	3	6	50	4
SX650-2-5	2	5	6	50	4
SX650-2-7	2	7	6	50	4
SX650-2-10	2	10	6	50	4
SX650-2.5-0.5	2.5	0.5	8	50	4
SX650-2.5-1	2.5	1	8	50	4
SX650-2.5-1.5	2.5	1.5	8	50	4
SX650-2.5-2	2.5	2	8	50	4
SX650-2.5-2.5	2.5	2.5	8	50	4
SX650-2.5-3	2.5	3	8	50	4
SX650-2.5-5	2.5	5	8	50	4
SX650-2.5-7	2.5	7	8	50	6
SX650-2.5-10	2.5	10	8	50	6
SX650-3-0.5	3	0.5	10	50	6
SX650-3-1	3	1	10	50	6
SX650-3-1.5	3	1.5	10	50	6
SX650-3-2	3	2	10	50	6
SX650-3-2.5	3	2.5	10	50	6
SX650-3-3	3	3	10	50	6
SX650-3-5	3	5	10	50	6
SX650-3-7	3	7	10	50	6
SX650-3-10	3	10	10	50	6



Co
9%

Wc
91%

Dia
0.2μm



Co
9%

Wc
91%

Dia
0.2μm

SX650-2-4 Series

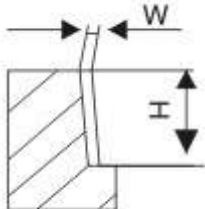
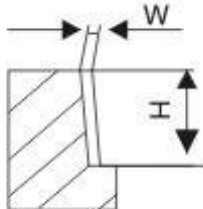
SX650-2-4系列



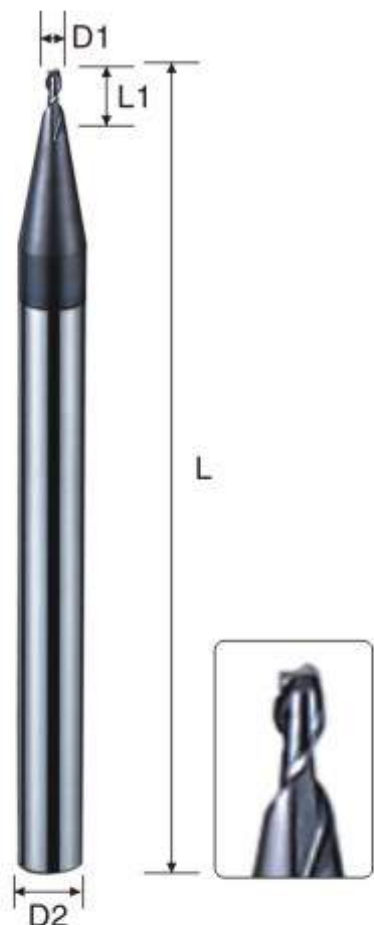
產品編號 Product NO.	先端徑 Diameter D1	單角 Single Angle R	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SX650-4-0.5	4	0.5	15	50	6
SX650-4-1	4	1	15	50	6
SX650-4-1.5	4	1.5	15	50	6
SX650-4-2	4	2	15	50	6
SX650-4-2.5	4	2.5	15	50	6
SX650-4-3	4	3	15	50	6
SX650-4-5	4	5	15	50	8
SX650-4-7	4	7	15	50	8
SX650-4-10	4	10	15	50	10
SX650-5-0.5	5	0.5	20	60	6
SX650-5-1	5	1	20	60	6
SX650-5-1.5	5	1.5	20	60	6
SX650-5-2	5	2	20	60	8
SX650-5-2.5	5	2.5	20	60	8
SX650-5-3	5	3	20	60	8
SX650-5-5	5	5	20	75	10
SX650-5-7	5	7	20	75	10
SX650-5-10	5	10	20	75	12
SX650-6-0.5	6	0.5	20	60	8
SX650-6-1	6	1	20	60	8
SX650-6-1.5	6	1.5	20	60	8
SX650-6-2	6	2	20	60	8
SX650-6-2.5	6	2.5	20	60	8
SX650-6-3	6	3	20	60	8
SX650-6-5	6	5	20	75	10
SX650-6-7	6	7	20	75	12
SX650-6-10	6	10	20	75	12
SX650-8-0.5	8	0.5	25	75	10
SX650-8-1	8	1	25	75	10
SX650-8-1.5	8	1.5	25	75	10
SX650-8-2	8	2	25	75	10
SX650-8-2.5	8	2.5	22	75	12
SX650-8-3	8	3	25	75	12
SX650-8-5	8	5	25	75	12
SX650-8-7	8	7	25	75	12
SX650-10-0.5	10	0.5	35	100	12
SX650-10-1	10	1	35	100	12
SX650-10-1.5	10	1.5	35	100	12
SX650-10-2	10	2	35	100	12
SX650-10-2.5	10	2.5	35	100	12
SX650-10-3	10	3	35	100	12
SX650-10-5	10	5	35	100	16

