





Non - Ferrous

Series



■ Non - Ferrous Series

Technical Data

● Details 產品特點

Tetrabond Diamond Coating TB超硬類鑽膜

A different type of DLC 並不是一般的類鑽膜

Super high lubrication & Super low friction coefficient

New PVD Nano Technology

The tool is long life to be surprised because "TB" hardness to near the the nature diamond coating
Swiss & Speed Tiger Technological Cooperation.

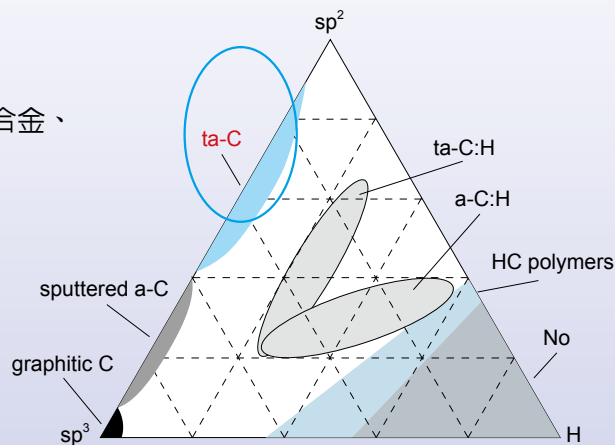
超高潤滑性・超低摩擦係數

最新奈米物理氣相沉積科技

超高硬度・超長壽命・惟有CVD鑽石薄膜可相比擬

泛虎與瑞士 Ionbond 技術合作開發

- Nano-composite coating which is improved the lubricative property without making the abrasive property lower by new coating material of nano-crystal.
- Excellent cutting is reached in machining non-ferrous materials, especially in aluminum with over six multiple in machining efficiency. Long tool life and precision machining in PCB boards, Brass, Titanium, Ceramics, Fiberglass etc.
- Dry cutting applicable, because of less cutting heat by improving friction property very much and wet cutting applicable.
- 奈米複合塗層採用奈米晶格靶材，大幅改善潤滑效果，有效的降低摩擦係數並且維持更好的耐摩耗性。
- 出色地應用在非鐵金屬加工，尤其是在鋁合金加工效率在6倍以上，並且在PCB板、銅、鈦合金、陶瓷形成超長刀具壽命和高品質加工。
- 摩擦係數大幅改善，形成較低的切削溫度，所以乾式切削可行，濕式切削亦可行。



Tetrabond Series

TB超硬類鑽膜 系列

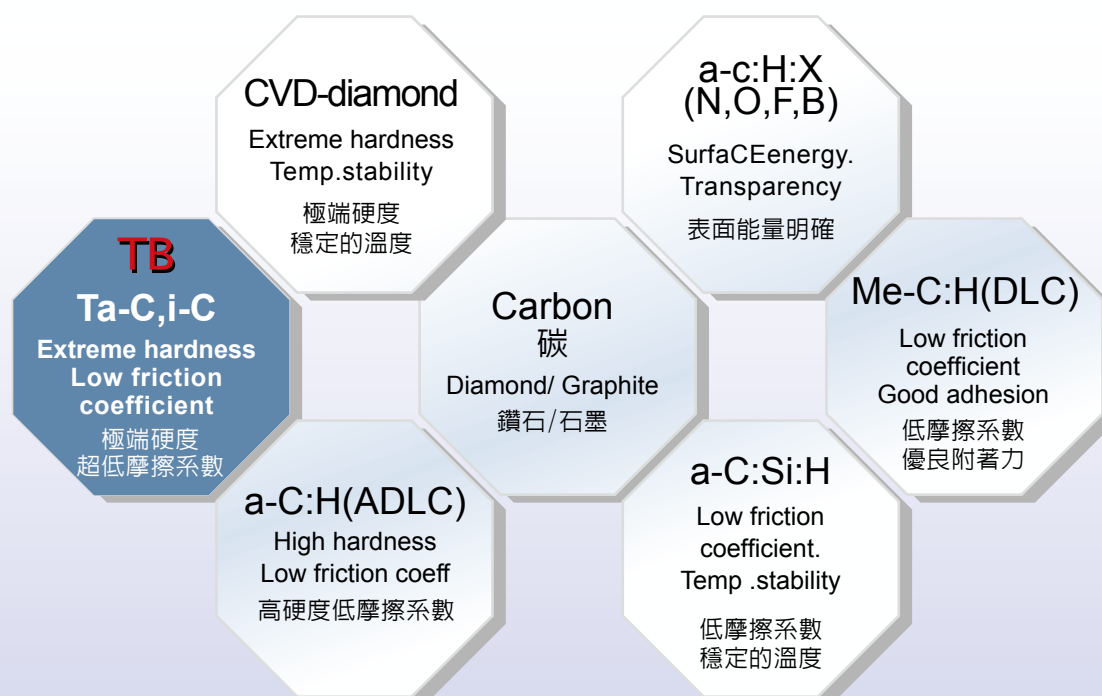
DLC coatings are generally deposited by five methods, each having different properties :

DLC 薄膜有5種不同的沉積方法，而每一個各有不同的特性：

		TB Ta:C	PVD a:CH	PVD Me:CH	CVD	PaCVD
Deposition temp	沈積溫度	under 150 C	under 200 C	under 200 C	over 900 C	under 200 C
Range of substrates	基材限制	Broad	Broad	Broad	Limited	Broad
Oxidation temp	氧化溫度	500-1000 C	350 C	300 C	700 C	300 C
Adhesion	附著力	Very good	Good	Very Good	Excellent	Good
Smoothness	平滑度	Good	Very good	Good	Good	Excellent
Hardness (GPA)	硬度	60-95	25	10-15	40-90	20-40
Coefficient of friction	摩擦係數	<0.1	<0.1	0.15	<0.4	<0.1
Hydrogenated	氫化	No	Yes or No	Yes	No	Yes
Metal content	金屬親和性	No	Yes	Yes	No	No

All DLC coatings are not equal : especially on Hardness and Oxidation

各種類鑽膜都有不同的特性，尤其是硬度和氧化溫度





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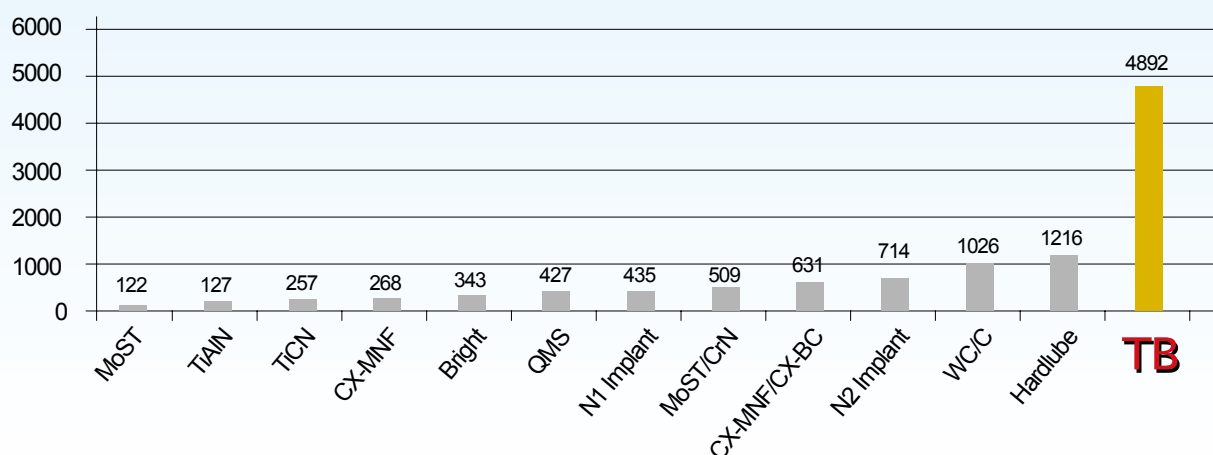
■ Performance and cost savings - Dry Drilling 節省成本和高性能－乾式鑽孔

Dry Drilling in A-319 Aluminum - pilot holes with cold-air 3500 rpm and 15 ipm / D13227A drills - Average number of holes.

鋁合金 (A-319) 乾式鑽孔－氣冷－3500rpm－15ipm/D13227A－平均鑽孔數

TB exhibits outstanding performance in machining aluminum!*

TB塗層在加工鋁件有著優異的表現



■ TetraBond Performance TB 類鑽石完美的表現在非鐵材質的加工

TETRABOND is an excellent choice for machining non-ferrous materials such as:
TB 類鑽石薄膜非常出色的表現在機器加工非鐵金屬材質上

- High silicon content aluminum alloys 高矽鋁合金
- Aluminum magnesium matrix materials 鋁合金
- Titanium 6Al4V 鈦金屬
- Epoxy resins 環氧樹脂
- Fiberglass and composites 玻璃纖維和合成
- Plastic 塑膠
- Graphite 石墨
- Brass and bronze 黃銅和青銅
- Ceramics... 陶瓷

■ **Tetrabond** Series

TB超硬類鑽膜 系列

■ **TETRABOND Advantages.**

TB 薄膜的優勢

- No substrate preparation required 不必特別選擇基材
- Suitable for HSS and carbide cutter 適合高速鋼和碳化鎢工具
- Able to strip and recoat without damaging the substrate 沒有任何有害物質，非常環保，且容易再塗層
- Thin coating maintains sharp edges 非常薄的膜厚可以保持工具銳利

■ **TETRABOND reduces manufacturing cost through:**

TB類鑽石薄膜可以大幅降低製造業成本

Higher Speeds & Feeds 高轉速和高進給	→	Improve productivity 增加生產效率
Reduced Tool Inventory 減少庫存工具	→	Tool cost savings 降低工具成本
Longer Tool Life 較長的工具壽命	→	Reduced downtime 減少停機時間
Improved Part Quality 精良的工作品質	→	Less scrap 較少的毛邊

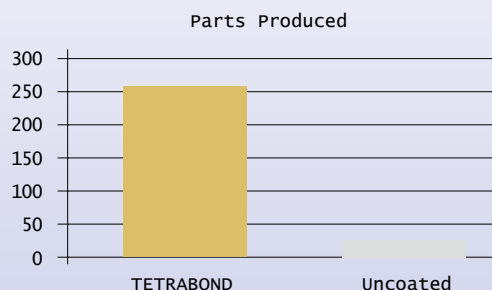
■ **Performance and cost savings Rough turning Titanium 6AL 4V**

性能和節省成本：鈦合金 6AL 4V的車削



Insert WNMG 431 T-F IC20 Work material : Titanium 6AL 4V
刀片WNHG431 T-F IC20、被切削材質：Titanium 6AL 4V

- Speed : 800 rpm → 轉速：800 rpm
- Feed : 0.011 fpr → 進給：0.011 fpr
- Depth of cut : 0.080 inches → 深度：0.080 英吋



TETRABOND coated tools achieved over eight multiple tool life over uncoated tools
相較其它無鍍層的刀具，TB塗層刀具效能多了8倍



Miniature Square series - 2 flutes

■ 2刃微小徑立銑刀

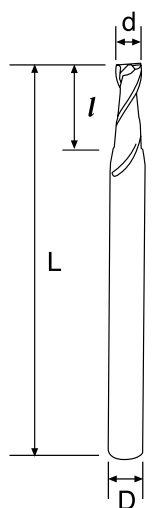
600
Nano

HRC
40

35°

● Super Ultra Fine Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
MIE0022	0.2	0.4	50	4	2
MIE0032	0.3	0.6	50	4	2
MIE0042	0.4	0.8	50	4	2
MIE0052	0.5	1	50	4	2
MIE0062	0.6	1.2	50	4	2
MIE0072	0.7	1.4	50	4	2
MIE0082	0.8	1.6	50	4	2
MIE0092	0.9	1.8	50	4	2
MIE0102	1	3	50	4	2
MIE0112	1.1	3	50	4	2
MIE0122	1.2	3	50	4	2
MIE0132	1.3	3	50	4	2
MIE0142	1.4	3	50	4	2
MIE0152	1.5	4	50	4	2
MIE0162	1.6	4	50	4	2
MIE0172	1.7	4	50	4	2
MIE0182	1.8	4	50	4	2
MIE0192	1.9	4	50	4	2
MIE0202	2	6	50	4	2
MIE0212	2.1	6	50	4	2
MIE0222	2.2	6	50	4	2
MIE0232	2.3	6	50	4	2
MIE0242	2.4	6	50	4	2
MIE0252	2.5	8	50	4	2
MIE0262	2.6	8	50	4	2
MIE0272	2.7	8	50	4	2
MIE0282	2.8	8	50	4	2
MIE0292	2.9	8	50	4	2
MIE0302	3	8	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎						○	○

Miniature Square series - 2 flutes

■ 2刃微小徑立銑刀

600
Nano

HRC
50

35°

AlTiN

● Super Ultra Fine Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
MIE0022 AlTiN	0.2	0.4	50	4	2
MIE0032 AlTiN	0.3	0.6	50	4	2
MIE0042 AlTiN	0.4	0.8	50	4	2
MIE0052 AlTiN	0.5	1	50	4	2
MIE0062 AlTiN	0.6	1.2	50	4	2
MIE0072 AlTiN	0.7	1.4	50	4	2
MIE0082 AlTiN	0.8	1.6	50	4	2
MIE0092 AlTiN	0.9	1.8	50	4	2
MIE0102 AlTiN	1	3	50	4	2
MIE0112 AlTiN	1.1	3	50	4	2
MIE0122 AlTiN	1.2	3	50	4	2
MIE0132 AlTiN	1.3	3	50	4	2
MIE0142 AlTiN	1.4	3	50	4	2
MIE0152 AlTiN	1.5	4	50	4	2
MIE0162 AlTiN	1.6	4	50	4	2
MIE0172 AlTiN	1.7	4	50	4	2
MIE0182 AlTiN	1.8	4	50	4	2
MIE0192 AlTiN	1.9	4	50	4	2
MIE0202 AlTiN	2	6	50	4	2
MIE0212 AlTiN	2.1	6	50	4	2
MIE0222 AlTiN	2.2	6	50	4	2
MIE0232 AlTiN	2.3	6	50	4	2
MIE0242 AlTiN	2.4	6	50	4	2
MIE0252 AlTiN	2.5	8	50	4	2
MIE0262 AlTiN	2.6	8	50	4	2
MIE0272 AlTiN	2.7	8	50	4	2
MIE0282 AlTiN	2.8	8	50	4	2
MIE0292 AlTiN	2.9	8	50	4	2
MIE0302 AlTiN	3	8	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		

HRC
40

HRC
45

HRC
50

HRC
55

HRC
60

HRC
65

◎

◎

◎

◎

◎

◎

◎

◎

◎

◎

◎

◎



Miniature Square series - 2 flutes

2刃微小徑立銑刀



● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
UMIE3022 nBS	0.2	0.4	38	3	2
UMIE3032 nBS	0.3	0.6	38	3	2
UMIE3042 nBS	0.4	0.7	38	3	2
UMIE3052 nBS	0.5	0.8	38	3	2
UMIE3062 nBS	0.6	0.9	38	3	2
UMIE3072 nBS	0.7	1.4	38	3	2
UMIE3082 nBS	0.8	1.6	38	3	2
UMIE3092 nBS	0.9	1.8	38	3	2
UMIE3102 nBS	1	3	38	3	2
UMIE3112 nBS	1.1	3	38	3	2
UMIE3122 nBS	1.2	3	38	3	2
UMIE3132 nBS	1.3	3	38	3	2
UMIE3142 nBS	1.4	3	38	3	2
UMIE3152 nBS	1.5	4	38	3	2
UMIE3162 nBS	1.6	4	38	3	2
UMIE3172 nBS	1.7	4	38	3	2
UMIE3182 nBS	1.8	4	38	3	2
UMIE3192 nBS	1.9	4	38	3	2
UMIE3202 nBS	2	6	38	3	2
UMIE3212 nBS	2.1	6	38	3	2
UMIE3222 nBS	2.2	6	38	3	2
UMIE3232 nBS	2.3	6	38	3	2
UMIE3242 nBS	2.4	6	38	3	2
UMIE3252 nBS	2.5	8	38	3	2
UMIE3262 nBS	2.6	8	38	3	2
UMIE3272 nBS	2.7	8	38	3	2
UMIE3282 nBS	2.8	8	38	3	2
UMIE3292 nBS	2.9	8	38	3	2
UMIE3302 nBS	3	8	38	3	2

Application 適用材質：

◎ Recommend 最適 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	○		○		

Miniature Square series - 2 flutes

■ 2刃微小徑立銑刀

400
Nano

HRC
▶ 60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
UMIE0022 nBS	0.2	0.4	50	4	2
UMIE0032 nBS	0.3	0.6	50	4	2
UMIE0042 nBS	0.4	0.7	50	4	2
UMIE0052 nBS	0.5	0.8	50	4	2
UMIE0062 nBS	0.6	0.9	50	4	2
UMIE0072 nBS	0.7	1.4	50	4	2
UMIE0082 nBS	0.8	1.6	50	4	2
UMIE0092 nBS	0.9	1.8	50	4	2
UMIE0102 nBS	1	3	50	4	2
UMIE0112 nBS	1.1	3	50	4	2
UMIE0122 nBS	1.2	3	50	4	2
UMIE0132 nBS	1.3	3	50	4	2
UMIE0142 nBS	1.4	3	50	4	2
UMIE0152 nBS	1.5	4	50	4	2
UMIE0162 nBS	1.6	4	50	4	2
UMIE0172 nBS	1.7	4	50	4	2
UMIE0182 nBS	1.8	4	50	4	2
UMIE0192 nBS	1.9	4	50	4	2
UMIE0202 nBS	2	6	50	4	2
UMIE0212 nBS	2.1	6	50	4	2
UMIE0222 nBS	2.2	6	50	4	2
UMIE0232 nBS	2.3	6	50	4	2
UMIE0242 nBS	2.4	6	50	4	2
UMIE0252 nBS	2.5	8	50	4	2
UMIE0262 nBS	2.6	8	50	4	2
UMIE0272 nBS	2.7	8	50	4	2
UMIE0282 nBS	2.8	8	50	4	2
UMIE0292 nBS	2.9	8	50	4	2
UMIE0302 nBS	3	8	50	4	2

Application 適用材質：

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carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	○		○		