SX650 Tungsten carbide slope end mill

SX650極細微粒碳化鎢鋼斜度銑刀

被切削材料 processed material code	鐵材, 碳素鋼, 鑄鐵, 合金鋼, 模具鋼, 工具鋼 Iron, carbon steel, cast iron, alloy steel, tool steel, die steel SS41, S45C, FC, FCD SCR, SCM, SNC, SNCM SK, SKS, SKT, SKD PDS1, PDS3, S50C, YK30	合金鋼, 工具鋼 模具鋼, 熱處理鋼 alloy steel, tool steel, die steel, heat-treated steel SCR, SCM, SNC, SNCM SKD, NAK101 PDS5, P20	合金鋼, 工具鋼, 模具鋼, 熱處理鋼 alloy steel, tool steel, die steel, heat-treated steel SCR, SCM, SNC, SNCM SKD, NAK55, NAK80 P20S, FDAC	熱處理鋼 不銹鋼 heat-treated steel stainless steel SUS304 SUS316 SUS420J2	耐熱合金 鎳基合金 INCONEL TI-6AL-4V
被切削材硬度 material hardness	HRC30以下	HRC30-35	HRC35-40	HRC40-45	HRC45-55
立銑刀刃徑	轉速 轉/分 rpm/min 進給 mm/分 feeding/min	轉速 轉/分 rpm/min 進給 mm/分 feeding/min	轉速 轉/分 rpm/min 進給 mm/分 feeding/min	轉速 轉/分 rpm/min 進給 mm/分 feeding/min	轉速 轉/分 rpm/min 進給 mm/分 feeding/min
D 3.0	3400 45	2250 30	2000 26	1800 23	750 9
D 4.0	3200 75	1900 35	1700 32	1500 30	630 12
D 5.0	2850 75	1700 45	1550 40	1350 36	560 15
D 6.0	2650 100	1600 60	1450 52	1250 45	530 19
D 8.0	2000 100	1200 60	1100 52	950 45	400 19
D 10.0	1600 100	950 60	850 52	750 45	320 19
最大切削量	 H=2.5D以下, W=0.02D以下			 H=2D以下, W=0.01D以下	

- 初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
 - 請採用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
 - 刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
 - 在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
 - 鋼料之冷卻以噴霧式或噴氣式為最佳選用方式，不銹鋼，鈦合金與耐熱合金建議採用不水溶性切削液。
 - 為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況，請採用順銑方式切削。
- The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
 - Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
 - The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
 - When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
 - In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting.



SRE650-2 series

SRE650-2系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SRE650-2002	0.2	0.4	50	4
SRE650-2003	0.3	0.6	50	4
SRE650-2004	0.4	0.8	50	4
SRE650-2005	0.5	1.0	50	4
SRE650-2006	0.6	1.2	50	4
SRE650-2007	0.7	1.4	50	4
SRE650-2008	0.8	1.6	50	4
SRE650-2009	0.9	1.8	50	4

SRE650 Cutting parameters

SRE650微小徑立銑刀切削參數

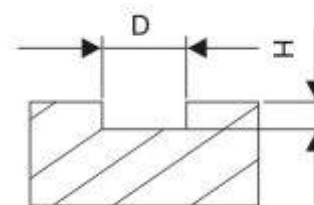
Co
9%

Wc
91%

Dia
0.2μm

被切削材料 processed material code		鐵材, 碳素鋼, 鑄鐵, 合金鋼, 工具鋼, 模具鋼 Iron, carbon steel, cast iron, alloy steel, tool steel, die steel SS41, S45C, FC, FCD SCR, SCM, SNC, SNCM SK, SKS, SKT, SKD PDS1, PDS3, S50C, YK30		合金鋼, 工具鋼 模具鋼, 熱處理鋼 alloy steel, tool steel, die steel, heat-treated steel SCR, SCM, SNC, SNCM SKD, NAK101 PDS5, P20		合金鋼, 工具鋼, 不銹鋼 模具鋼, 熱處理鋼 alloy steel, tool steel, die steel, stainless steel, heat-treated steel SCR, SCM, SNC, SNCM SKD, NAK55, NAK80 P20S, FDAC, SUS420J2 SUS304, SUS316		熱處理鋼 heat-treated steel	
被切削材硬度 material hardness		HRC30以下		HRC30-35		HRC35-40		HRC40-45	
立銑刀刃徑 mm	最大切削量 mm	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min
D0.20	0.015	20000-50000	200-1500	15000-30000	150-1000	10000-20000	100-500	5000-15000	50-250
D 0.30	0.020	20000-50000	200-1500	15000-30000	150-1000	10000-20000	100-500	5000-15000	50-250
D 0.40	0.025	20000-50000	200-1500	15000-30000	150-1000	10000-20000	100-500	5000-15000	50-250
D 0.50	0.030	20000-50000	200-1500	15000-30000	150-1000	10000-20000	100-500	5000-15000	50-250
D 0.60	0.035	20000-50000	200-1500	15000-30000	150-1000	10000-20000	100-500	5000-15000	50-250
D 0.70	0.040	20000-50000	200-1500	15000-30000	150-1000	10000-20000	100-500	5000-15000	50-250
D 0.80	0.045	20000-50000	200-1500	15000-30000	150-1000	10000-20000	100-500	5000-15000	50-250
D 0.90	0.045	20000-50000	200-1500	15000-30000	150-1000	10000-20000	100-500	5000-15000	50-250

- 初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
- 請採用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
- 刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
- 在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
- 鋼料之冷卻以噴霧式或噴氣式為最佳選用方式，不銹鋼，鈦合金與耐熱合金建議採用不水溶性切削液。
- 為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況，請採用順銑方式切削。



- The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
- Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
- The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
- When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
- In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting.

SRE650L極細微粒碳化鎢鋼長頸立銑刀

SRE650L Tungsten carbide long neck ball end mill

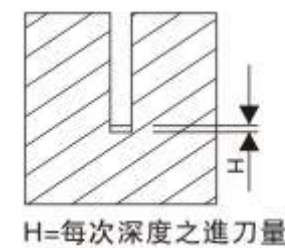


SRE650L-2 series

SRE650L-2系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	有效長 Effective Length L2	全長 O.A.L L	柄徑 Shank Dia D2
SRE650L-2003-3	0.3	0.6	3	50	4
SRE650L-2004-4	0.4	0.8	4	50	4
SRE650L-2005-4/6	0.5	1	4/6	50	4
SRE650L-2005-8	0.5	1	8	50	4
SRE650L-2006-4/6	0.6	1.2	4/6	50	4
SRE650L-2006-8/12	0.6	1.2	8/12	50	4
SRE650L-2007-4/6	0.7	1.4	4/6	50	4
SRE650L-2007-7/8	0.7	1.4	7/8	50	4
SRE650L-2008-4/6	0.8	1.6	4/6	50	4
SRE650L-2008-8/12	0.8	1.6	8/12	50	4
SRE650L-2009-4/6	0.9	1.8	4/6	50	4
SRE650L-2009-8	0.9	1.8	8	50	4
SRE650L-2010-4/6	1	2.5	4/6	50	4
SRE650L-2010-8/10	1	2.5	8/10	50	4
SRE650L-2010-12/15	1	2.5	12/15	50	4
SRE650L-2010-16	1	2.5	16	50?	4
SRE650L-2012-4/6	1.2	3	4/6	50	4
SRE650L-2012-8/10	1.2	3	8/10	50?	4
SRE650L-2012-12	1.2	3	12	50	4
SRE650L-2015-6/8	1.5	4	6/8	50	4
SRE650L-2015-10/12	1.5	4	10/12	50	4
SRE650L-2015-16	1.5	4	16	50	4
SRE650L-2020-6/8	2	5	6/8	50	4
SRE650L-2020-10/12	2	5	10/12	50	4
SRE650L-2020-15/16	2	5	15/16	50	4
SRE650L-2020-20	2	5	20	50	4
SRE650L-2025-10	2.5	6.5	10	50?	4
SRE650L-2030-12	3	7.5	12	50	4
SRE650L-2040-16	4	10	16	50	4