HRC
▶ 40

HRC
▶ 45

HRC
▶ 50

HRC
▶ 55

HRC
▶ 60

HRC
▶ 65





Miniature Square series - 2 flutes

2刃微小徑立銑刀



- Super Ultra Fine Micro Grain Carbide
- WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
SFUMIE0023 TiSiN	0.2	0.4	38	3	2
SFUMIE0033 TiSiN	0.3	0.6	38	3	2
SFUMIE0043 TiSiN	0.4	0.8	38	3	2
SFUMIE0053 TiSiN	0.5	1	38	3	2
SFUMIE0063 TiSiN	0.6	1.2	38	3	2
SFUMIE0073 TiSiN	0.7	1.4	38	3	2
SFUMIE0083 TiSiN	0.8	1.6	38	3	2
SFUMIE0093 TiSiN	0.9	1.8	38	3	2
SFUMIE0103 TiSiN	1	2	38	3	2
SFUMIE0113 TiSiN	1.1	2	38	3	2
SFUMIE0123 TiSiN	1.2	2.5	38	3	2
SFUMIE0133 TiSiN	1.3	2.5	38	3	2
SFUMIE0143 TiSiN	1.4	3	38	3	2
SFUMIE0153 TiSiN	1.5	3	38	3	2
SFUMIE0163 TiSiN	1.6	3.5	38	3	2
SFUMIE0173 TiSiN	1.7	3.5	38	3	2
SFUMIE0183 TiSiN	1.8	4	38	3	2
SFUMIE0193 TiSiN	1.9	4	38	3	2
SFUMIE0203 TiSiN	2	4	38	3	2
SFUMIE0213 TiSiN	2.1	4	38	3	2
SFUMIE0223 TiSiN	2.2	4.5	38	3	2
SFUMIE0233 TiSiN	2.3	4.5	38	3	2
SFUMIE0243 TiSiN	2.4	5	38	3	2
SFUMIE0253 TiSiN	2.5	5	38	3	2
SFUMIE0263 TiSiN	2.6	5	38	3	2
SFUMIE0273 TiSiN	2.7	5.5	38	3	2
SFUMIE0283 TiSiN	2.8	5.5	38	3	2
SFUMIE0293 TiSiN	2.9	6	38	3	2
SFUMIE0303 TiSiN	3	6	38	3	2

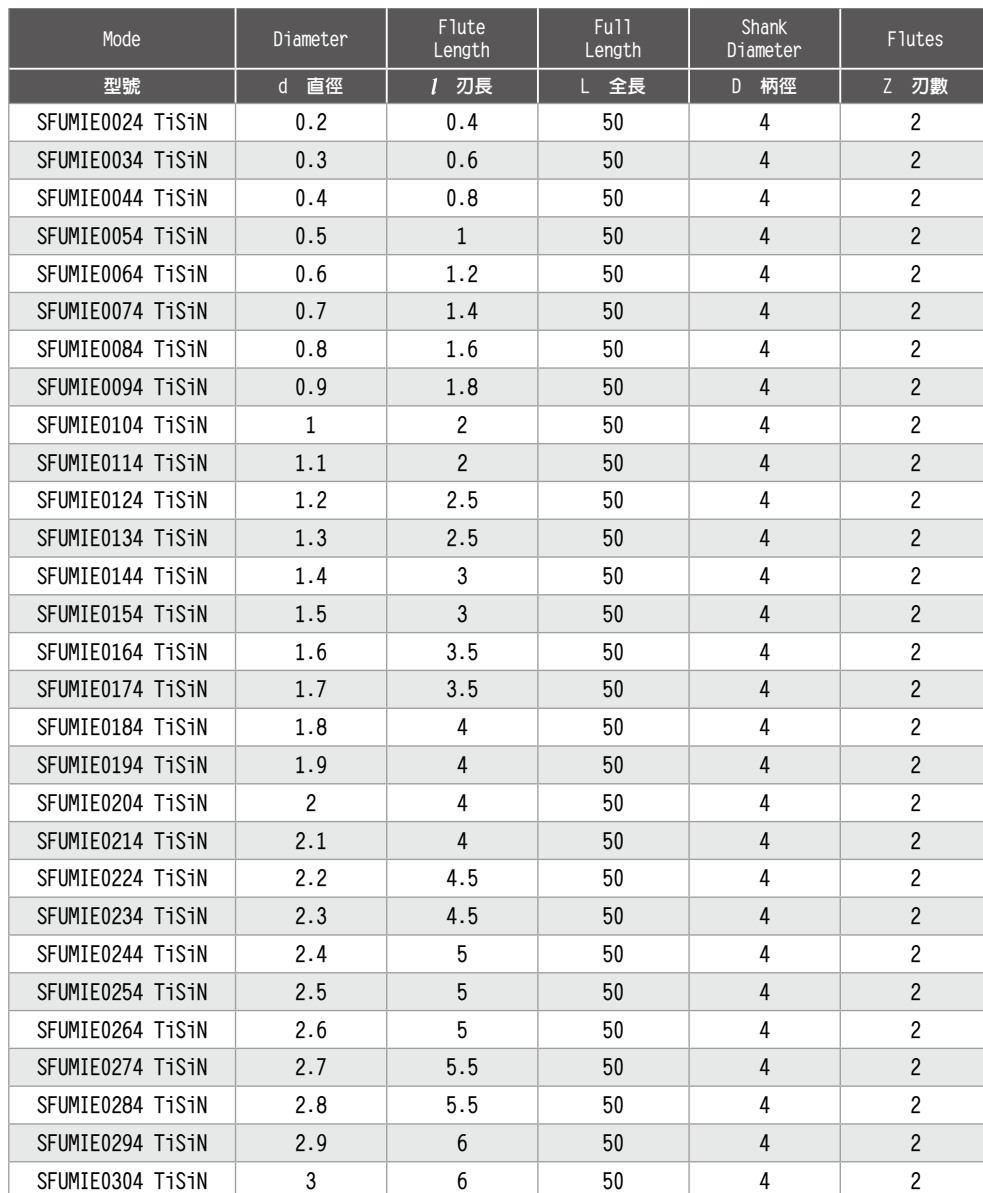
Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

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	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	○	○	◎	◎	○	○	○		



- WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	○	○		



Miniature Square series - 2 flutes

■ 2刃微小徑立銑刀

500
Nano

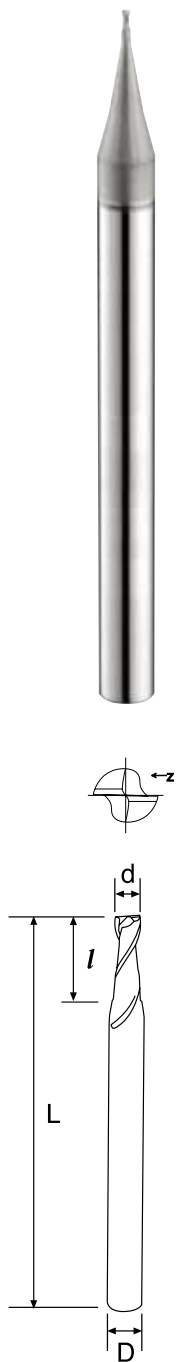
HRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUMIE 0022	0.2	0.4	50	4	2
SUMIE 0032	0.3	0.6	50	4	2
SUMIE 0042	0.4	0.8	50	4	2
SUMIE 0052	0.5	1	50	4	2
SUMIE 0062	0.6	1.2	50	4	2
SUMIE 0072	0.7	1.4	50	4	2
SUMIE 0082	0.8	1.6	50	4	2
SUMIE 0092	0.9	1.8	50	4	2
SUMIE 0102	1	3	50	4	2
SUMIE 0112	1.1	3	50	4	2
SUMIE 0122	1.2	3	50	4	2
SUMIE 0132	1.3	3	50	4	2
SUMIE 0142	1.4	3	50	4	2
SUMIE 0152	1.5	4	50	4	2
SUMIE 0162	1.6	4	50	4	2
SUMIE 0172	1.7	4	50	4	2
SUMIE 0182	1.8	4	50	4	2
SUMIE 0192	1.9	4	50	4	2
SUMIE 0202	2	6	50	4	2
SUMIE 0212	2.1	6	50	4	2
SUMIE 0222	2.2	6	50	4	2
SUMIE 0232	2.3	6	50	4	2
SUMIE 0242	2.4	6	50	4	2
SUMIE 0252	2.5	8	50	4	2
SUMIE 0262	2.6	8	50	4	2
SUMIE 0272	2.7	8	50	4	2
SUMIE 0282	2.8	8	50	4	2
SUMIE 0292	2.9	8	50	4	2
SUMIE 0302	3	8	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
◎	◎	○	○	○			◎	○	○

Miniature Square series - 2 flutes

■ 2刃微小徑立銑刀

500
Nano

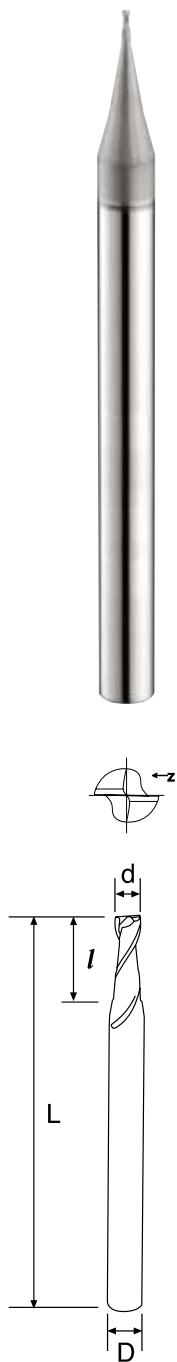
HRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUMIE 0022	0.2	0.4	50	4	2
SUMIE 0032	0.3	0.6	50	4	2
SUMIE 0042	0.4	0.8	50	4	2
SUMIE 0052	0.5	1	50	4	2
SUMIE 0062	0.6	1.2	50	4	2
SUMIE 0072	0.7	1.4	50	4	2
SUMIE 0082	0.8	1.6	50	4	2
SUMIE 0092	0.9	1.8	50	4	2
SUMIE 0102	1	3	50	4	2
SUMIE 0112	1.1	3	50	4	2
SUMIE 0122	1.2	3	50	4	2
SUMIE 0132	1.3	3	50	4	2
SUMIE 0142	1.4	3	50	4	2
SUMIE 0152	1.5	4	50	4	2
SUMIE 0162	1.6	4	50	4	2
SUMIE 0172	1.7	4	50	4	2
SUMIE 0182	1.8	4	50	4	2
SUMIE 0192	1.9	4	50	4	2
SUMIE 0202	2	6	50	4	2
SUMIE 0212	2.1	6	50	4	2
SUMIE 0222	2.2	6	50	4	2
SUMIE 0232	2.3	6	50	4	2
SUMIE 0242	2.4	6	50	4	2
SUMIE 0252	2.5	8	50	4	2
SUMIE 0262	2.6	8	50	4	2
SUMIE 0272	2.7	8	50	4	2
SUMIE 0282	2.8	8	50	4	2
SUMIE 0292	2.9	8	50	4	2
SUMIE 0302	3	8	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	○	○			◎	○	○

HRC
40

HRC
45

HRC
50

HRC
55

HRC
60

HRC
65

◎

◎

◎

◎

◎

◎

◎

◎

◎

◎

◎

◎



Square series - Long Neck - 2 flutes

■ 2刃深溝專用長頸立銑刀

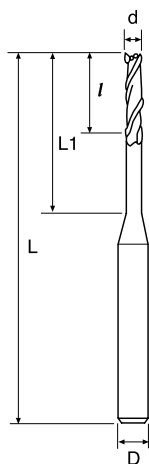
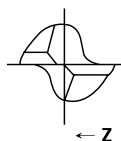
600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
LNT05022	0.5	0.75	2	50	4	2
LNT05042	0.5	0.75	4	50	4	2
LNT05062	0.5	0.75	6	50	4	2
LNT06022	0.6	0.9	2	50	4	2
LNT06042	0.6	0.9	4	50	4	2
LNT06062	0.6	0.9	6	50	4	2
LNT07042	0.7	1.1	4	50	4	2
LNT07062	0.7	1.1	6	50	4	2
LNT08042	0.8	1.2	4	50	4	2
LNT08062	0.8	1.2	6	50	4	2
LNT08082	0.8	1.2	8	50	4	2
LNT09062	0.9	1.4	6	50	4	2
LNT09082	0.9	1.4	8	50	4	2
LNT09102	0.9	1.4	10	50	4	2
LNT10062	1	1.5	6	50	4	2
LNT10082	1	1.5	8	50	4	2
LNT10102	1	1.5	10	50	4	2
LNT10122	1	1.5	12	50	4	2
LNT10162	1	1.5	16	50	4	2
LNT12062	1.2	1.8	6	50	4	2
LNT12082	1.2	1.8	8	50	4	2
LNT12102	1.2	1.8	10	50	4	2
LNT12122	1.2	1.8	12	50	4	2
LNT14062	1.4	2.1	6	50	4	2
LNT14102	1.4	2.1	10	50	4	2
LNT14162	1.4	2.1	16	50	4	2
LNT15062	1.5	2.3	6	50	4	2
LNT15082	1.5	2.3	8	50	4	2
LNT15102	1.5	2.3	10	50	4	2
LNT15122	1.5	2.3	12	50	4	2
LNT15142	1.5	2.3	14	50	4	2
LNT15162	1.5	2.3	16	50	4	2
LNT15182	1.5	2.3	18	50	4	2
LNT15202	1.5	2.3	20	50	4	2
LNT16062	1.6	2.4	6	50	4	2
LNT16082	1.6	2.4	8	50	4	2
LNT16102	1.6	2.4	10	50	4	2
LNT16122	1.6	2.4	12	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	○						○	○	

Square series - Long Neck - 2 flutes

2刃深溝專用長頸立銑刀

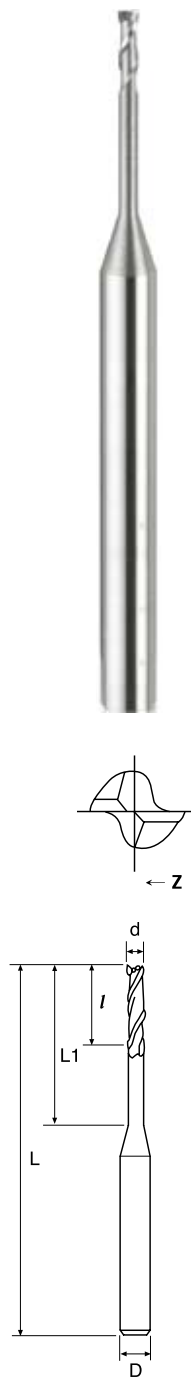
600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	I 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
LNT16142	1.6	2.4	14	50	4	2
LNT16162	1.6	2.4	16	50	4	2
LNT16182	1.6	2.4	18	50	4	2
LNT18082	1.8	2.7	8	50	4	2
LNT18142	1.8	2.7	14	50	4	2
LNT18202	1.8	2.7	20	50	4	2
LNT20062	2	3	6	50	4	2
LNT20082	2	3	8	50	4	2
LNT20102	2	3	10	50	4	2
LNT20122	2	3	12	50	4	2
LNT20142	2	3	14	50	4	2
LNT20162	2	3	16	50	4	2
LNT20182	2	3	18	50	4	2
LNT20202	2	3	20	50	4	2
LNT25082	2.5	4	8	50	4	2
LNT25102	2.5	4	10	50	4	2
LNT25122	2.5	4	12	50	4	2
LNT25142	2.5	4	14	50	4	2
LNT25162	2.5	4	16	50	4	2
LNT25202	2.5	4	20	50	4	2
LNT30082	3	4.5	8	50	6	2
LNT30102	3	4.5	10	50	6	2
LNT30122	3	4.5	12	50	6	2
LNT30162	3	4.5	16	60	6	2
LNT30202	3	4.5	20	60	6	2
LNT30252	3	4.5	25	75	6	2
LNT35122	3.5	6	12	50	6	2
LNT35162	3.5	6	16	60	6	2
LNT35202	3.5	6	20	75	6	2
LNT35252	3.5	6	25	75	6	2
LNT35302	3.5	6	30	75	6	2
LNT40122	4	6	12	50	6	2
LNT40162	4	6	16	60	6	2
LNT40202	4	6	20	75	6	2
LNT40252	4	6	25	75	6	2
LNT40302	4	6	30	75	6	2
LNT40352	4	6	35	75	6	2

Application 適用材質：

◎ Recommend 最適 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-harden steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○



Square series - Long Neck - 2 flutes

■ 2刃深溝專用長頸立銑刀

600
Nano

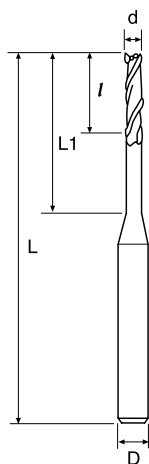
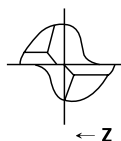
HRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
LNT05022 AlTiN	0.5	0.75	2	50	4	2
LNT05042 AlTiN	0.5	0.75	4	50	4	2
LNT05062 AlTiN	0.5	0.75	6	50	4	2
LNT06022 AlTiN	0.6	0.9	2	50	4	2
LNT06042 AlTiN	0.6	0.9	4	50	4	2
LNT06062 AlTiN	0.6	0.9	6	50	4	2
LNT07042 AlTiN	0.7	1.1	4	50	4	2
LNT07062 AlTiN	0.7	1.1	6	50	4	2
LNT08042 AlTiN	0.8	1.2	4	50	4	2
LNT08062 AlTiN	0.8	1.2	6	50	4	2
LNT08082 AlTiN	0.8	1.2	8	50	4	2
LNT09062 AlTiN	0.9	1.4	6	50	4	2
LNT09082 AlTiN	0.9	1.4	8	50	4	2
LNT09102 AlTiN	0.9	1.4	10	50	4	2
LNT10062 AlTiN	1	1.5	6	50	4	2
LNT10082 AlTiN	1	1.5	8	50	4	2
LNT10102 AlTiN	1	1.5	10	50	4	2
LNT10122 AlTiN	1	1.5	12	50	4	2
LNT10162 AlTiN	1	1.5	16	50	4	2
LNT12062 AlTiN	1.2	1.8	6	50	4	2
LNT12082 AlTiN	1.2	1.8	8	50	4	2
LNT12102 AlTiN	1.2	1.8	10	50	4	2
LNT12122 AlTiN	1.2	1.8	12	50	4	2
LNT14062 AlTiN	1.4	2.1	6	50	4	2
LNT14102 AlTiN	1.4	2.1	10	50	4	2
LNT14162 AlTiN	1.4	2.1	16	50	4	2
LNT15062 AlTiN	1.5	2.3	6	50	4	2
LNT15082 AlTiN	1.5	2.3	8	50	4	2
LNT15102 AlTiN	1.5	2.3	10	50	4	2
LNT15122 AlTiN	1.5	2.3	12	50	4	2
LNT15142 AlTiN	1.5	2.3	14	50	4	2
LNT15162 AlTiN	1.5	2.3	16	50	4	2
LNT15182 AlTiN	1.5	2.3	18	50	4	2
LNT15202 AlTiN	1.5	2.3	20	50	4	2
LNT16062 AlTiN	1.6	2.4	6	50	4	2
LNT16082 AlTiN	1.6	2.4	8	50	4	2
LNT16102 AlTiN	1.6	2.4	10	50	4	2
LNT16122 AlTiN	1.6	2.4	12	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	◎	◎	◎				○		