被切削材料 processed material code		鐵材, 碳素鋼, 鑄鐵, 合金鋼, 工具鋼, 模具鋼 Iron, carbon steel, cast iron, alloy steel, tool steel, die steel SS41, S45C, FC, FCD SCR, SCM, SNC, SNCM SK, SKS, SKT, SKD PDS1, PDS3, S50C, YK30		合金鋼, 工具鋼 模具鋼, 熱處理鋼 alloy steel, tool steel, die steel, heat-treated steel SCR, SCM, SNC, SNCM SKD, NAK101 PDS5, P20		熱處理鋼 heat-treated steel	
被切削材硬度 material hardness		HRC35以下		HRC45-55		HRC55-65	
立銑刀刃徑 mm	最大切削量 mm	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min
D0.50	H0.006-0.035	26000	280-315	23900	265-310	18000	100-115
D0.60	H0.007-0.030	22000	260-290	18300	295-340	14200	100-120
D0.70	H0.008-0.035	16700	280-310	16000	260-290	12800	110-125
D0.80	H0.009-0.040	16700	250-280	15500	280-310	11900	100-115
D0.90	H0.010-0.035	16500	250-280	14200	280-310	11500	100-115
D 1.0	H 0.02-0.030	12800	260-340	9000	250-280	9000	105-280
D 1.5	H 0.02-0.030	8500	260-340	6800	250-300	5400	105-310
D 2.0	H 0.04-0.080	6400	260-340	5200	250-300	3600	105-310



SRB650-2 series

SRB650-2系列



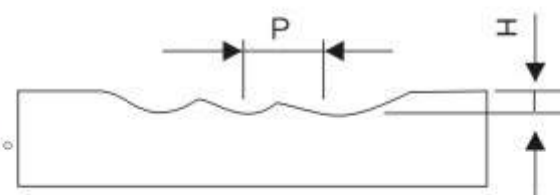
產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SRB650-2010	0.1R	0.4	50	4
SRB650-2020	0.2R	0.7	50	4
SRB650-2025	0.25R	0.8	50	4
SRB650-2030	0.3R	0.9	50	4
SRB650-2040	0.4R	1.6	50	4
SRB650-2060	0.6R	2.4	50	4
SRB650-2070	0.7R	2.8	50	4
SRB650-2080	0.8R	3.2	50	4
SRB650-2090	0.9R	3.6	50	4

SRB650 Tungsten carbide micro diameter ball end mill

SRB650微小徑球形銑刀切削參數

Co 9%								
Wc 91%								
Dia 0.2μm								
被切削材料 processed material code			鐵材，碳素鋼，鑄鐵， 合金鋼，工具鋼，模具鋼 Iron, carbon steel, cast iron, alloy steel, tool steel, die steel SS41, S45C, FC, FCD SCR, SCM, SNC, SNCM SK, SKS, SKT, SKD PDS1, PDS3, S50C, YK30		合金鋼，工具鋼， 模具鋼，熱處理鋼 alloy steel, tool steel, die steel, heat-treated steel SCR, SCM, SNC, SNCM, SKD, NAK101, PDS5, P20		合金鋼，工具鋼，模具鋼， 不銹鋼，熱處理鋼 alloy steel, tool steel, die steel, stainless steel, heat-treated steel SCR, SCM, SNC, SNCM SKT, SKD, NAK55, NAK80 P20S, FDAC, SUS304 SUS316, SUS420J2	
被切削材硬度 material hardness			HRC30-35		HRC35-45		HRC45-55	
立銑刀R徑 mm	最大切削量 H	P	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min
R 0.20	0.012	0.020	32000	560	32000	510	32000	480
R 0.25	0.015	0.025	32000	640	32000	570	32000	440
R 0.30	0.018	0.030	32000	690	32000	630	32000	610
R 0.40	0.024	0.040	32000	920	32000	850	32000	820
R 0.60	0.030	0.045	32000	1040	32000	920	32000	860
R 0.70	0.035	0.050	32000	1120	32000	1040	32000	920
R 0.80	0.039	0.055	32000	1130	32000	1120	32000	1040
R 0.90	0.040	0.060	32000	1160	32000	1130	32000	1120

- 初次使用本刀具時，進給速度依上術數據之50%度切削，切削狀況穩定后再將進給速度逐一調升。
- 請採用高精度高剛性與動態平衡之夾頭組，刀具之偏擺精度超過0.01mm時，請改善后再切削。
- 刀具伸出夾頭之長度愈短愈好，刀具之伸出量若伸出較長時，請自行調降轉速，進給速度或切削量。
- 在切削中如果發生異常之震動可聲音時，逐一調降主軸轉速，進給速度或切削量至情況改善為止。
- 鋼料之冷卻以噴霧式或噴氣式為最佳選用方式，不銹鋼，鈦合金與耐熱合金建議採用不水溶性切削液。
- 為了防止刀刃與切屑產生二次切削而導致刀刃崩裂，為了避免過切之情況，請採用順銑方式切削。



- The feeding speed should be tested as 50% of the above data by using this tool for the first time, then cutting speed and feed rate can be adjusted step by step under stable cutting condition.
- Please use the clamping module with high precision and good balance. When the tool deflection accuracy is over 0.01mm, it should be improved before cutting.
- The shorter the length of cutting tool extending the chuck, the better for the tool. When the cutting tool stretches out longer, please slow down the rotation speed, feeding speed or milling amount.
- When abnormal vibration sound occurs during processing, slow down the spindle speed one by one, modify the feed speed or milling amount until the condition is improved.
- In order to prevent tool flute from cracking caused by secondary milling between flute and chips, please process by climb milling to avoid overcutting.

SRB650L極細微粒碳化鎢鋼長頸球形銑刀

SRB650 Tungsten carbide micro diameter ball end mill



SRB650L-2 series

SRB650L-2系列



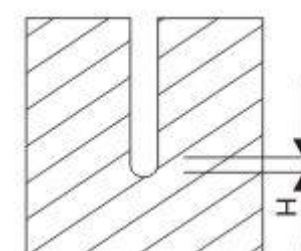
產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	有效長 Effective Length L2	全長 O.A.L. L	柄徑 Shank Dia D2
SRB650L-2001-1/2	0.1R	0.4	1/2	50	4
SRB650L-2002-2/3	0.2R	0.8	2/3	50	4
SRB650L-20025-4/6	0.25R	1	4/6	50	4
SRB650L-20025-8	0.25R	1	8	50	4
SRB650L-2003-2/3	0.3R	1.2	2/3	50	4
SRB650L-2003-4/6	0.3R	1.2	4/6	50	4
SRB650L-2003-8	0.3R	1.2	8	50	4
SRB650L-20035-4/6	0.35R	1.4	4/6	50	4
SRB650L-20035-8	0.35R	1.4	8	50	4
SRB650L-2004-2/4	0.4R	1.6	2/4	50	4
SRB650L-2004-6/8	0.4R	1.6	6/8	50	4
SRB650L-2005-4/6	0.5R	2	4/6	50	4
SRB650L-2005-8/10	0.5R	2	8/10	50	4
SRB650L-2005-12/15	0.5R	2	12/15	50	4
SRB650L-2006-6/8	0.6R	2.4	6/8	50	4
SRB650L-2006-12	0.6R	2.4	12	50	4
SRB650L-20075-6/8	0.75R	3	6/8	50	4
SRB650L-20075-10/12	0.75R	3	10/12	50	4
SRB650L-20075-16	0.75R	3	16	50	4
SRB650L-2010-6/8	1R	4	6/8	50	4
SRB650L-2010-10/12	1R	4	10/12	50	4
SRB650L-2010-15/16	1R	4	15/16	50	4
SRB650L-2015-10/12	1.5R	6	10/12	50	4
SRB650L-2015-15/16	1.5R	6	15/16	50	4
SRB650L-2020-14	2R	8	14	50	4