Square series - Long Neck - 2 flutes

■ 2刃深溝專用長頸立銑刀

600
NanoHRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
LNT16142 AlTiN	1.6	2.4	14	50	4	2
LNT16162 AlTiN	1.6	2.4	16	50	4	2
LNT16182 AlTiN	1.6	2.4	18	50	4	2
LNT18082 AlTiN	1.8	2.7	8	50	4	2
LNT18142 AlTiN	1.8	2.7	14	50	4	2
LNT18202 AlTiN	1.8	2.7	20	50	4	2
LNT20062 AlTiN	2	3	6	50	4	2
LNT20082 AlTiN	2	3	8	50	4	2
LNT20102 AlTiN	2	3	10	50	4	2
LNT20122 AlTiN	2	3	12	50	4	2
LNT20142 AlTiN	2	3	14	50	4	2
LNT20162 AlTiN	2	3	16	50	4	2
LNT20182 AlTiN	2	3	18	50	4	2
LNT20202 AlTiN	2	3	20	50	4	2
LNT25082 AlTiN	2.5	4	8	50	4	2
LNT25102 AlTiN	2.5	4	10	50	4	2
LNT25122 AlTiN	2.5	4	12	50	4	2
LNT25142 AlTiN	2.5	4	14	50	4	2
LNT25162 AlTiN	2.5	4	16	50	4	2
LNT25202 AlTiN	2.5	4	20	50	4	2
LNT30082 AlTiN	3	4.5	8	50	6	2
LNT30102 AlTiN	3	4.5	10	50	6	2
LNT30122 AlTiN	3	4.5	12	50	6	2
LNT30162 AlTiN	3	4.5	16	60	6	2
LNT30202 AlTiN	3	4.5	20	60	6	2
LNT30252 AlTiN	3	4.5	25	75	6	2
LNT35122 AlTiN	3.5	6	12	50	6	2
LNT35162 AlTiN	3.5	6	16	60	6	2
LNT35202 AlTiN	3.5	6	20	75	6	2
LNT35252 AlTiN	3.5	6	25	75	6	2
LNT35302 AlTiN	3.5	6	30	75	6	2
LNT40122 AlTiN	4	6	12	50	6	2
LNT40162 AlTiN	4	6	16	60	6	2
LNT40202 AlTiN	4	6	20	75	6	2
LNT40252 AlTiN	4	6	25	75	6	2
LNT40302 AlTiN	4	6	30	75	6	2
LNT40352 AlTiN	4	6	35	75	6	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎			○		



Square series - Long Neck - 2flutes

■ 2刃深溝專用長頸立銑刀

400
Nano

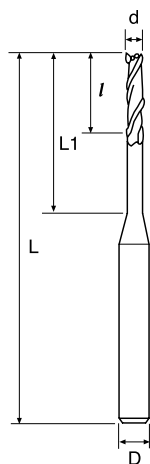
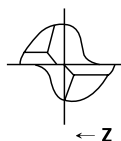
HRC
55

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
ULNT05022 nBS	0.5	0.75	2	50	4	2
ULNT05042 nBS	0.5	0.75	4	50	4	2
ULNT05062 nBS	0.5	0.75	6	50	4	2
ULNT06022 nBS	0.6	0.9	2	50	4	2
ULNT10062 nBS	1	1.5	6	50	4	2
ULNT10082 nBS	1	1.5	8	50	4	2
ULNT10102 nBS	1	1.5	10	50	4	2
ULNT10122 nBS	1	1.5	12	50	4	2
ULNT15062 nBS	1.5	2.3	6	50	4	2
ULNT15082 nBS	1.5	2.3	8	50	4	2
ULNT15102 nBS	1.5	2.3	10	50	4	2
ULNT15122 nBS	1.5	2.3	12	50	4	2
ULNT15142 nBS	1.5	2.3	14	50	4	2
ULNT15162 nBS	1.5	2.3	16	50	4	2
ULNT15182 nBS	1.5	2.3	18	50	4	2
ULNT15202 nBS	1.5	2.3	20	50	4	2
ULNT20062 nBS	2	3	6	50	4	2
ULNT20082 nBS	2	3	8	50	4	2
ULNT20102 nBS	2	3	10	50	4	2
ULNT20122 nBS	2	3	12	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		

Square series - Long Neck - 2flutes

■ 2刃深溝專用長頸立銑刀

400
Nano

HRC
55

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
ULNT20142 nBS	2	3	14	50	4	2
ULNT20162 nBS	2	3	16	50	4	2
ULNT20182 nBS	2	3	18	50	4	2
ULNT20202 nBS	2	3	20	50	4	2
ULNT25082 nBS	2.5	4	8	50	4	2
ULNT25122 nBS	2.5	4	12	50	4	2
ULNT25162 nBS	2.5	4	16	50	4	2
ULNT25202 nBS	2.5	4	20	50	4	2
ULNT30102 nBS	3	4.5	10	50	6	2
ULNT30122 nBS	3	4.5	12	50	6	2
ULNT30162 nBS	3	4.5	16	60	6	2
ULNT30202 nBS	3	4.5	20	60	6	2
ULNT30252 nBS	3	4.5	25	75	6	2
ULNT40122 nBS	4	6	12	50	6	2
ULNT40162 nBS	4	6	16	60	6	2
ULNT40202 nBS	4	6	20	75	6	2
ULNT40252 nBS	4	6	25	75	6	2
ULNT40302 nBS	4	6	30	75	6	2
ULNT40352 nBS	4	6	35	75	6	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		



Square series - Long Neck - 2flutes

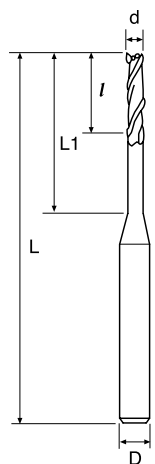
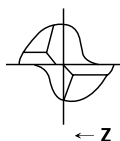
■ 2刃深溝專用長頸立銑刀

200
NanoHRC
65

35°

nACo

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm

Mode	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SFULNT05022 nACo	0.5	0.75	2	50	4	2
SFULNT05042 nACo	0.5	0.75	4	50	4	2
SFULNT05062 nACo	0.5	0.75	6	50	4	2
SFULNT06022 nACo	0.6	0.9	2	50	4	2
SFULNT06042 nACo	0.6	0.9	4	50	4	2
SFULNT06062 nACo	0.6	0.9	6	50	4	2
SFULNT07042 nACo	0.7	1.1	4	50	4	2
SFULNT07062 nACo	0.7	1.1	6	50	4	2
SFULNT08042 nACo	0.8	1.2	4	50	4	2
SFULNT08062 nACo	0.8	1.2	6	50	4	2
SFULNT08082 nACo	0.8	1.2	8	50	4	2
SFULNT10062 nACo	1	1.5	6	50	4	2
SFULNT10082 nACo	1	1.5	8	50	4	2
SFULNT10102 nACo	1	1.5	10	50	4	2
SFULNT10122 nACo	1	1.5	12	50	4	2
SFULNT10162 nACo	1	1.5	16	50	4	2
SFULNT15062 nACo	1.5	2.3	6	50	4	2
SFULNT15082 nACo	1.5	2.3	8	50	4	2
SFULNT15102 nACo	1.5	2.3	10	50	4	2
SFULNT15122 nACo	1.5	2.3	12	50	4	2
SFULNT15142 nACo	1.5	2.3	14	50	4	2
SFULNT15162 nACo	1.5	2.3	16	50	4	2
SFULNT15182 nACo	1.5	2.3	18	50	4	2
SFULNT15202 nACo	1.5	2.3	20	50	4	2
SFULNT20062 nACo	2	3	6	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	○	○	◎	◎	◎		○		

Square series - Long Neck - 2flutes

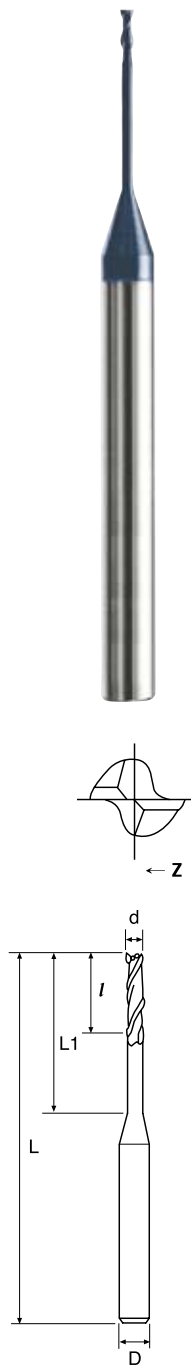
■ 2刃深溝專用長頸立銑刀

200
NanoHRC
65

35°

nACo

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm

Mode	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SFULNT20082 nACo	2	3	8	50	4	2
SFULNT20102 nACo	2	3	10	50	4	2
SFULNT20122 nACo	2	3	12	50	4	2
SFULNT20142 nACo	2	3	14	50	4	2
SFULNT20162 nACo	2	3	16	50	4	2
SFULNT20182 nACo	2	3	18	50	4	2
SFULNT20202 nACo	2	3	20	50	4	2
SFULNT25082 nACo	2.5	4	8	50	4	2
SFULNT25102 nACo	2.5	4	10	50	4	2
SFULNT25122 nACo	2.5	4	12	50	4	2
SFULNT25142 nACo	2.5	4	14	50	4	2
SFULNT25162 nACo	2.5	4	16	50	4	2
SFULNT25202 nACo	2.5	4	20	50	4	2
SFULNT30082 nACo	3	4.5	8	50	6	2
SFULNT30102 nACo	3	4.5	10	50	6	2
SFULNT30122 nACo	3	4.5	12	50	6	2
SFULNT30162 nACo	3	4.5	16	60	6	2
SFULNT30202 nACo	3	4.5	20	60	6	2
SFULNT30252 nACo	3	4.5	25	75	6	2
SFULNT40122 nACo	4	6	12	50	6	2
SFULNT40162 nACo	4	6	16	60	6	2
SFULNT40202 nACo	4	6	20	75	6	2
SFULNT40252 nACo	4	6	25	75	6	2
SFULNT40302 nACo	4	6	30	75	6	2
SFULNT40352 nACo	4	6	35	75	6	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		



Square series - Long Neck - 2flutes

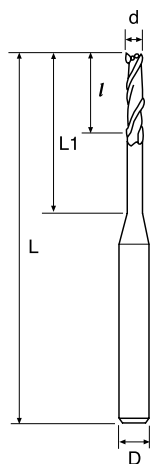
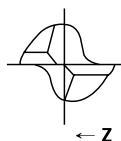
■ 2刃深溝專用長頸立銑刀

500
NanoHRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	I 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SULNT 05022	0.5	0.75	2	50	4	2
SULNT 05042	0.5	0.75	4	50	4	2
SULNT 05062	0.5	0.75	6	50	4	2
SULNT 06022	0.6	0.9	2	50	4	2
SULNT 06042	0.6	0.9	4	50	4	2
SULNT 06062	0.6	0.9	6	50	4	2
SULNT 07042	0.7	1.1	4	50	4	2
SULNT 07062	0.7	1.1	6	50	4	2
SULNT 08042	0.8	1.2	4	50	4	2
SULNT 08062	0.8	1.2	6	50	4	2
SULNT 08082	0.8	1.2	8	50	4	2
SULNT 09062	0.9	1.4	6	50	4	2
SULNT 09082	0.9	1.4	8	50	4	2
SULNT 09102	0.9	1.4	10	50	4	2
SULNT 10062	1	1.5	6	50	4	2
SULNT 10082	1	1.5	8	50	4	2
SULNT 10102	1	1.5	10	50	4	2
SULNT 10122	1	1.5	12	50	4	2
SULNT 10162	1	1.5	16	50	4	2
SULNT 12062	1.2	1.8	6	50	4	2
SULNT 12082	1.2	1.8	8	50	4	2
SULNT 12102	1.2	1.8	10	50	4	2
SULNT 12122	1.2	1.8	12	50	4	2
SULNT 14062	1.4	2.1	6	50	4	2
SULNT 14102	1.4	2.1	10	50	4	2
SULNT 14162	1.4	2.1	16	50	4	2
SULNT 15062	1.5	2.3	6	50	4	2
SULNT 15082	1.5	2.3	8	50	4	2
SULNT 15102	1.5	2.3	10	50	4	2
SULNT 15122	1.5	2.3	12	50	4	2
SULNT 15142	1.5	2.3	14	50	4	2
SULNT 15162	1.5	2.3	16	50	4	2
SULNT 15182	1.5	2.3	18	50	4	2
SULNT 15202	1.5	2.3	20	50	4	2
SULNT 16062	1.6	2.4	6	50	4	2
SULNT 16082	1.6	2.4	8	50	4	2
SULNT 16102	1.6	2.4	10	50	4	2
SULNT 16122	1.6	2.4	12	50	4	2

Application 適用材質：

◎ Recommend 最適 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○

Square series - Long Neck - 2flutes

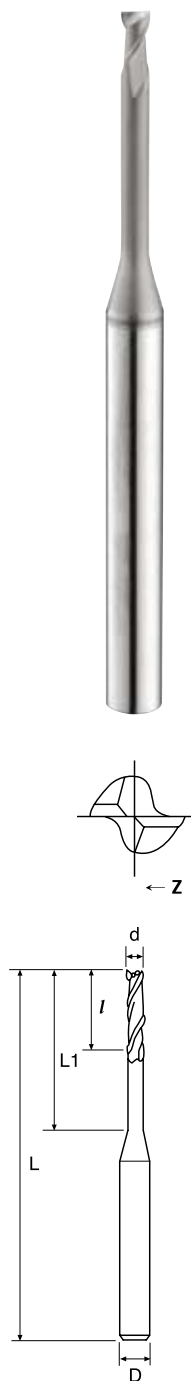
■ 2刃深溝專用長頸立銑刀

500
NanoHRC
▷ 50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SULNT 16142	1.6	2.4	14	50	4	2
SULNT 16162	1.6	2.4	16	50	4	2
SULNT 16182	1.6	2.4	18	50	4	2
SULNT 18082	1.8	2.7	8	50	4	2
SULNT 18142	1.8	2.7	14	50	4	2
SULNT 18202	1.8	2.7	20	50	4	2
SULNT 20062	2	3	6	50	4	2
SULNT 20082	2	3	8	50	4	2
SULNT 20102	2	3	10	50	4	2
SULNT 20122	2	3	12	50	4	2
SULNT 20142	2	3	14	50	4	2
SULNT 20162	2	3	16	50	4	2
SULNT 20182	2	3	18	50	4	2
SULNT 20202	2	3	20	50	4	2
SULNT 25082	2.5	4	8	50	4	2
SULNT 25102	2.5	4	10	50	4	2
SULNT 25122	2.5	4	12	50	4	2
SULNT 25142	2.5	4	14	50	4	2
SULNT 25162	2.5	4	16	50	4	2
SULNT 25202	2.5	4	20	50	4	2
SULNT 30082	3	4.5	8	50	6	2
SULNT 30102	3	4.5	10	50	6	2
SULNT 30122	3	4.5	12	50	6	2
SULNT 30162	3	4.5	16	60	6	2
SULNT 30202	3	4.5	20	60	6	2
SULNT 30252	3	4.5	25	75	6	2
SULNT 35122	3.5	6	12	50	6	2
SULNT 35162	3.5	6	16	60	6	2
SULNT 35202	3.5	6	20	75	6	2
SULNT 35252	3.5	6	25	75	6	2
SULNT 35302	3.5	6	30	75	6	2
SULNT 40122	4	6	12	50	6	2
SULNT 40162	4	6	16	60	6	2
SULNT 40202	4	6	20	75	6	2
SULNT 40252	4	6	25	75	6	2
SULNT 40302	4	6	30	75	6	2
SULNT 40352	4	6	35	75	6	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○



Square



Square series - 2 flutes

■ 2刃立銑刀

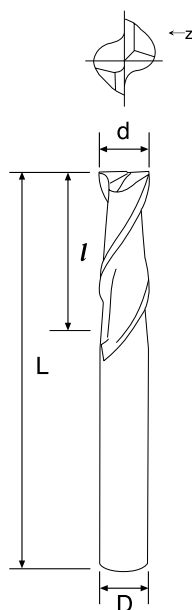
600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SSE0102	1	3	50	3	2
MSE0102	1	3	50	4	2
SSE0152	1.5	4	50	3	2
MSE0152	1.5	4	50	4	2
SSE0202	2	6	50	3	2
MSE0202	2	6	50	4	2
SSE0252	2.5	8	50	3	2
MSE0252	2.5	8	50	4	2
SSE0302	3	8	50	3	2
MSE0302	3	8	50	4	2
MSE0352	3.5	10	50	4	2
MSE0402	4	11	50	4	2
SE0102	1	3	50	6	2
SE0152	1.5	4	50	6	2
SE0202	2	6	50	6	2
SE0252	2.5	8	50	6	2
SE0302	3	8	50	6	2
SE0352	3.5	10	50	6	2
SE0402	4	11	50	6	2
SE0452	4.5	13	50	6	2
SE0502	5	13	50	6	2
SE0552	5.5	13	50	6	2
SE0602	6	16	50	6	2
SE0652	6.5	16	60	8	2
SE0702	7	16	60	8	2
SE0752	7.5	19	60	8	2
SE0802	8	20	60	8	2
SE0852	8.5	20	75	10	2
SE0902	9	20	75	10	2
SE0952	9.5	25	75	10	2
SE1002	10	25	75	10	2
SE1052	10.5	25	75	12	2
SE1102	11	30	75	12	2
SE1152	11.5	30	75	12	2
SE1202	12	32	75	12	2
SE1402	14	40	100	16	2
SE1602	16	40	100	16	2
SE1802	18	45	100	20	2
SE2002	20	45	100	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○

Square series - 2 flutes

■ 2刃立銑刀

600
NanoHRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SSE0102 AlTiN	1	3	50	3	2
MSE0102 AlTiN	1	3	50	4	2
SSE0152 AlTiN	1.5	4	50	3	2
MSE0152 AlTiN	1.5	4	50	4	2
SSE0202 AlTiN	2	6	50	3	2
MSE0202 AlTiN	2	6	50	4	2
SSE0252 AlTiN	2.5	8	50	3	2
MSE0252 AlTiN	2.5	8	50	4	2
SSE0302 AlTiN	3	8	50	3	2
MSE0302 AlTiN	3	8	50	4	2
MSE0352 AlTiN	3.5	10	50	4	2
MSE0402 AlTiN	4	11	50	4	2
SE0102 AlTiN	1	3	50	6	2
SE0152 AlTiN	1.5	4	50	6	2
SE0202 AlTiN	2	6	50	6	2
SE0252 AlTiN	2.5	8	50	6	2
SE0302 AlTiN	3	8	50	6	2
SE0352 AlTiN	3.5	10	50	6	2
SE0402 AlTiN	4	11	50	6	2
SE0452 AlTiN	4.5	13	50	6	2
SE0502 AlTiN	5	13	50	6	2
SE0552 AlTiN	5.5	13	50	6	2
SE0602 AlTiN	6	16	50	6	2
SE0652 AlTiN	6.5	16	60	8	2
SE0702 AlTiN	7	16	60	8	2
SE0752 AlTiN	7.5	19	60	8	2
SE0802 AlTiN	8	20	60	8	2
SE0852 AlTiN	8.5	20	75	10	2
SE0902 AlTiN	9	20	75	10	2
SE0952 AlTiN	9.5	25	75	10	2
SE1002 AlTiN	10	25	75	10	2
SE1052 AlTiN	10.5	25	75	12	2
SE1102 AlTiN	11	30	75	12	2
SE1152 AlTiN	11.5	30	75	12	2
SE1202 AlTiN	12	32	75	12	2
SE1402 AlTiN	14	40	100	16	2
SE1602 AlTiN	16	40	100	16	2
SE1802 AlTiN	18	45	100	20	2
SE2002 AlTiN	20	45	100	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Square



Square series - 2 flutes

■ 2刃立銑刀

400
Nano

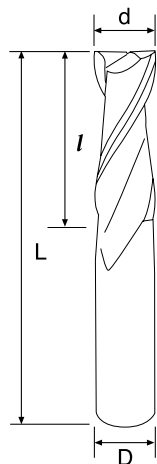
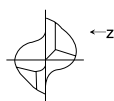
HRC
▶ 60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
UET0102 nBS	1	3	50	4	2
UET0152 nBS	1.5	4	50	4	2
UET0202 nBS	2	6	50	4	2
UET0252 nBS	2.5	8	50	4	2
UET0302 nBS	3	8	50	4	2
UET0352 nBS	3.5	10	50	4	2
UET0402 nBS	4	11	50	4	2
UET0452 nBS	4.5	13	50	6	2
UET0502 nBS	5	13	50	6	2
UET0552 nBS	5.5	13	50	6	2
UET0602 nBS	6	16	50	6	2
UET0652 nBS	6.5	16	60	8	2
UET0702 nBS	7	17	60	8	2
UET0752 nBS	7.5	17	60	8	2
UET0802 nBS	8	21	60	8	2
UET0852 nBS	8.5	25	75	10	2
UET0902 nBS	9	25	75	10	2
UET0952 nBS	9.5	25	75	10	2
UET1002 nBS	10	26	75	10	2
UET1102 nBS	11	28	75	12	2
UET1202 nBS	12	30	75	12	2
UET1302 nBS	13	33	75	14	2
UET1402 nBS	14	33	75	14	2
UET1502 nBS	15	33	75	16	2
UET1602 nBS	16	33	75	16	2
UET1802 nBS	18	45	100	18	2
UET2002 nBS	20	50	100	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		

Square series - 2 flutes

■ 2刃立銑刀

200
NanoHRC
65

35°

TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm

Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
SFUET0102 TiSiN	1	2.5	50	4	2
SFUET0152 TiSiN	1.5	3	50	4	2
SFUET0202 TiSiN	2	5	50	4	2
SFUET0252 TiSiN	2.5	6	50	4	2
SFUET0302 TiSiN	3	7.5	50	4	2
SFUET0352 TiSiN	3.5	8	50	4	2
SFUET0402 TiSiN	4	9	50	4	2
SFUET0452 TiSiN	4.5	10	50	6	2
SFUET0502 TiSiN	5	11	50	6	2
SFUET0552 TiSiN	5.5	12	50	6	2
SFUET0602 TiSiN	6	13	60	6	2
SFUET0652 TiSiN	6.5	14	60	8	2
SFUET0702 TiSiN	7	14	60	8	2
SFUET0752 TiSiN	7.5	16	60	8	2
SFUET0802 TiSiN	8	16	60	8	2
SFUET0852 TiSiN	8.5	18	75	10	2
SFUET0902 TiSiN	9	18	75	10	2
SFUET0952 TiSiN	9.5	22	75	10	2
SFUET1002 TiSiN	10	22	75	10	2
SFUET1052 TiSiN	10.5	24	75	12	2
SFUET1102 TiSiN	11	24	75	12	2
SFUET1152 TiSiN	11.5	24	75	12	2
SFUET1202 TiSiN	12	26	75	12	2
SFUET1402 TiSiN	14	30	75	16	2
SFUET1502 TiSiN	15	30	75	16	2
SFUET1602 TiSiN	16	33	75	16	2
SFUET2002 TiSiN	20	45	100	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		

HRC
40HRC
45HRC
50HRC
55HRC
60HRC
65



Square



Square series - Long Shank - 2 flutes

■ 2刃長柄立銑刀

600
Nano

HRC
45

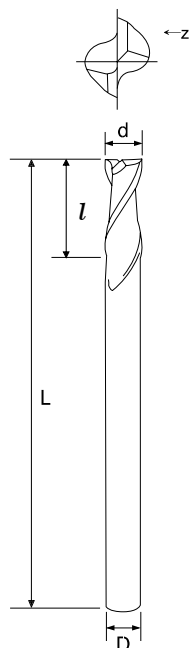
35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SLE0602	6	16	75	6	2
MLE0602	6	16	100	6	2
SLE0802	8	20	75	8	2
MLE0802	8	20	100	8	2
SLE1002	10	25	100	10	2
MLE1002	10	25	150	10	2
SLE1202	12	32	100	12	2
MLE1202	12	32	150	12	2



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○

Square series - Long Shank - 2 flutes

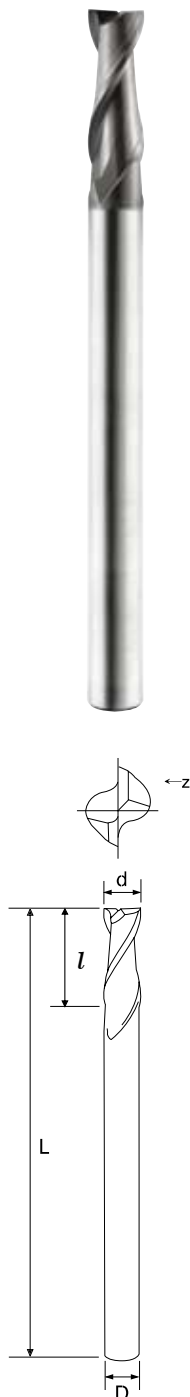
■ 2刃長柄立銑刀

600
NanoHRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SLE0602 AlTiN	6	16	75	6	2
MLE0602 AlTiN	6	16	100	6	2
SLE0802 AlTiN	8	20	75	8	2
MLE0802 AlTiN	8	20	100	8	2
SLE1002 AlTiN	10	25	100	10	2
MLE1002 AlTiN	10	25	150	10	2
SLE1202 AlTiN	12	32	100	12	2
MLE1202 AlTiN	12	32	150	12	2

HRC
40HRC
45HRC
50HRC
55HRC
60HRC
65

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Square



Square series - Long Flute - 2 flutes

■ 2刃長刃立銑刀

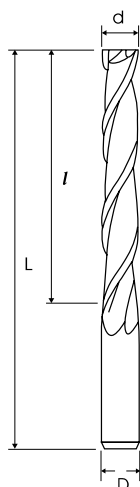
600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
LET0102	1	7	50	4	2
LET0152	1.5	9	50	4	2
LET0202	2	12	50	4	2
LET0252	2.5	12	50	4	2
LET0302	3	15	60	6	2
LET0352	3.5	15	60	6	2
LET0402	4	20	75	6	2
LET0452	4.5	20	75	6	2
LET0502	5	25	75	6	2
LET0552	5.5	25	75	6	2
LET0602	6	30	75	6	2
LET0702	7	30	100	8	2
LET0802	8	40	100	8	2
LET0902	9	40	100	10	2
LET1002	10	40	100	10	2
LET1102	11	40	100	12	2
LET1202	12	50	100	12	2
LET1402	14	50	150	16	2
LET1602	16	60	150	16	2
LET2002	20	90	200	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○

Square series - Long Flute - 2 flutes

■ 2刃長刃立銑刀

600
NanoHRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	I 刃長	L 全長	D 柄徑	Z 刃數
LET0102 AlTiN	1	7	50	4	2
LET0152 AlTiN	1.5	9	50	4	2
LET0202 AlTiN	2	12	50	4	2
LET0252 AlTiN	2.5	12	50	4	2
LET0302 AlTiN	3	15	60	6	2
LET0352 AlTiN	3.5	15	60	6	2
LET0402 AlTiN	4	20	75	6	2
LET0452 AlTiN	4.5	20	75	6	2
LET0502 AlTiN	5	25	75	6	2
LET0552 AlTiN	5.5	25	75	6	2
LET0602 AlTiN	6	30	75	6	2
LET0702 AlTiN	7	30	100	8	2
LET0802 AlTiN	8	40	100	8	2
LET0902 AlTiN	9	40	100	10	2
LET1002 AlTiN	10	40	100	10	2
LET1102 AlTiN	11	40	100	12	2
LET1202 AlTiN	12	50	100	12	2
LET1402 AlTiN	14	50	150	16	2
LET1602 AlTiN	16	60	150	16	2
LET2002 AlTiN	20	90	200	20	2

HRC
40HRC
45HRC
50HRC
55HRC
60HRC
65HRC
70HRC
75HRC
80HRC
85HRC
90HRC
95HRC
100HRC
105HRC
110HRC
115HRC
120HRC
125

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	◎	○	○	○		○			



Square



Square series - Long Flute - 2 flutes

■ 2刃長刃立銑刀

400
Nano

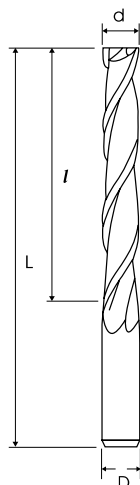
HRC
▶ 60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
ULET0102 nBS	1	5	50	4	2
ULET0152 nBS	1.5	6	50	4	2
ULET0202 nBS	2	8	50	6	2
ULET0252 nBS	2.5	10	50	6	2
ULET0302 nBS	3	12	60	6	2
ULET0352 nBS	3.5	14	60	6	2
ULET0402 nBS	4	16	60	6	2
ULET0452 nBS	4.5	16	60	6	2
ULET0502 nBS	5	20	60	6	2
ULET0552 nBS	5.5	20	60	6	2
ULET0602 nBS	6	25	75	6	2
ULET0702 nBS	7	26	75	8	2
ULET0802 nBS	8	26	75	8	2
ULET0812 nBS	8	36	100	8	2
ULET1002 nBS	10	40	100	10	2
ULET1102 nBS	11	40	100	12	2
ULET1202 nBS	12	46	100	12	2
ULET1402 nBS	14	46	100	14	2
ULET1502 nBS	15	46	100	16	2
ULET1602 nBS	16	46	100	16	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		

Square series - Long Flute - 2 flutes

■ 2刃長刃立銑刀

200
NanoHRC
▶ 65

35°

TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm

Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
SFULET0102 TiSiN	1	4	50	4	2
SFULET0152 TiSiN	1.5	6	50	4	2
SFULET0202 TiSiN	2	8	50	4	2
SFULET0302 TiSiN	3	11	60	6	2
SFULET0402 TiSiN	4	14	60	6	2
SFULET0452 TiSiN	4.5	16	60	6	2
SFULET0502 TiSiN	5	18	60	6	2
SFULET0552 TiSiN	5.5	20	60	6	2
SFULET0602 TiSiN	6	25	75	6	2
SFULET0652 TiSiN	6.5	25	75	8	2
SFULET0702 TiSiN	7	25	75	8	2
SFULET0752 TiSiN	7.5	25	75	8	2
SFULET0802 TiSiN	8	25	75	8	2
SFULET0812 TiSiN	8	35	100	8	2
SFULET0852 TiSiN	8.5	35	100	10	2
SFULET0902 TiSiN	9	35	100	10	2
SFULET0952 TiSiN	9.5	40	100	10	2
SFULET1002 TiSiN	10	40	100	10	2
SFULET1052 TiSiN	10.5	40	100	12	2
SFULET1102 TiSiN	11	40	100	12	2
SFULET1152 TiSiN	11.5	45	100	12	2
SFULET1202 TiSiN	12	45	100	12	2
SFULET1402 TiSiN	14	45	100	16	2
SFULET1502 TiSiN	15	45	100	16	2
SFULET1602 TiSiN	16	45	100	16	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		



Square



Square series - Long Flute - 2 flutes

■ 2刃長刃立銑刀

500
Nano

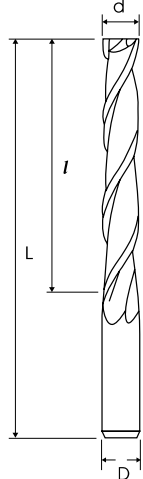
HRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SULET 0102	1	7	50	4	2
SULET 0152	1.5	9	50	4	2
SULET 0202	2	12	50	4	2
SULET 0252	2.5	12	50	4	2
SULET 0302	3	15	60	6	2
SULET 0352	3.5	15	60	6	2
SULET 0402	4	20	75	6	2
SULET 0452	4.5	20	75	6	2
SULET 0502	5	25	75	6	2
SULET 0552	5.5	25	75	6	2
SULET 0602	6	30	75	6	2
SULET 0702	7	30	100	8	2
SULET 0802	8	40	100	8	2
SULET 0902	9	40	100	10	2
SULET 1002	10	40	100	10	2
SULET 1102	11	40	100	12	2
SULET 1202	12	50	100	12	2
SULET 1402	14	50	150	16	2
SULET 1602	16	60	150	16	2
SULET 2002	20	90	200	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○

Square series - Flute angle 45° - 2 flutes

■ 2刃45° 立銑刀

500
NanoHRC
50

45°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUPE0102	1	3	50	6	2
SUPE3102	1	3	50	3	2
SUPE4102	1	3	50	4	2
SUPE0152	1.5	4	50	6	2
SUPE3152	1.5	4	50	3	2
SUPE4152	1.5	4	50	4	2
SUPE0202	2	6	50	6	2
SUPE3202	2	6	50	3	2
SUPE4202	2	6	50	4	2
SUPE0252	2.5	8	50	6	2
SUPE3252	2.5	8	50	3	2
SUPE4252	2.5	8	50	4	2
SUPE0302	3	8	50	6	2
SUPE3302	3	8	50	3	2
SUPE4302	3	8	50	4	2
SUPE0352	3.5	10	50	6	2
SUPE4352	3.5	10	50	4	2
SUPE0402	4	11	50	6	2
SUPE4402	4	11	50	4	2
SUPE0452	4.5	13	50	6	2
SUPE0502	5	13	50	6	2
SUPE0552	5.5	13	50	6	2
SUPE0602	6	16	50	6	2
SUPE0652	6.5	16	60	8	2
SUPE0702	7	16	60	8	2
SUPE0752	7.5	19	60	8	2
SUPE0802	8	20	60	8	2
SUPE0852	8.5	20	75	10	2
SUPE0902	9	20	75	10	2
SUPE0952	9.5	25	75	10	2
SUPE1002	10	25	75	10	2
SUPE1052	10.5	25	75	12	2
SUPE1102	11	30	75	12	2
SUPE1152	11.5	30	75	12	2
SUPE1202	12	32	75	12	2
SUPE1402	14	40	100	16	2
SUPE1602	16	40	100	16	2
SUPE1802	18	45	100	20	2
SUPE2002	20	45	100	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○



Square



Square series - Flute Angle 45° - 3 flutes

■ 3刃45° 立銑刀

600
Nano

HRC
45

45°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
MPE0103	1	3	50	4	3
MPE0153	1.5	4	50	4	3
MPE0203	2	6	50	4	3
MPE0253	2.5	8	50	4	3
MPE3303	3	8	50	3	3
MPE0303	3	8	50	4	3
MPE0353	3.5	10	50	4	3
MPE0403	4	11	50	4	3
PE0103	1	3	50	6	3
PE0153	1.5	4	50	6	3
PE0203	2	6	50	6	3
PE0253	2.5	8	50	6	3
PE0303	3	8	50	6	3
PE0353	3.5	10	50	6	3
PE0403	4	11	50	6	3
PE0453	4.5	13	50	6	3
PE0503	5	13	50	6	3
PE0553	5.5	13	50	6	3
PE0603	6	16	50	6	3
PE0653	6.5	16	60	8	3
PE0703	7	16	60	8	3
PE0753	7.5	19	60	8	3
PE0803	8	20	60	8	3
PE0853	8.5	20	75	10	3
PE0903	9	20	75	10	3
PE0953	9.5	25	75	10	3
PE1003	10	30	75	10	3
PE1053	10.5	30	75	12	3
PE1103	11	30	75	12	3
PE1153	11.5	30	75	12	3
PE1203	12	32	75	12	3
PE1403	14	40	100	16	3
PE1603	16	40	100	16	3
PE1803	18	45	100	20	3
PE2003	20	45	100	20	3

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○

Square series - Flute Angle 45° - 3 flutes

■ 3刃45° 立銑刀

600
NanoHRC
▶ 55

55°

AlTiN

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
MPE0103 AlTiN	1	3	50	4	3
MPE0153 AlTiN	1.5	4	50	4	3
MPE0203 AlTiN	2	6	50	4	3
MPE0253 AlTiN	2.5	8	50	4	3
MPE3303 AlTiN	3	8	50	3	3
MPE0303 AlTiN	3	8	50	4	3
MPE0353 AlTiN	3.5	10	50	4	3
MPE0403 AlTiN	4	11	50	4	3
PE0103 AlTiN	1	3	50	6	3
PE0153 AlTiN	1.5	4	50	6	3
PE0203 AlTiN	2	6	50	6	3
PE0253 AlTiN	2.5	8	50	6	3
PE0303 AlTiN	3	8	50	6	3
PE0353 AlTiN	3.5	10	50	6	3
PE0403 AlTiN	4	11	50	6	3
PE0453 AlTiN	4.5	13	50	6	3
PE0503 AlTiN	5	13	50	6	3
PE0553 AlTiN	5.5	13	50	6	3
PE0603 AlTiN	6	16	50	6	3
PE0653 AlTiN	6.5	16	60	8	3
PE0703 AlTiN	7	16	60	8	3
PE0753 AlTiN	7.5	19	60	8	3
PE0803 AlTiN	8	20	60	8	3
PE0853 AlTiN	8.5	20	75	10	3
PE0903 AlTiN	9	20	75	10	3
PE0953 AlTiN	9.5	25	75	10	3
PE1003 AlTiN	10	30	75	10	3
PE1053 AlTiN	10.5	30	75	12	3
PE1103 AlTiN	11	30	75	12	3
PE1153 AlTiN	11.5	30	75	12	3
PE1203 AlTiN	12	32	75	12	3
PE1403 AlTiN	14	40	100	16	3
PE1603 AlTiN	16	40	100	16	3
PE1803 AlTiN	18	45	100	20	3
PE2003 AlTiN	20	45	100	20	3