Co
9%

Wc
91%

Dia
0.2μm



H=每次深度之進刀量

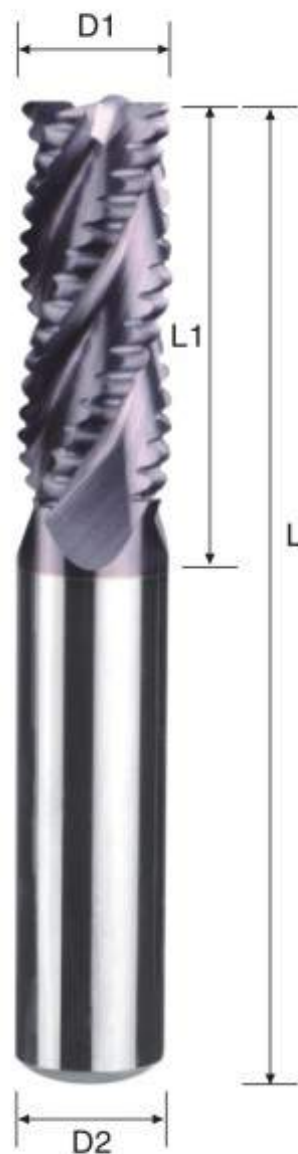
SRB650L Cutting parameters

SRB650L長頸球形銑刀切削參數

被切削材料 processed material code		鐵材, 碳素鋼, 鑄鐵, 合金鋼, 工具鋼, 模具鋼 Iron, carbon steel, cast iron, alloy steel, tool steel, die steel SS41, S45C, FC, FCD SCR, SCM, SNC, SNCM SK, SKS, SKT, SKD PDS1, PDS3, S50C, YK30		合金鋼, 工具鋼 模具鋼, 熱處理鋼 alloy steel, tool steel, die steel, heat-treated steel SCR, SCM, SNC, SNCM, SKD, NAK101PDS5, P20		合金鋼, 工具鋼, 模具鋼, 不銹鋼, 熱處理鋼 alloy steel, tool steel, die steel, stainless steel, heat-treated steel SCR, SCM, SNC, SNCM SKT, SKD, NAK55, NAK80 P20S, FDAC, SUS304 SUS316, SUS420J2	
被切削材硬度 material hardness		HRC30-35		HRC35-45		HRC45-55	
立銑刀R徑 mm	最大切削量 mm	轉速 轉/分 rpm/min	進給 Mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min	轉速 轉/分 rpm/min	進給 mm/分 feeding/min
R 0.2	H 0.008-0.010	48000-50000	480-520	48000-50000	440-450	46000-50000	390-400
R 0.25	H 0.010-0.017	48000-50000	470-520	48000-50000	440-460	46000-50000	380-415
R 0.3	H 0.010-0.017	48000-50000	460-510	48000-50000	440-460	46000-50000	370-410
R 0.4	H 0.013-0.032	34100-49500	720-790	34100-49500	450-540	31900-35200	400-460
R 0.5	H 0.030-0.060	22000-30800	600-870	22000-30800	450-540	26400-29700	440-480
R 0.75	H 0.040-0.090	12500-16500	590-850	12500-16500	480-540	19800-22200	440-480
R 1.0	H 0.060-0.120	9500-12500	600-850	9500-12500	490-540	12000-14000	440-480

SEH550 超微粒鎢鋼粗銑刀

SEH550 Tungsten carbide rough end mill



SEH550 Tungsten carbide rough end mill series

SEH550超微粒鎢鋼粗銑刀系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	全長 O.A.L L	柄徑 Shank Dia D2
SEH550-4040	4	10	50	6
SEH550-4060	6	15	50	6
SEH550-4080	8	20	60	8
SEH550-4100	10	25	75	10
SEH550-4120	12	30	75	12
SEH550-4160	16	35	100	16
SEH550-4200	20	45	100	20

1. 材質:超微粒鎢鋼
2. 刃數:4刃
3. 獨特圓弧間隙角設計
4. 適合粗銑加工

1. Material: tungsten steel
2. Flute: 4
3. Special design for round corner gap
4. Suitable for rough machining



SEAA550-4 Tungsten carbide end mill

SEAA550-4(AD系列)超微粒鎢鋼銑刀 (不等分割+不等螺旋)



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute length L1	全長 O.A.L L	柄徑 Shank Dia D2
SEAA550-4040-A2AD	4	9	50	6
SEAA550-4060-A2AD	6	13	50	6
SEAA550-4080-A2AD	8	19	60	8
SEAA550-4100-A2AD	10	22	75	10
SEAA550-4120-A2AD	12	26	75	12
SEAA550-4160-A2AD	16	35	100	16
SEAA550-4200-A2AD	20	45	100	20

1. 材質: 超微粒鎢鋼
2. 刃數:4刃
3. 獨特圓弧間隙角設計
4. 獨特不等分割/不等螺旋可避免機械共振
5. 高度提聲工作效率

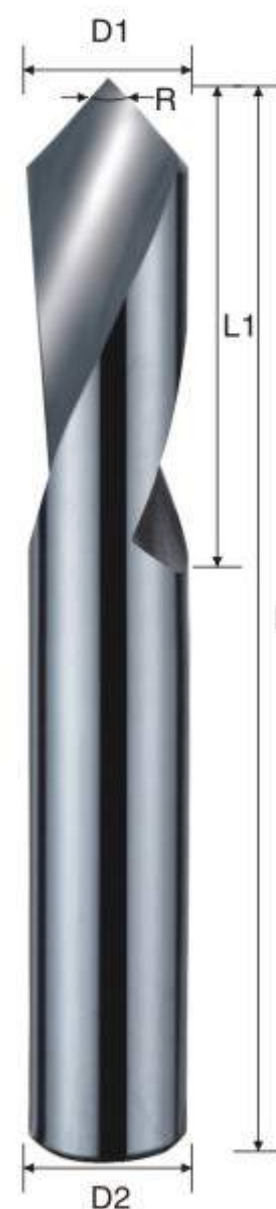
1. Material: tungsten steel
2. Flute: 4
3. Special design for round corner gap
4. Unequal design of cutting helix to avoid mechanical resonance
5. Improved processing efficiency

SKPD series

SKPD系列



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	頂角 Angle R	全長 O.A.L L	柄徑 Shank Dia D2
SKPD-030-90	3	8	90°	50	3
SKPD-030-120	3	8	120°	50	3
SKPD-040-90	4	10	90°	50	4
SKPD-040-120	4	10	120°	50	4
SKPD-050-90	5	13	90°	50	5
SKPD-050-120	5	13	120°	50	5
SKPD-060-90	6	15	90°	50	6
SKPD-060-120	6	15	120°	50	6
SKPD-080-90	8	20	90°	60	8
SKPD-080-120	8	20	120°	60	8
SKPD-100-90	10	20	90°	75	10
SKPD-100-120	10	20	120°	75	10
SKPD-120-90	12	22	90°	75	12
SKPD-120-120	12	22	120°	75	12
SKPD-160-90	16	30	90°	100	16
SKPD-160-120	16	30	120°	100	16

Co
9%Wc
91%Dia
0.2μm

SKCS Tungsten carbide chamfer end mill

SKCS超微粒鎢鋼倒角銑刀



產品編號 Product NO.	先端徑 Diameter D1	刃長 Flute Length L1	頂角 Angle R	全長 O.A.L L	柄徑 Shank Dia D2
SKCS-030-90	3	8	90°	50	3
SKCS-030-120	3	8	120°	50	3
SKCS-040-90	4	10	90°	50	4
SKCS-040-120	4	10	120°	50	4
SKCS-050-90	5	13	90°	50	5
SKCS-050-120	5	13	120°	50	5
SKCS-060-90	6	15	90°	50	6
SKCS-060-120	6	15	120°	50	6
SKCS-080-90	8	20	90°	60	8
SKCS-080-120	8	20	120°	60	8
SKCS-100-90	10	20	90°	75	10
SKCS-100-120	10	20	120°	75	10
SKCS-120-90	12	22	90°	75	12
SKCS-120-120	12	22	120°	75	12
SKCS-160-90	16	30	90°	100	16
SKCS-160-120	16	30	120°	100	16



產品特點:

專屬的斷屑槽設計，倒角加工，清槽加工，角度面加工減少加工時間，節省加工成本。

Product Feature:

Unique design of chip removal slot promises cost-efficient processing in chamfering, grooving, angled surface.

速肯销售服务中心
Service center



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