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Square



Square series - Flute Angle 45° - 3 flutes

■ 3刃45° 立銑刀

500
Nano

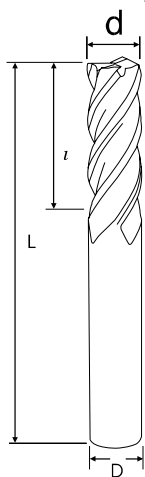
HRC
▶ 50

45°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUPE0103	1	3	50	6	3
SUPE4103	1	3	50	4	3
SUPE0153	1.5	4	50	6	3
SUPE4153	1.5	4	50	4	3
SUPE0203	2	6	50	6	3
SUPE4203	2	6	50	4	3
SUPE0253	2.5	8	50	6	3
SUPE4253	2.5	8	50	4	3
SUPE0303	3	8	50	6	3
SUPE3303	3	8	50	3	3
SUPE4303	3	8	50	4	3
SUPE0353	3.5	10	50	6	3
SUPE4353	3.5	10	50	4	3
SUPE0403	4	11	50	6	3
SUPE4403	4	11	50	4	3
SUPE0453	4.5	13	50	6	3
SUPE0503	5	13	50	6	3
SUPE0553	5.5	13	50	6	3

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	○	○			◎	○	○

Square series - Flute Angle 45° - 3 flutes

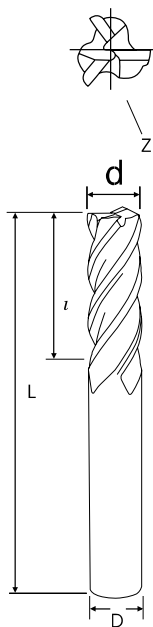
■ 3刃45° 立銑刀

500
NanoHRC
▶ 50

45°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUPE0603	6	16	50	6	3
SUPE0653	6.5	16	60	8	3
SUPE0703	7	16	60	8	3
SUPE0753	7.5	19	60	8	3
SUPE0803	8	20	60	8	3
SUPE0853	8.5	20	75	10	3
SUPE0903	9	20	75	10	3
SUPE0953	9.5	25	75	10	3
SUPE1003	10	30	75	10	3
SUPE1053	10.5	30	75	12	3
SUPE1103	11	30	75	12	3
SUPE1153	11.5	30	75	12	3
SUPE1203	12	32	75	12	3
SUPE1403	14	40	100	16	3
SUPE1603	16	40	100	16	3
SUPE1803	18	45	100	20	3
SUPE2003	20	45	100	20	3

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	○	○			◎	○	○



Fine Pitch Roughing series

3刃粗精銑刀

500
NanoHRC
50

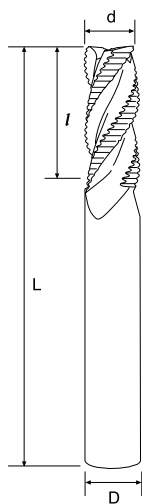
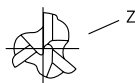
40°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUNTA 0403	4	8	50	6	3
SUNTA 0503	5	13	50	6	3
SUNTA 0603	6	16	50	6	3
SUNTA 0703	7	16	60	8	3
SUNTA 0803	8	19	60	8	3
SUNTA 0903	9	25	75	10	3
SUNTA 1003	10	25	75	10	3
SUNTA 1103	11	30	75	12	3
SUNTA 1203	12	30	75	12	3
SUNTA 1603	16	35	100	16	3
SUNTA 2003	20	45	100	20	3



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

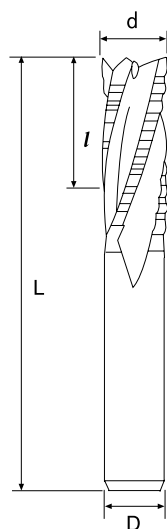
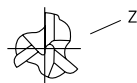
carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	○		○		◎	○	○

Roughing series

■ 3刃粗銑刀



● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUXTA 0403	4	8	50	6	3
SUXTA 0503	5	13	50	6	3
SUXTA 0603	6	16	50	6	3
SUXTA 0703	7	16	60	8	3
SUXTA 0803	8	19	60	8	3
SUXTA 0903	9	25	75	10	3
SUXTA 1003	10	25	75	10	3
SUXTA 1103	11	30	75	12	3
SUXTA 1203	12	30	75	12	3
SUXTA 1603	16	35	100	16	3
SUXTA 2003	20	45	100	20	3

HRC
▶ 40HRC
▶ 45HRC
▶ 50HRC
▶ 55HRC
▶ 60HRC
▶ 65

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	○		○		◎	○	○



Fine Pitch Roughing series

■ 3刃/4刃粗精銑刀

600
NanoHRC
50

40°

AlTiN

● Micro Grain Carbide

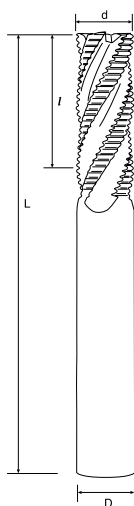
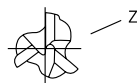
● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

3 Flutes - 3刃

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
NTA0403 AlTiN	4	8	50	6	3
NTA0503 AlTiN	5	13	50	6	3
NTA0603 AlTiN	6	16	50	6	3
NTA0703 AlTiN	7	16	60	8	3
NTA0803 AlTiN	8	19	60	8	3
NTA0903 AlTiN	9	25	75	10	3
NTA1003 AlTiN	10	25	75	10	3
NTA1103 AlTiN	11	30	75	12	3
NTA1203 AlTiN	12	30	75	12	3
NTA1603 AlTiN	16	35	100	16	3
NTA2003 AlTiN	20	45	100	20	3

4 Flutes - 4刃

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
NTA0404 AlTiN	4	8	50	6	4
NTA0504 AlTiN	5	13	50	6	4
NTA0604 AlTiN	6	16	50	6	4
NTA0704 AlTiN	7	16	60	8	4
NTA0804 AlTiN	8	19	60	8	4
NTA0904 AlTiN	9	25	75	10	4
NTA1004 AlTiN	10	25	75	10	4
NTA1104 AlTiN	11	30	75	12	4
NTA1204 AlTiN	12	30	75	12	4
NTA1404 AlTiN	14	35	100	16	4
NTA1504 AlTiN	15	35	100	16	4
NTA1604 AlTiN	16	35	100	16	4
NTA2004 AlTiN	20	45	100	20	4



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		

Roughing series

■ 3刃/4粗銑刀



● Micro Grain Carbide

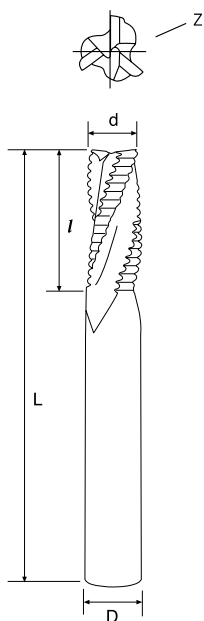
● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

3 Flutes - 3刃

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
XTA0403 AlTiN	4	8	50	6	3
XTA0503 AlTiN	5	13	50	6	3
XTA0603 AlTiN	6	16	50	6	3
XTA0703 AlTiN	7	16	60	8	3
XTA0803 AlTiN	8	19	60	8	3
XTA0903 AlTiN	9	25	75	10	3
XTA1003 AlTiN	10	25	75	10	3
XTA1103 AlTiN	11	30	75	12	3
XTA1203 AlTiN	12	30	75	12	3
XTA1603 AlTiN	16	35	100	16	3
XTA2003 AlTiN	20	45	100	20	3

4 Flutes - 4刃

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
XTA0404 AlTiN	4	8	50	6	4
XTA0504 AlTiN	5	13	50	6	4
XTA0604 AlTiN	6	16	50	6	4
XTA0704 AlTiN	7	16	60	8	4
XTA0804 AlTiN	8	19	60	8	4
XTA0904 AlTiN	9	25	75	10	4
XTA1004 AlTiN	10	25	75	10	4
XTA1104 AlTiN	11	30	75	12	4
XTA1204 AlTiN	12	30	75	12	4
XTA1604 AlTiN	16	35	100	16	4
XTA2004 AlTiN	20	45	100	20	4



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Fine Pitch Roughing series

■ 4刃粗精銑刀

600
Nano

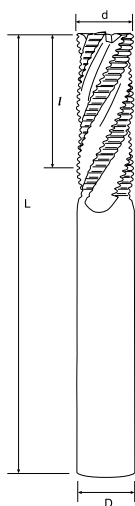
HRC
50

40°

RS

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUNTA 0504	5	13	50	6	4
SUNTA 0604	6	16	50	6	4
SUNTA 0704	7	16	60	8	4
SUNTA 0804	8	19	60	8	4
SUNTA 0904	9	25	75	10	4
SUNTA 1004	10	25	75	10	4
SUNTA 1104	11	30	75	12	4
SUNTA 1204	12	30	75	12	4
SUNTA 1404	14	35	100	16	4
SUNTA 1504	15	35	100	16	4
SUNTA 1604	16	35	100	16	4
SUNTA 2004	20	45	100	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	○	○			◎	○	○

Roughing series

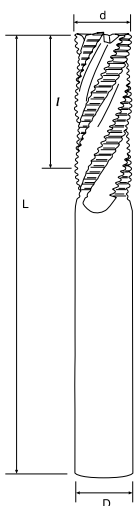
■ 4刃粗銑刀

600
NanoHRC
50

25°

RS

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	I 刃長	L 全長	D 柄徑	Z 刃數
SUXTA 0504	5	13	50	6	4
SUXTA 0604	6	16	50	6	4
SUXTA 0704	7	16	60	8	4
SUXTA 0804	8	19	60	8	4
SUXTA 0904	9	25	75	10	4
SUXTA 1004	10	25	75	10	4
SUXTA 1104	11	30	75	12	4
SUXTA 1204	12	30	75	12	4
SUXTA 1604	16	35	100	16	4
SUXTA 2004	20	45	100	20	4

HRC
40HRC
45HRC
50HRC
55HRC
60HRC
65

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	○	○			◎	○	○



Wave Shap Series

■ 波浪標準刀

600
NanoHRC
50

30°

● Micro Grain Carbide

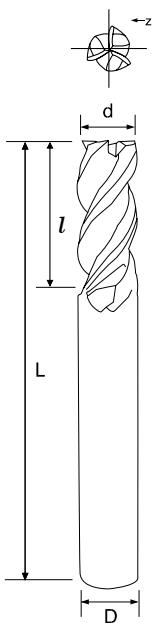
● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

3 Flutes - 3刃

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
WNE08003	8	19	60	8	3
WNE10003	10	22	75	10	3
WNE12003	12	26	75	12	3
WNE16003	16	32	100	16	3
WNE20003	20	38	100	20	3

4 Flutes - 4刃

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
WNE08004	8	19	60	8	4
WNE10004	10	22	75	10	4
WNE12004	12	26	75	12	4
WNE16004	16	32	100	16	4
WNE20004	20	38	100	20	4



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎						

Wave Shap Series

■ 波浪標準刀



● Micro Grain Carbide

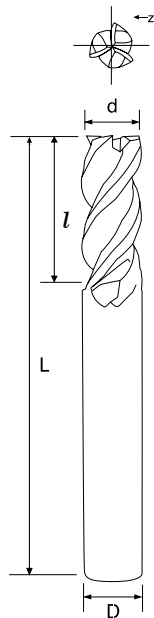
● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

3 Flutes - 3刃

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
WNE08003 nACro	8	19	60	8	3
WNE10003 nACro	10	22	75	10	3
WNE12003 nACro	12	26	75	12	3
WNE16003 nACro	16	32	100	16	3
WNE20003 nACro	20	38	100	20	3

4 Flutes - 4刃

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
WNE08004 nACro	8	19	60	8	4
WNE10004 nACro	10	22	75	10	4
WNE12004 nACro	12	26	75	12	4
WNE16004 nACro	16	32	100	16	4
WNE20004 nACro	20	38	100	20	4



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎						



Square



Square series - 4 flutes

■ 4刃立銑刀

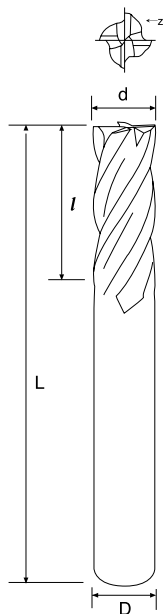
600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SSE0104	1	3	50	3	4
MSE0104	1	3	50	4	4
SSE0154	1.5	4	50	3	4
MSE0154	1.5	4	50	4	4
SSE0204	2	6	50	3	4
MSE0204	2	6	50	4	4
SSE0254	2.5	8	50	3	4
MSE0254	2.5	8	50	4	4
SSE0304	3	8	50	3	4
MSE0304	3	8	50	4	4
MSE0354	3.5	10	50	4	4
MSE0404	4	11	50	4	4
SE0104	1	3	50	6	4
SE0154	1.5	4	50	6	4
SE0204	2	6	50	6	4
SE0254	2.5	8	50	6	4
SE0304	3	8	50	6	4
SE0354	3.5	10	50	6	4
SE0404	4	11	50	6	4
SE0454	4.5	13	50	6	4
SE0504	5	13	50	6	4
SE0554	5.5	13	50	6	4
SE0604	6	16	50	6	4
SE0654	6.5	16	60	8	4
SE0704	7	16	60	8	4
SE0754	7.5	19	60	8	4
SE0804	8	20	60	8	4
SE0854	8.5	20	75	10	4
SE0904	9	20	75	10	4
SE0954	9.5	25	75	10	4
SE1004	10	30	75	10	4
SE1054	10.5	30	75	12	4
SE1104	11	30	75	12	4
SE1154	11.5	30	75	12	4
SE1204	12	32	75	12	4
SE1404	14	40	100	16	4
SE1604	16	40	100	16	4
SE1804	18	45	100	20	4
SE2004	20	45	100	20	4

Application 適用材質：

◎ Recommend 最適 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○

Square series - 4 flutes

■ 4刃立銑刀

600
NanoHRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SSE0104 AlTiN	1	3	50	3	4
MSE0104 AlTiN	1	3	50	4	4
SSE0154 AlTiN	1.5	4	50	3	4
MSE0154 AlTiN	1.5	4	50	4	4
SSE0204 AlTiN	2	6	50	3	4
MSE0204 AlTiN	2	6	50	4	4
SSE0254 AlTiN	2.5	8	50	3	4
MSE0254 AlTiN	2.5	8	50	4	4
SSE0304 AlTiN	3	8	50	3	4
MSE0304 AlTiN	3	8	50	4	4
MSE0354 AlTiN	3.5	10	50	4	4
MSE0404 AlTiN	4	11	50	4	4
SE0104 AlTiN	1	3	50	6	4
SE0154 AlTiN	1.5	4	50	6	4
SE0204 AlTiN	2	6	50	6	4
SE0254 AlTiN	2.5	8	50	6	4
SE0304 AlTiN	3	8	50	6	4
SE0354 AlTiN	3.5	10	50	6	4
SE0404 AlTiN	4	11	50	6	4
SE0454 AlTiN	4.5	13	50	6	4
SE0504 AlTiN	5	13	50	6	4
SE0554 AlTiN	5.5	13	50	6	4
SE0604 AlTiN	6	16	50	6	4
SE0654 AlTiN	6.5	16	60	8	4
SE0704 AlTiN	7	16	60	8	4
SE0754 AlTiN	7.5	19	60	8	4
SE0804 AlTiN	8	20	60	8	4
SE0854 AlTiN	8.5	20	75	10	4
SE0904 AlTiN	9	20	75	10	4
SE0954 AlTiN	9.5	25	75	10	4
SE1004 AlTiN	10	30	75	10	4
SE1054 AlTiN	10.5	30	75	12	4
SE1104 AlTiN	11	30	75	12	4
SE1154 AlTiN	11.5	30	75	12	4
SE1204 AlTiN	12	32	75	12	4
SE1404 AlTiN	14	40	100	16	4
SE1604 AlTiN	16	40	100	16	4
SE1804 AlTiN	18	45	100	20	4
SE2004 AlTiN	20	45	100	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Square



Square series - 4 flutes

■ 4刃立銑刀

400
Nano

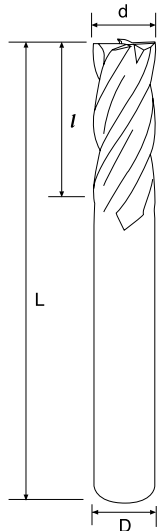
HRC
▶ 60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
UET0104 nBS	1	3	50	4	4
UET0154 nBS	1.5	4	50	4	4
UET0204 nBS	2	6	50	4	4
UET0254 nBS	2.5	8	50	4	4
UET0304 nBS	3	8	50	4	4
UET0354 nBS	3.5	8	50	4	4
UET0404 nBS	4	11	50	4	4
UET0454 nBS	4.5	13	50	6	4
UET0504 nBS	5	13	50	6	4
UET0554 nBS	5.5	13	50	6	4
UET0604 nBS	6	16	50	6	4
UET0654 nBS	6.5	16	60	8	4
UET0704 nBS	7	17	60	8	4
UET0804 nBS	8	21	60	8	4
UET0814 nBS	8	26	75	8	4
UET0854 nBS	8.5	26	75	10	4
UET0904 nBS	9	26	75	10	4
UET0954 nBS	9.5	26	75	10	4
UET1004 nBS	10	30	75	10	4
UET1104 nBS	11	30	75	12	4
UET1204 nBS	12	32	75	12	4
UET1304 nBS	13	33	75	14	4
UET1404 nBS	14	35	75	14	4
UET1604 nBS	16	46	100	16	4
UET2004 nBS	20	46	100	20	4
UET2504 nBS	25	50	100	25	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		

Square series - 4 flutes

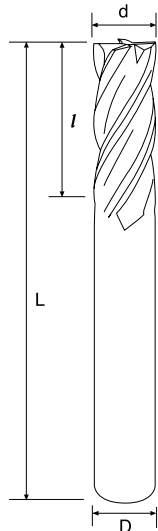
■ 4刃立銑刀

200
NanoHRC
▶ 65

35°

TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm

Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
SFUET0104 TiSiN	1	2.5	50	4	4
SFUET0154 TiSiN	1.5	3	50	4	4
SFUET0204 TiSiN	2	5	50	4	4
SFUET0254 TiSiN	2.5	6	50	4	4
SFUET0304 TiSiN	3	7.5	50	4	4
SFUET0354 TiSiN	3.5	8	50	4	4
SFUET0404 TiSiN	4	10	50	4	4
SFUET0454 TiSiN	4.5	10	50	6	4
SFUET0504 TiSiN	5	12	50	6	4
SFUET0554 TiSiN	5.5	12.5	60	6	4
SFUET0604 TiSiN	6	15	60	6	4
SFUET0704 TiSiN	7	20	60	8	4
SFUET0804 TiSiN	8	20	60	8	4
SFUET1004 TiSiN	10	25	75	10	4
SFUET1204 TiSiN	12	30	75	12	4
SFUET1404 TiSiN	14	30	80	16	4
SFUET1604 TiSiN	16	45	100	16	4
SFUET2004 TiSiN	20	50	100	20	4
SFUET2504 TiSiN	25	55	100	25	4

HRC
▶ 40HRC
▶ 45HRC
▶ 50HRC
▶ 55HRC
▶ 60HRC
▶ 65

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		



Square



Square series - Long Shank - 4 flutes

■ 4刃長柄立銑刀

600
Nano

HRC
45

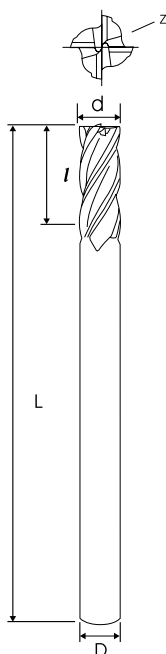
35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SLE0604	6	16	75	6	4
MLE0604	6	16	100	6	4
SLE0804	8	20	75	8	4
MLE0804	8	20	100	8	4
SLE1004	10	30	100	10	4
MLE1004	10	30	150	10	4
SLE1204	12	32	100	12	4
MLE1204	12	32	150	12	4



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	○						○	○	

Square series - Long Shank - 4 flutes

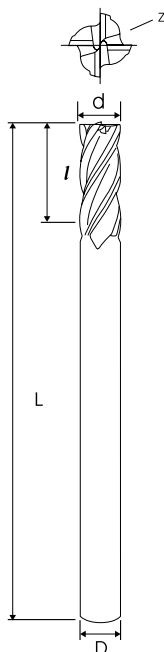
■ 4刃長柄立銑刀

600
NanoHRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SLE0604 AlTiN	6	16	75	6	4
MLE0604 AlTiN	6	16	100	6	4
SLE0804 AlTiN	8	20	75	8	4
MLE0804 AlTiN	8	20	100	8	4
SLE1004 AlTiN	10	30	100	10	4
MLE1004 AlTiN	10	30	150	10	4
SLE1204 AlTiN	12	32	100	12	4
MLE1204 AlTiN	12	32	150	12	4

HRC
40HRC
45HRC
50HRC
55HRC
60HRC
65

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Square



Square series - Long Flute - 4 flutes

■ 4刃長刃立銑刀

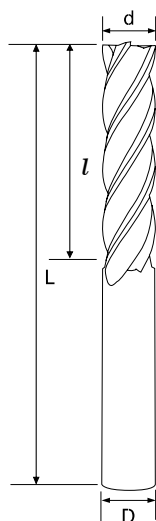
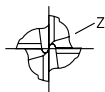
600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
LET0104	1	6	50	4	4
LET0154	1.5	9	50	4	4
LET0204	2	12	50	4	4
LET0254	2.5	12	50	4	4
LET0304	3	15	60	6	4
LET0354	3.5	15	60	6	4
LET0404	4	20	75	6	4
LET0454	4.5	20	75	6	4
LET0504	5	25	75	6	4
LET0554	5.5	25	75	6	4
LET0604	6	30	75	6	4
LET0704	7	30	100	8	4
LET0804	8	40	100	8	4
LET0904	9	40	100	10	4
LET1004	10	40	100	10	4
LET1104	11	40	100	12	4
LET1204	12	50	100	12	4
LET1404	14	50	150	16	4
LET1604	16	60	150	16	4
LET2004	20	90	200	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○

Square series - Long Flute - 4 flutes

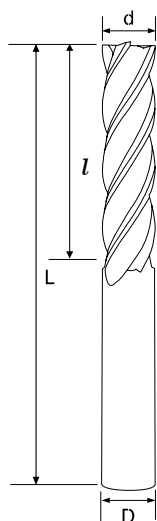
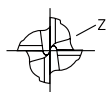
■ 4刃長刃立銑刀

600
NanoHRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
LET0104 AlTiN	1	6	50	4	4
LET0154 AlTiN	1.5	9	50	4	4
LET0204 AlTiN	2	12	50	4	4
LET0254 AlTiN	2.5	12	50	4	4
LET0304 AlTiN	3	15	60	6	4
LET0354 AlTiN	3.5	15	60	6	4
LET0404 AlTiN	4	20	75	6	4
LET0454 AlTiN	4.5	20	75	6	4
LET0504 AlTiN	5	25	75	6	4
LET0554 AlTiN	5.5	25	75	6	4
LET0604 AlTiN	6	30	75	6	4
LET0704 AlTiN	7	30	100	8	4
LET0804 AlTiN	8	40	100	8	4
LET0904 AlTiN	9	40	100	10	4
LET1004 AlTiN	10	40	100	10	4
LET1104 AlTiN	11	40	100	12	4
LET1204 AlTiN	12	50	100	12	4
LET1404 AlTiN	14	50	150	16	4
LET1604 AlTiN	16	60	150	16	4
LET2004 AlTiN	20	90	200	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Square



Square series - Long Flute - 4 flutes

■ 4刃長刃立銑刀

400
Nano

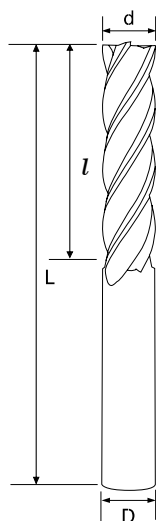
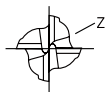
HRC
▶ 60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
ULET0104 nBS	1	5	50	4	4
ULET0154 nBS	1.5	6	50	4	4
ULET0204 nBS	2	9	50	4	4
ULET0254 nBS	2.5	10	50	4	4
ULET0304 nBS	3	12	50	6	4
ULET0354 nBS	3.5	14	50	6	4
ULET0404 nBS	4	16	60	6	4
ULET0454 nBS	4.5	18	60	6	4
ULET0504 nBS	5	25	75	6	4
ULET0604 nBS	6	25	75	6	4
ULET0704 nBS	7	30	75	8	4
ULET0804 nBS	8	35	100	8	4
ULET1004 nBS	10	40	100	10	4
ULET1204 nBS	12	45	100	12	4
ULET1214 nBS	12	60	150	12	4
ULET1404 nBS	14	45	100	14	4
ULET1604 nBS	16	65	150	16	4
ULET2004 nBS	20	75	150	20	4
ULET2504 nBS	25	80	150	25	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		

Square series - Long Flute - 4 flute

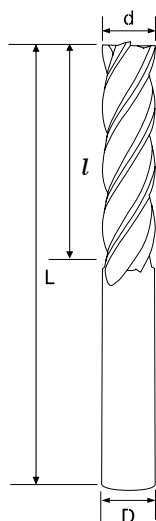
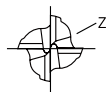
■ 4刃長刃立銑刀

200
NanoHRC
65

35°

TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm

Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
SFULET0104 TiSiN	1	4	50	4	4
SFULET0154 TiSiN	1.5	6	50	4	4
SFULET0204 TiSiN	2	8	50	4	4
SFULET0304 TiSiN	3	12	60	6	4
SFULET0404 TiSiN	4	16	60	6	4
SFULET0504 TiSiN	5	20	75	6	4
SFULET0604 TiSiN	6	25	75	6	4
SFULET0704 TiSiN	7	30	75	8	4
SFULET0804 TiSiN	8	30	75	8	4
SFULET1004 TiSiN	10	40	100	10	4
SFULET1204 TiSiN	12	45	100	12	4
SFULET1404 TiSiN	14	45	100	16	4
SFULET1604 TiSiN	16	65	150	16	4
SFULET2004 TiSiN	20	75	150	20	4
SFULET2504 TiSiN	25	80	150	25	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		



Square



Square series - Long Flute - 4 flutes

■ 4刃長刃立銑刀

500
Nano

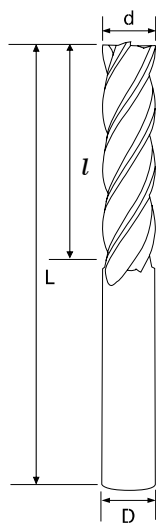
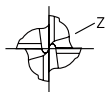
HRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SULET 0104	1	6	50	4	4
SULET 0154	1.5	9	50	4	4
SULET 0204	2	12	50	4	4
SULET 0254	2.5	12	50	4	4
SULET 0304	3	15	60	6	4
SULET 0354	3.5	15	60	6	4
SULET 0404	4	20	75	6	4
SULET 0454	4.5	20	75	6	4
SULET 0504	5	25	75	6	4
SULET 0554	5.5	25	75	6	4
SULET 0604	6	30	75	6	4
SULET 0704	7	30	100	8	4
SULET 0804	8	40	100	8	4
SULET 0904	9	40	100	10	4
SULET 1004	10	40	100	10	4
SULET 1104	11	40	100	12	4
SULET 1204	12	50	100	12	4
SULET 1404	14	50	150	16	4
SULET 1604	16	60	150	16	4
SULET 2004	20	90	200	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○

Square series - Flute Angle 45° - 4 flutes

■ 4刃45° 立銑刀

600
NanoHRC
45

45°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
MPE0104	1	3	50	4	4
MPE0154	1.5	4	50	4	4
MPE0204	2	6	50	4	4
MPE0254	2.5	8	50	4	4
MPE3304	3	8	50	3	4
MPE0304	3	8	50	4	4
MPE0354	3.5	10	50	4	4
MPE0404	4	11	50	4	4
PE0104	1	3	50	6	4
PE0154	1.5	4	50	6	4
PE0204	2	6	50	6	4
PE0254	2.5	8	50	6	4
PE0304	3	8	50	6	4
PE0354	3.5	10	50	6	4
PE0404	4	11	50	6	4
PE0454	4.5	13	50	6	4
PE0504	5	13	50	6	4
PE0554	5.5	13	50	6	4
PE0604	6	16	50	6	4
PE0654	6.5	16	60	8	4
PE0704	7	16	60	8	4
PE0754	7.5	19	60	8	4
PE0804	8	20	60	8	4
PE0854	8.5	20	75	10	4
PE0904	9	20	75	10	4
PE0954	9.5	25	75	10	4
PE1004	10	30	75	10	4
PE1054	10.5	30	75	12	4
PE1104	11	30	75	12	4
PE1154	11.5	30	75	12	4
PE1204	12	32	75	12	4
PE1404	14	40	100	16	4
PE1604	16	40	100	16	4
PE1804	18	45	100	20	4
PE2004	20	45	100	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-harden steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○



Square



Square series - Flute Angle 45° - 4 flutes

■ 4刃45° 立銑刀

600
Nano

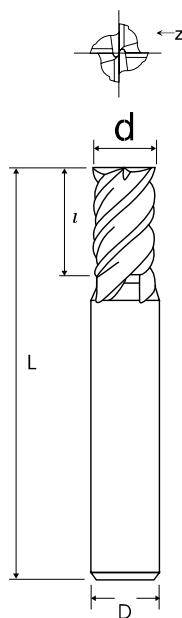
HRC
55

45°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
MPE0104 AlTiN	1	3	50	4	4
MPE0154 AlTiN	1.5	4	50	4	4
MPE0204 AlTiN	2	6	50	4	4
MPE0254 AlTiN	2.5	8	50	4	4
MPE3304 AlTiN	3	8	50	3	4
MPE0304 AlTiN	3	8	50	4	4
MPE0354 AlTiN	3.5	10	50	4	4
MPE0404 AlTiN	4	11	50	4	4
PE0104 AlTiN	1	3	50	6	4
PE0154 AlTiN	1.5	4	50	6	4
PE0204 AlTiN	2	6	50	6	4
PE0254 AlTiN	2.5	8	50	6	4
PE0304 AlTiN	3	8	50	6	4
PE0354 AlTiN	3.5	10	50	6	4
PE0404 AlTiN	4	11	50	6	4
PE0454 AlTiN	4.5	13	50	6	4
PE0504 AlTiN	5	13	50	6	4
PE0554 AlTiN	5.5	13	50	6	4
PE0604 AlTiN	6	16	50	6	4
PE0654 AlTiN	6.5	16	60	8	4
PE0704 AlTiN	7	16	60	8	4
PE0754 AlTiN	7.5	19	60	8	4
PE0804 AlTiN	8	20	60	8	4
PE0854 AlTiN	8.5	20	75	10	4
PE0904 AlTiN	9	20	75	10	4
PE0954 AlTiN	9.5	25	75	10	4
PE1004 AlTiN	10	30	75	10	4
PE1054 AlTiN	10.5	30	75	12	4
PE1104 AlTiN	11	30	75	12	4
PE1154 AlTiN	11.5	30	75	12	4
PE1204 AlTiN	12	32	75	12	4
PE1404 AlTiN	14	40	100	16	4
PE1604 AlTiN	16	40	100	16	4
PE1804 AlTiN	18	45	100	20	4
PE2004 AlTiN	20	45	100	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		

Square series - Flute angle 45° - 4 flutes

■ 4刃45° 立銑刀



● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SUPE0104	1	3	50	6	4
SUPE4104	1	3	50	4	4
SUPE0154	1.5	4	50	6	4
SUPE4154	1.5	4	50	4	4
SUPE0204	2	6	50	6	4
SUPE4204	2	6	50	4	4
SUPE0254	2.5	8	50	6	4
SUPE4254	2.5	8	50	4	4
SUPE0304	3	8	50	6	4
SUPE3304	3	8	50	3	4
SUPE4304	3	8	50	4	4
SUPE0354	3.5	10	50	6	4
SUPE4354	3.5	10	50	4	4
SUPE0404	4	11	50	6	4
SUPE4404	4	11	50	4	4
SUPE0454	4.5	13	50	6	4
SUPE0504	5	13	50	6	4
SUPE0554	5.5	13	50	6	4
SUPE0604	6	16	50	6	4
SUPE0654	6.5	16	60	8	4
SUPE0704	7	16	60	8	4
SUPE0754	7.5	19	60	8	4
SUPE0804	8	20	60	8	4
SUPE0854	8.5	20	75	10	4
SUPE0904	9	20	75	10	4
SUPE0954	9.5	25	75	10	4
SUPE1004	10	30	75	10	4
SUPE1054	10.5	30	75	12	4
SUPE1104	11	30	75	12	4
SUPE1154	11.5	30	75	12	4
SUPE1204	12	32	75	12	4
SUPE1404	14	40	100	16	4
SUPE1604	16	40	100	16	4
SUPE1804	18	45	100	20	4
SUPE2004	20	45	100	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○



Square



Square series - Long Flute - Flute angle 45° - 4 flutes

■ 4刃45° 長刃立銑刀

500
Nano

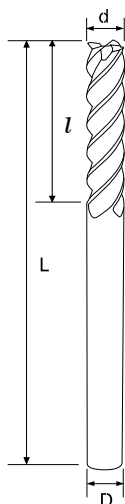
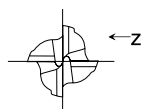
HRC
50

45°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm



MODE	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	l 刃長	L 全長	D 柄徑	Z 刃數
SULPE0104	1	4	60	6	4
SULPE0154	1.5	6	60	6	4
SULPE0204	2	8	60	6	4
SULPE0254	2.5	10	60	6	4
SULPE0304	3	12	60	6	4
SULPE0404	4	16	60	6	4
SULPE0504	5	21	60	6	4
SULPE0604	6	26	75	6	4
SULPE0804	8	31	75	8	4
SULPE1004	10	35	100	10	4
SULPE1204	12	40	100	12	4
SULPE1604	16	61	150	16	4
SULPE2004	20	76	150	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○

Square series - For Hard Material - Multiple Flute

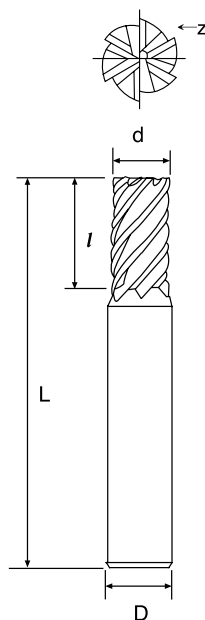
■ 多刃高硬度用立銑刀

400
NanoHRC
▶ 60

45°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm

Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
UVT0204 nBS	2	4	50	4	4
UVT0304 nBS	3	6	50	6	4
UVT0404 nBS	4	8	50	6	4
UVT0506 nBS	5	13	50	6	6
UVT0606 nBS	6	15	50	6	6
UVT0806 nBS	8	20	60	8	6
UVT1006 nBS	10	30	75	10	6
UVT1206 nBS	12	32	75	12	6
UVT1606 nBS	16	40	100	16	6
UVT2008 nBS	20	45	100	20	8
UVT2508 nBS	25	45	100	25	8
ULVT0606 nBS	6	25	75	6	6
ULVT0806 nBS	8	30	75	8	6
ULVT1006 nBS	10	40	100	10	6
ULVT1206 nBS	12	45	100	12	6
ULVT1606 nBS	16	65	150	16	6
ULVT2008 nBS	20	75	150	20	8
ULVT2508 nBS	25	80	150	25	8

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	○		○		

HRC
▶ 40HRC
▶ 45HRC
▶ 50HRC
▶ 55HRC
▶ 60HRC
▶ 65



Square



Square series - For Hard Material - Multiple Flute

■ 多刃高硬度用立銑刀

200
Nano

HRC
65

45°

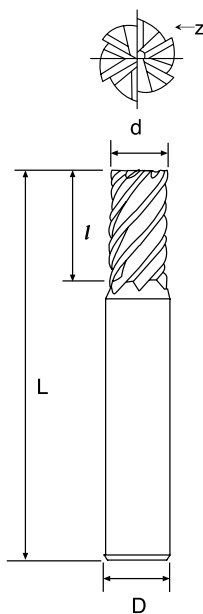
TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



Model	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
SFUVT0606 TiSiN	6	15	60	6	6
SFUVT0806 TiSiN	8	20	60	8	6
SFUVT1006 TiSiN	10	25	75	10	6
SFUVT1206 TiSiN	12	30	75	12	6
SFUVT1606 TiSiN	16	45	100	16	6
SFUVT2008 TiSiN	20	45	100	20	8
SFUVT2508 TiSiN	25	45	100	25	8



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		

Square series - Long Flute - Multiple Flute

■ 多刃長刃強力立銑刀

200
NanoHRC
65

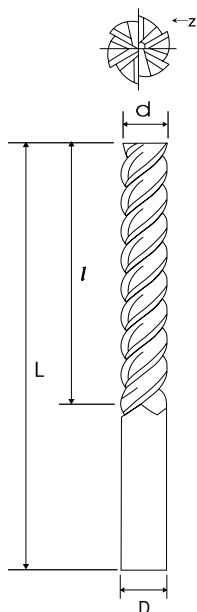
45°

TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm

Mode	Diameter	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	l 刃長	L 全長	D 柄徑	Z 刃數
SFULVT0606 TiSiN	6	25	75	6	6
SFULVT0806 TiSiN	8	35	100	8	6
SFULVT1006 TiSiN	10	45	100	10	6
SFULVT1206 TiSiN	12	50	100	12	6
SFULVT1606 TiSiN	16	65	150	16	6
SFULVT2008 TiSiN	20	75	150	20	8
SFULVT2508 TiSiN	25	80	150	25	8



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		

HRC
▶ 40HRC
▶ 45HRC
▶ 50HRC
▶ 55HRC
▶ 60HRC
▶ 65



Miniature Ball Nose - 2 flutes

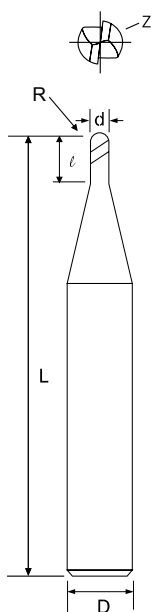
2刃微小徑球型立銑刀

600
Nano

HRC
40

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm


MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
MIB0032	0.3	0.15	0.6	50	4	2
MIB0042	0.4	0.2	0.8	50	4	2
MIB0052	0.5	0.25	1	50	4	2
MIB0062	0.6	0.3	1.2	50	4	2
MIB0072	0.7	0.35	1.4	50	4	2
MIB0082	0.8	0.4	1.6	50	4	2
MIB0092	0.9	0.45	1.8	50	4	2
MIB0102	1	0.5	2	50	4	2
MIB0112	1.1	0.55	2.2	50	4	2
MIB0122	1.2	0.6	2.4	50	4	2
MIB0132	1.3	0.65	2.6	50	4	2
MIB0142	1.4	0.7	2.8	50	4	2
MIB0152	1.5	0.75	3	50	4	2
MIB0162	1.6	0.8	3.2	50	4	2
MIB0172	1.7	0.85	3.4	50	4	2
MIB0182	1.8	0.9	3.6	50	4	2
MIB0192	1.9	0.95	3.8	50	4	2
MIB0202	2	1	4	50	4	2
MIB0212	2.1	1.05	4.2	50	4	2
MIB0222	2.2	1.1	4.4	50	4	2
MIB0232	2.3	1.15	4.6	50	4	2
MIB0242	2.4	1.2	4.8	50	4	2
MIB0252	2.5	1.25	5	50	4	2
MIB0262	2.6	1.3	5.2	50	4	2
MIB0272	2.7	1.35	5.4	50	4	2
MIB0282	2.8	1.4	5.6	50	4	2
MIB0292	2.9	1.45	5.8	50	4	2
MIB0302	3	1.5	6	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○

Miniature Ball Nose - 2 flutes

■ 2刃微小徑球型立銑刀

600
NanoHRC
50

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
MIB0032 AlTiN	0.3	0.15	0.6	50	4	2
MIB0042 AlTiN	0.4	0.2	0.8	50	4	2
MIB0052 AlTiN	0.5	0.25	1	50	4	2
MIB0062 AlTiN	0.6	0.3	1.2	50	4	2
MIB0072 AlTiN	0.7	0.35	1.4	50	4	2
MIB0082 AlTiN	0.8	0.4	1.6	50	4	2
MIB0092 AlTiN	0.9	0.45	1.8	50	4	2
MIB0102 AlTiN	1	0.5	2	50	4	2
MIB0112 AlTiN	1.1	0.55	2.2	50	4	2
MIB0122 AlTiN	1.2	0.6	2.4	50	4	2
MIB0132 AlTiN	1.3	0.65	2.6	50	4	2
MIB0142 AlTiN	1.4	0.7	2.8	50	4	2
MIB0152 AlTiN	1.5	0.75	3	50	4	2
MIB0162 AlTiN	1.6	0.8	3.2	50	4	2
MIB0172 AlTiN	1.7	0.85	3.4	50	4	2
MIB0182 AlTiN	1.8	0.9	3.6	50	4	2
MIB0192 AlTiN	1.9	0.95	3.8	50	4	2
MIB0202 AlTiN	2	1	4	50	4	2
MIB0212 AlTiN	2.1	1.05	4.2	50	4	2
MIB0222 AlTiN	2.2	1.1	4.4	50	4	2
MIB0232 AlTiN	2.3	1.15	4.6	50	4	2
MIB0242 AlTiN	2.4	1.2	4.8	50	4	2
MIB0252 AlTiN	2.5	1.25	5	50	4	2
MIB0262 AlTiN	2.6	1.3	5.2	50	4	2
MIB0272 AlTiN	2.7	1.35	5.4	50	4	2
MIB0282 AlTiN	2.8	1.4	5.6	50	4	2
MIB0292 AlTiN	2.9	1.45	5.8	50	4	2
MIB0302 AlTiN	3	1.5	6	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Miniature Ball Nose - 2 flutes

2刃微小徑球型立銑刀

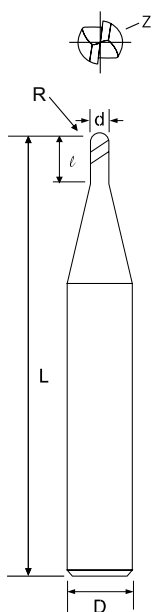
400
Nano

HRC
60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm


Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
UMIB3032 nBS	0.3	0.15	0.6	38	3	2
UMIB3042 nBS	0.4	0.2	0.7	38	3	2
UMIB3052 nBS	0.5	0.25	0.8	38	3	2
UMIB3062 nBS	0.6	0.3	0.9	38	3	2
UMIB3072 nBS	0.7	0.35	1.4	38	3	2
UMIB3082 nBS	0.8	0.4	1.6	38	3	2
UMIB3092 nBS	0.9	0.45	1.8	38	3	2
UMIB3102 nBS	1	0.5	2	38	3	2
UMIB3112 nBS	1.1	0.55	2.2	38	3	2
UMIB3122 nBS	1.2	0.6	2.4	38	3	2
UMIB3132 nBS	1.3	0.65	2.6	38	3	2
UMIB3142 nBS	1.4	0.7	2.8	38	3	2
UMIB3152 nBS	1.5	0.75	3	38	3	2
UMIB3162 nBS	1.6	0.8	3.2	38	3	2
UMIB3172 nBS	1.7	0.85	3.4	38	3	2
UMIB3182 nBS	1.8	0.9	3.6	38	3	2
UMIB3192 nBS	1.9	0.95	3.8	38	3	2
UMIB3202 nBS	2	1	4	38	3	2
UMIB3212 nBS	2.1	1.05	4.2	38	3	2
UMIB3222 nBS	2.2	1.1	4.4	38	3	2
UMIB3232 nBS	2.3	1.15	4.6	38	3	2
UMIB3242 nBS	2.4	1.2	4.8	38	3	2
UMIB3252 nBS	2.5	1.25	5	38	3	2
UMIB3262 nBS	2.6	1.3	5.2	38	3	2
UMIB3272 nBS	2.7	1.35	5.4	38	3	2
UMIB3282 nBS	2.8	1.4	5.6	38	3	2
UMIB3292 nBS	2.9	1.45	5.8	38	3	2
UMIB3302 nBS	3	1.5	6	38	3	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	◎	◎	◎	◎			○		

Miniature Ball Nose - 2 flutes

■ 2刃微小徑球型立銑刀

400
NanoHRC
60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm

Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
UMIB0032 nBS	0.3	0.15	0.6	50	4	2
UMIB0042 nBS	0.4	0.2	0.7	50	4	2
UMIB0052 nBS	0.5	0.25	0.8	50	4	2
UMIB0062 nBS	0.6	0.3	0.9	50	4	2
UMIB0072 nBS	0.7	0.35	1.4	50	4	2
UMIB0082 nBS	0.8	0.4	1.6	50	4	2
UMIB0092 nBS	0.9	0.45	1.8	50	4	2
UMIB0102 nBS	1	0.5	2	50	4	2
UMIB0112 nBS	1.1	0.55	2.2	50	4	2
UMIB0122 nBS	1.2	0.6	2.4	50	4	2
UMIB0132 nBS	1.3	0.65	2.6	50	4	2
UMIB0142 nBS	1.4	0.7	2.8	50	4	2
UMIB0152 nBS	1.5	0.75	3	50	4	2
UMIB0162 nBS	1.6	0.8	3.2	50	4	2
UMIB0172 nBS	1.7	0.85	3.4	50	4	2
UMIB0182 nBS	1.8	0.9	3.6	50	4	2
UMIB0192 nBS	1.9	0.95	3.8	50	4	2
UMIB0202 nBS	2	1	4	50	4	2
UMIB0212 nBS	2.1	1.05	4.2	50	4	2
UMIB0222 nBS	2.2	1.1	4.4	50	4	2
UMIB0232 nBS	2.3	1.15	4.6	50	4	2
UMIB0242 nBS	2.4	1.2	4.8	50	4	2
UMIB0252 nBS	2.5	1.25	5	50	4	2
UMIB0262 nBS	2.6	1.3	5.2	50	4	2
UMIB0272 nBS	2.7	1.35	5.4	50	4	2
UMIB0282 nBS	2.8	1.4	5.6	50	4	2
UMIB0292 nBS	2.9	1.45	5.8	50	4	2
UMIB0302 nBS	3	1.5	6	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎		○		



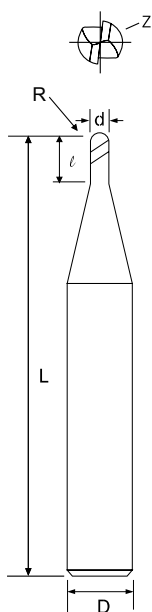
Miniature Ball Nose - 2 flutes

2刃微小徑球型立銑刀



● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SFUMIB0033 TiSiN	0.3	0.15	0.6	38	3	2
SFUMIB0043 TiSiN	0.4	0.2	0.8	38	3	2
SFUMIB0053 TiSiN	0.5	0.25	1	38	3	2
SFUMIB0063 TiSiN	0.6	0.3	1.2	38	3	2
SFUMIB0073 TiSiN	0.7	0.35	1.4	38	3	2
SFUMIB0083 TiSiN	0.8	0.4	1.6	38	3	2
SFUMIB0103 TiSiN	1	0.5	2	38	3	2
SFUMIB0123 TiSiN	1.2	0.6	2.5	38	3	2
SFUMIB0143 TiSiN	1.4	0.7	3	38	3	2
SFUMIB0153 TiSiN	1.5	0.75	3	38	3	2
SFUMIB0163 TiSiN	1.6	0.8	3.5	38	3	2
SFUMIB0183 TiSiN	1.8	0.9	4	38	3	2
SFUMIB0203 TiSiN	2	1	4	38	3	2
SFUMIB0223 TiSiN	2.2	1.1	4.5	38	3	2
SFUMIB0243 TiSiN	2.4	1.2	5	38	3	2
SFUMIB0253 TiSiN	2.5	1.25	5	38	3	2
SFUMIB0303 TiSiN	3	1.5	6	38	3	2
SFUMIB0034 TiSiN	0.3	0.15	0.6	50	4	2
SFUMIB0044 TiSiN	0.4	0.2	0.8	50	4	2
SFUMIB0054 TiSiN	0.5	0.25	1	50	4	2
SFUMIB0064 TiSiN	0.6	0.3	1.2	50	4	2
SFUMIB0074 TiSiN	0.7	0.35	1.4	50	4	2
SFUMIB0084 TiSiN	0.8	0.4	1.6	50	4	2
SFUMIB0104 TiSiN	1	0.5	2	50	4	2
SFUMIB0124 TiSiN	1.2	0.6	2.5	50	4	2
SFUMIB0144 TiSiN	1.4	0.7	3	50	4	2
SFUMIB0154 TiSiN	1.5	0.75	3	50	4	2
SFUMIB0164 TiSiN	1.6	0.8	3.5	50	4	2
SFUMIB0184 TiSiN	1.8	0.9	4	50	4	2
SFUMIB0204 TiSiN	2	1	4	50	4	2
SFUMIB0224 TiSiN	2.2	1.1	4.5	50	4	2
SFUMIB0244 TiSiN	2.4	1.2	5	50	4	2
SFUMIB0254 TiSiN	2.5	1.25	5	50	4	2
SFUMIB0304 TiSiN	3	1.5	6	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	○	○	◎	◎	○		○		

Miniature Ball Nose - 2 flutes

■ 2刃微小徑球型立銑刀

500
Nano

HRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm



MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SUMIB0032	0.3	0.15	0.6	50	4	2
SUMIB0042	0.4	0.2	0.7	50	4	2
SUMIB0052	0.5	0.25	0.8	50	4	2
SUMIB0062	0.6	0.3	0.9	50	4	2
SUMIB0072	0.7	0.35	1.4	50	4	2
SUMIB0082	0.8	0.4	1.6	50	4	2
SUMIB0092	0.9	0.45	1.8	50	4	2
SUMIB0102	1.0	0.5	2	50	4	2
SUMIB0112	1.1	0.55	2.2	50	4	2
SUMIB0122	1.2	0.6	2.4	50	4	2
SUMIB0132	1.3	0.65	2.6	50	4	2
SUMIB0142	1.4	0.7	2.8	50	4	2
SUMIB0152	1.5	0.75	3	50	4	2
SUMIB0162	1.6	0.8	3.2	50	4	2
SUMIB0172	1.7	0.85	3.4	50	4	2
SUMIB0182	1.8	0.9	3.6	50	4	2
SUMIB0192	1.9	0.95	3.8	50	4	2
SUMIB0202	2.0	1	4	50	4	2
SUMIB0212	2.1	1.05	4.2	50	4	2
SUMIB0222	2.2	1.1	4.4	50	4	2
SUMIB0232	2.3	1.15	4.6	50	4	2
SUMIB0242	2.4	1.2	4.8	50	4	2
SUMIB0252	2.5	1.25	5	50	4	2
SUMIB0262	2.6	1.3	5.2	50	4	2
SUMIB0272	2.7	1.35	5.4	50	4	2
SUMIB0282	2.8	1.4	5.6	50	4	2
SUMIB0292	2.9	1.45	5.8	50	4	2
SUMIB0302	3.0	1.5	6	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○



Ball Nose - Long Neck - 2 flutes

2刃深溝專用長頸球型立銑刀

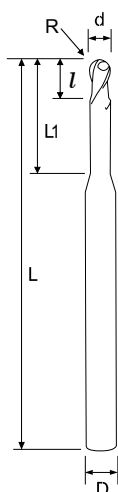
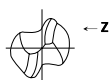
600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
LNBT05022	0.5	0.25	0.75	2	50	4	2
LNBT05042	0.5	0.25	0.75	4	50	4	2
LNBT05062	0.5	0.25	0.75	6	50	4	2
LNBT06022	0.6	0.3	0.9	2	50	4	2
LNBT06042	0.6	0.3	0.9	4	50	4	2
LNBT06062	0.6	0.3	0.9	6	50	4	2
LNBT08042	0.8	0.4	1.2	4	50	4	2
LNBT08062	0.8	0.4	1.2	6	50	4	2
LNBT08082	0.8	0.4	1.2	8	50	4	2
LNBT10062	1	0.5	1.5	6	50	4	2
LNBT10082	1	0.5	1.5	8	50	4	2
LNBT10102	1	0.5	1.5	10	50	4	2
LNBT10122	1	0.5	1.5	12	50	4	2
LNBT12062	1.2	0.6	1.8	6	50	4	2
LNBT12082	1.2	0.6	1.8	8	50	4	2
LNBT12102	1.2	0.6	1.8	10	50	4	2
LNBT12122	1.2	0.6	1.8	12	50	4	2
LNBT14062	1.4	0.7	2.1	6	50	4	2
LNBT14102	1.4	0.7	2.1	10	50	4	2
LNBT14162	1.4	0.7	2.1	16	50	4	2
LNBT15062	1.5	0.75	2.3	6	50	4	2
LNBT15082	1.5	0.75	2.3	8	50	4	2
LNBT15102	1.5	0.75	2.3	10	50	4	2
LNBT15122	1.5	0.75	2.3	12	50	4	2
LNBT15142	1.5	0.75	2.3	14	50	4	2
LNBT15162	1.5	0.75	2.3	16	50	4	2
LNBT15182	1.5	0.75	2.3	18	50	4	2
LNBT15202	1.5	0.75	2.3	20	50	4	2
LNBT16062	1.6	0.8	2.4	6	50	4	2
LNBT16082	1.6	0.8	2.4	8	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	○						○	○	

Ball Nose - Long Neck - 2 flutes

2刃深溝專用長頸球型立銑刀

600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
LNBT16102	1.6	0.8	2.4	10	50	4	2
LNBT16122	1.6	0.8	2.4	12	50	4	2
LNBT16142	1.6	0.8	2.4	14	50	4	2
LNBT16162	1.6	0.8	2.4	16	50	4	2
LNBT16182	1.6	0.8	2.4	18	50	4	2
LNBT16202	1.6	0.8	2.4	20	50	4	2
LNBT18082	1.8	0.9	2.7	8	50	4	2
LNBT18142	1.8	0.9	2.7	14	50	4	2
LNBT18202	1.8	0.9	2.7	20	50	4	2
LNBT20082	2	1	3	8	50	4	2
LNBT20102	2	1	3	10	50	4	2
LNBT20122	2	1	3	12	50	4	2
LNBT20142	2	1	3	14	50	4	2
LNBT20162	2	1	3	16	50	4	2
LNBT20182	2	1	3	18	50	4	2
LNBT20202	2	1	3	20	50	4	2
LNBT25082	2.5	1.25	4	8	50	4	2
LNBT25122	2.5	1.25	4	12	50	4	2
LNBT25162	2.5	1.25	4	16	50	4	2
LNBT25202	2.5	1.25	4	20	50	4	2
LNBT30102	3	1.5	4.5	10	50	6	2
LNBT30122	3	1.5	4.5	12	50	6	2
LNBT30162	3	1.5	4.5	16	60	6	2
LNBT30202	3	1.5	4.5	20	60	6	2
LNBT30252	3	1.5	4.5	25	75	6	2
LNBT40122	4	2	6	12	50	6	2
LNBT40162	4	2	6	16	60	6	2
LNBT40202	4	2	6	20	75	6	2
LNBT40252	4	2	6	25	75	6	2
LNBT40302	4	2	6	30	75	6	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-harden steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○



Ball Nose - Long Neck - 2 flutes

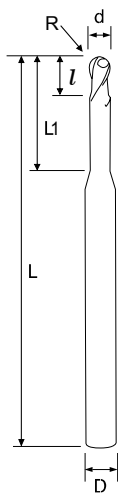
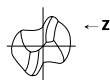
2刃深溝專用長頸球型立銑刀

600
NanoHRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
LNBT05022 AlTiN	0.5	0.25	0.75	2	50	4	2
LNBT05042 AlTiN	0.5	0.25	0.75	4	50	4	2
LNBT05062 AlTiN	0.5	0.25	0.75	6	50	4	2
LNBT06022 AlTiN	0.6	0.3	0.9	2	50	4	2
LNBT06042 AlTiN	0.6	0.3	0.9	4	50	4	2
LNBT06062 AlTiN	0.6	0.3	0.9	6	50	4	2
LNBT08042 AlTiN	0.8	0.4	1.2	4	50	4	2
LNBT08062 AlTiN	0.8	0.4	1.2	6	50	4	2
LNBT08082 AlTiN	0.8	0.4	1.2	8	50	4	2
LNBT10062 AlTiN	1	0.5	1.5	6	50	4	2
LNBT10082 AlTiN	1	0.5	1.5	8	50	4	2
LNBT10102 AlTiN	1	0.5	1.5	10	50	4	2
LNBT10122 AlTiN	1	0.5	1.5	12	50	4	2
LNBT12062 AlTiN	1.2	0.6	1.8	6	50	4	2
LNBT12082 AlTiN	1.2	0.6	1.8	8	50	4	2
LNBT12102 AlTiN	1.2	0.6	1.8	10	50	4	2
LNBT12122 AlTiN	1.2	0.6	1.8	12	50	4	2
LNBT14062 AlTiN	1.4	0.7	2.1	6	50	4	2
LNBT14102 AlTiN	1.4	0.7	2.1	10	50	4	2
LNBT14162 AlTiN	1.4	0.7	2.1	16	50	4	2
LNBT15062 AlTiN	1.5	0.75	2.3	6	50	4	2
LNBT15082 AlTiN	1.5	0.75	2.3	8	50	4	2
LNBT15102 AlTiN	1.5	0.75	2.3	10	50	4	2
LNBT15122 AlTiN	1.5	0.75	2.3	12	50	4	2
LNBT15142 AlTiN	1.5	0.75	2.3	14	50	4	2
LNBT15162 AlTiN	1.5	0.75	2.3	16	50	4	2
LNBT15182 AlTiN	1.5	0.75	2.3	18	50	4	2
LNBT15202 AlTiN	1.5	0.75	2.3	20	50	4	2
LNBT16062 AlTiN	1.6	0.8	2.4	6	50	4	2
LNBT16082 AlTiN	1.6	0.8	2.4	8	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		

Ball Nose - Long Neck - 2 flutes

2刃深溝專用長頸球型立銑刀

600
Nano

HRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
LNBT16102 AlTiN	1.6	0.8	2.4	10	50	4	2
LNBT16122 AlTiN	1.6	0.8	2.4	12	50	4	2
LNBT16142 AlTiN	1.6	0.8	2.4	14	50	4	2
LNBT16162 AlTiN	1.6	0.8	2.4	16	50	4	2
LNBT16182 AlTiN	1.6	0.8	2.4	18	50	4	2
LNBT16202 AlTiN	1.6	0.8	2.4	20	50	4	2
LNBT18082 AlTiN	1.8	0.9	2.7	8	50	4	2
LNBT18142 AlTiN	1.8	0.9	2.7	14	50	4	2
LNBT18202 AlTiN	1.8	0.9	2.7	20	50	4	2
LNBT20082 AlTiN	2	1	3	8	50	4	2
LNBT20102 AlTiN	2	1	3	10	50	4	2
LNBT20122 AlTiN	2	1	3	12	50	4	2
LNBT20142 AlTiN	2	1	3	14	50	4	2
LNBT20162 AlTiN	2	1	3	16	50	4	2
LNBT20182 AlTiN	2	1	3	18	50	4	2
LNBT20202 AlTiN	2	1	3	20	50	4	2
LNBT25082 AlTiN	2.5	1.25	4	8	50	4	2
LNBT25122 AlTiN	2.5	1.25	4	12	50	4	2
LNBT25162 AlTiN	2.5	1.25	4	16	50	4	2
LNBT25202 AlTiN	2.5	1.25	4	20	50	4	2
LNBT30102 AlTiN	3	1.5	4.5	10	50	6	2
LNBT30122 AlTiN	3	1.5	4.5	12	50	6	2
LNBT30162 AlTiN	3	1.5	4.5	16	60	6	2
LNBT30202 AlTiN	3	1.5	4.5	20	60	6	2
LNBT30252 AlTiN	3	1.5	4.5	25	75	6	2
LNBT40122 AlTiN	4	2	6	12	50	6	2
LNBT40162 AlTiN	4	2	6	16	60	6	2
LNBT40202 AlTiN	4	2	6	20	75	6	2
LNBT40252 AlTiN	4	2	6	25	75	6	2
LNBT40302 AlTiN	4	2	6	30	75	6	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Ball Nose - Long Neck - 2 flutes

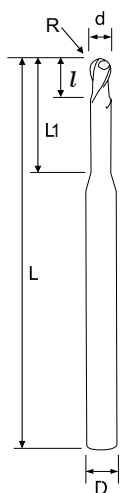
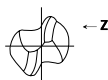
2刃深溝專用長頸球型立銑刀

400
NanoHRC
60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm

Mode	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
ULNBT05022 nBS	0.5	0.25	0.75	2	50	4	2
ULNBT05042 nBS	0.5	0.25	0.75	4	50	4	2
ULNBT05062 nBS	0.5	0.25	0.75	6	50	4	2
ULNBT06022 nBS	0.6	0.3	0.9	2	50	4	2
ULNBT06042 nBS	0.6	0.3	0.9	4	50	4	2
ULNBT06062 nBS	0.6	0.3	0.9	6	50	4	2
ULNBT08042 nBS	0.8	0.4	1.2	4	50	4	2
ULNBT08062 nBS	0.8	0.4	1.2	6	50	4	2
ULNBT08082 nBS	0.8	0.4	1.2	8	50	4	2
ULNBT10062 nBS	1	0.5	1.5	6	50	4	2
ULNBT10082 nBS	1	0.5	1.5	8	50	4	2
ULNBT10102 nBS	1	0.5	1.5	10	50	4	2
ULNBT10122 nBS	1	0.5	1.5	12	50	4	2
ULNBT15062 nBS	1.5	0.75	2.3	6	50	4	2
ULNBT15082 nBS	1.5	0.75	2.3	8	50	4	2
ULNBT15102 nBS	1.5	0.75	2.3	10	50	4	2
ULNBT15122 nBS	1.5	0.75	2.3	12	50	4	2
ULNBT15142 nBS	1.5	0.75	2.3	14	50	4	2
ULNBT15162 nBS	1.5	0.75	2.3	16	50	4	2
ULNBT15182 nBS	1.5	0.75	2.3	18	50	4	2
ULNBT15202 nBS	1.5	0.75	2.3	20	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼 ,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎		○		

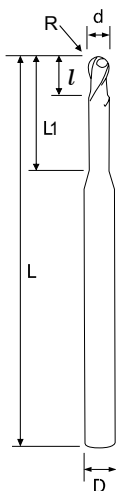
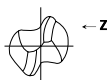
Ball Nose - Long Neck - 2 flutes

2刃深溝專用長頸球型立銑刀



● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刀數
ULNBT20082 nBS	2	1	3	8	50	4	2
ULNBT20102 nBS	2	1	3	10	50	4	2
ULNBT20122 nBS	2	1	3	12	50	4	2
ULNBT20142 nBS	2	1	3	14	50	4	2
ULNBT20162 nBS	2	1	3	16	50	4	2
ULNBT20182 nBS	2	1	3	18	50	4	2
ULNBT20202 nBS	2	1	3	20	50	4	2
ULNBT25082 nBS	2.5	1.25	4	8	50	4	2
ULNBT25122 nBS	2.5	1.25	4	12	50	4	2
ULNBT25162 nBS	2.5	1.25	4	16	50	4	2
ULNBT25202 nBS	2.5	1.25	4	20	50	4	2
ULNBT30102 nBS	3	1.5	4.5	10	50	6	2
ULNBT30122 nBS	3	1.5	4.5	12	50	6	2
ULNBT30162 nBS	3	1.5	4.5	16	60	6	2
ULNBT30202 nBS	3	1.5	4.5	20	60	6	2
ULNBT30252 nBS	3	1.5	4.5	25	75	6	2
ULNBT40122 nBS	4	2	6	12	50	6	2
ULNBT40162 nBS	4	2	6	16	60	6	2
ULNBT40202 nBS	4	2	6	20	75	6	2
ULNBT40252 nBS	4	2	6	25	75	6	2
ULNBT40302 nBS	4	2	6	30	75	6	2

HRC
▶ 40

HRC
▶ 45

HRC
▶ 50

HRC
▶ 55

HRC
▶ 60

HRC
▶ 65



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎		○		



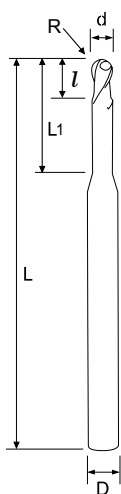
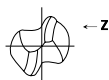
Ball Nose - Long Neck - 2 flutes

2刃深溝專用長頸球型立銑刀



● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



Mode	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SFULNBT05022 nAco	0.5	0.25	0.75	2	50	4	2
SFULNBT05042 nAco	0.5	0.25	0.75	4	50	4	2
SFULNBT05062 nAco	0.5	0.25	0.75	6	50	4	2
SFULNBT06022 nAco	0.6	0.3	0.9	2	50	4	2
SFULNBT06042 nAco	0.6	0.3	0.9	4	50	4	2
SFULNBT06062 nAco	0.6	0.3	0.9	6	50	4	2
SFULNBT08042 nAco	0.8	0.4	1.2	4	50	4	2
SFULNBT08062 nAco	0.8	0.4	1.2	6	50	4	2
SFULNBT08082 nAco	0.8	0.4	1.2	8	50	4	2
SFULNBT10062 nAco	1	0.5	1.5	6	50	4	2
SFULNBT10082 nAco	1	0.5	1.5	8	50	4	2
SFULNBT10102 nAco	1	0.5	1.5	10	50	4	2
SFULNBT10122 nAco	1	0.5	1.5	12	50	4	2
SFULNBT15062 nAco	1.5	0.75	2.3	6	50	4	2
SFULNBT15082 nAco	1.5	0.75	2.3	8	50	4	2
SFULNBT15102 nAco	1.5	0.75	2.3	10	50	4	2
SFULNBT15122 nAco	1.5	0.75	2.3	12	50	4	2
SFULNBT15142 nAco	1.5	0.75	2.3	14	50	4	2
SFULNBT15162 nAco	1.5	0.75	2.3	16	50	4	2
SFULNBT15182 nAco	1.5	0.75	2.3	18	50	4	2
SFULNBT15202 nAco	1.5	0.75	2.3	20	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		

Ball Nose - Long Neck - 2 flutes

2刃深溝專用長頸球型立銑刀

200
Nano

HRC
65

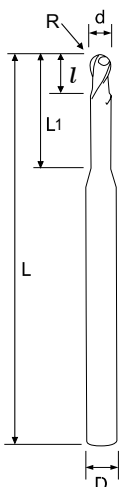
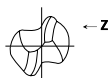
35°

nAco

深溝球型

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



Mode	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SFULNBT20082 nAco	2	1	3	8	50	4	2
SFULNBT20102 nAco	2	1	3	10	50	4	2
SFULNBT20122 nAco	2	1	3	12	50	4	2
SFULNBT20142 nAco	2	1	3	14	50	4	2
SFULNBT20162 nAco	2	1	3	16	50	4	2
SFULNBT20182 nAco	2	1	3	18	50	4	2
SFULNBT20202 nAco	2	1	3	20	50	4	2
SFULNBT25082 nAco	2.5	1.25	4	8	50	4	2
SFULNBT25122 nAco	2.5	1.25	4	12	50	4	2
SFULNBT25162 nAco	2.5	1.25	4	16	50	4	2
SFULNBT30102 nAco	3	1.5	4.5	10	50	6	2
SFULNBT30122 nAco	3	1.5	4.5	12	50	6	2
SFULNBT30162 nAco	3	1.5	4.5	16	60	6	2
SFULNBT30202 nAco	3	1.5	4.5	20	60	6	2
SFULNBT30252 nAco	3	1.5	4.5	25	75	6	2
SFULNBT40122 nAco	4	2	6	12	50	6	2
SFULNBT40162 nAco	4	2	6	16	60	6	2
SFULNBT40202 nAco	4	2	6	20	75	6	2
SFULNBT40252 nAco	4	2	6	25	75	6	2
SFULNBT40302 nAco	4	2	6	30	75	6	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		

HRC
40

HRC
45

HRC
50

HRC
55

HRC
60

HRC
65





Ball Nose - Long Neck - 2 flutes

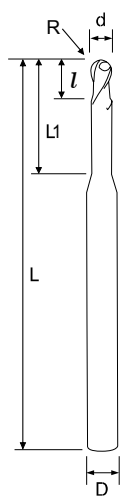
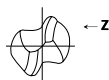
2刃深溝專用長頸球型立銑刀

500
NanoHRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	1 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SULNBT05022	0.5	0.25	0.75	2	50	4	2
SULNBT05042	0.5	0.25	0.75	4	50	4	2
SULNBT05062	0.5	0.25	0.75	6	50	4	2
SULNBT06022	0.6	0.3	0.9	2	50	4	2
SULNBT06042	0.6	0.3	0.9	4	50	4	2
SULNBT06062	0.6	0.3	0.9	6	50	4	2
SULNBT08042	0.8	0.4	1.2	4	50	4	2
SULNBT08062	0.8	0.4	1.2	6	50	4	2
SULNBT08082	0.8	0.4	1.2	8	50	4	2
SULNBT10062	1	0.5	1.5	6	50	4	2
SULNBT10082	1	0.5	1.5	8	50	4	2
SULNBT10102	1	0.5	1.5	10	50	4	2
SULNBT10122	1	0.5	1.5	12	50	4	2
SULNBT12062	1.2	0.6	1.8	6	50	4	2
SULNBT12082	1.2	0.6	1.8	8	50	4	2
SULNBT12102	1.2	0.6	1.8	10	50	4	2
SULNBT12122	1.2	0.6	1.8	12	50	4	2
SULNBT14062	1.4	0.7	2.1	6	50	4	2
SULNBT14102	1.4	0.7	2.1	10	50	4	2
SULNBT14162	1.4	0.7	2.1	16	50	4	2
SULNBT15062	1.5	0.75	2.3	6	50	4	2
SULNBT15082	1.5	0.75	2.3	8	50	4	2
SULNBT15102	1.5	0.75	2.3	10	50	4	2
SULNBT15122	1.5	0.75	2.3	12	50	4	2
SULNBT15142	1.5	0.75	2.3	14	50	4	2
SULNBT15162	1.5	0.75	2.3	16	50	4	2
SULNBT15182	1.5	0.75	2.3	18	50	4	2
SULNBT15202	1.5	0.75	2.3	20	50	4	2
SULNBT16062	1.6	0.8	2.4	6	50	4	2
SULNBT16082	1.6	0.8	2.4	8	50	4	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○

Ball Nose - Long Neck - 2 flutes

■ 2刃深溝專用長頸球型立銑刀

500
NanoHRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刀徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SULNBT16102	1.6	0.8	2.4	10	50	4	2
SULNBT16122	1.6	0.8	2.4	12	50	4	2
SULNBT16142	1.6	0.8	2.4	14	50	4	2
SULNBT16162	1.6	0.8	2.4	16	50	4	2
SULNBT16182	1.6	0.8	2.4	18	50	4	2
SULNBT16202	1.6	0.8	2.4	20	50	4	2
SULNBT18082	1.8	0.9	2.7	8	50	4	2
SULNBT18142	1.8	0.9	2.7	14	50	4	2
SULNBT18202	1.8	0.9	2.7	20	50	4	2
SULNBT20082	2	1	3	8	50	4	2
SULNBT20102	2	1	3	10	50	4	2
SULNBT20122	2	1	3	12	50	4	2
SULNBT20142	2	1	3	14	50	4	2
SULNBT20162	2	1	3	16	50	4	2
SULNBT20182	2	1	3	18	50	4	2
SULNBT20202	2	1	3	20	50	4	2
SULNBT25082	2.5	1.25	4	8	50	4	2
SULNBT25122	2.5	1.25	4	12	50	4	2
SULNBT25162	2.5	1.25	4	16	50	4	2
SULNBT25202	2.5	1.25	4	20	50	4	2
SULNBT30102	3	1.5	4.5	10	50	6	2
SULNBT30122	3	1.5	4.5	12	50	6	2
SULNBT30162	3	1.5	4.5	16	60	6	2
SULNBT30202	3	1.5	4.5	20	60	6	2
SULNBT30252	3	1.5	4.5	25	75	6	2
SULNBT40122	4	2	6	12	50	6	2
SULNBT40162	4	2	6	16	60	6	2
SULNBT40202	4	2	6	20	75	6	2
SULNBT40252	4	2	6	25	75	6	2
SULNBT40302	4	2	6	30	75	6	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○



Pencil Neck Ball Nose - 2 flutes

2刃斜度頸球型銑刀

600
Nano

HRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



HRC
40

HRC
45

HRC
50

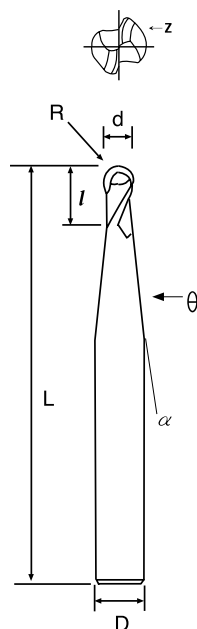
HRC
55

HRC
60

HRC
65



MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Bevel	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	θ 斜度	Z 刃數
PBTA0101 A1TiN	1	0.5	2	75	6	1°	2
PBTA0151 A1TiN	1.5	0.75	3	75	6	1°	2
PBTA0201 A1TiN	2	1	4	75	6	1°	2
PBTA0205 A1TiN	2	1	12	100	8	5°	2
PBTA0301 A1TiN	3	1.5	6	75	6	1°	2
PBTA0305 A1TiN	3	1.5	8	100	8	5°	2
PBTA0401 A1TiN	4	2	8	75	6	1°	2
PBTA0405 A1TiN	4	2	10	100	8	5°	2
PBTA0605 A1TiN	6	3	12	100	10	5°	2
PBTA0603 A1TiN	6	3	16	150	12	3°	2
PBTA0805 A1TiN	8	4	16	100	12	5°	2
PBTA0803 A1TiN	8	4	20	150	12	3°	2



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-harden steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		

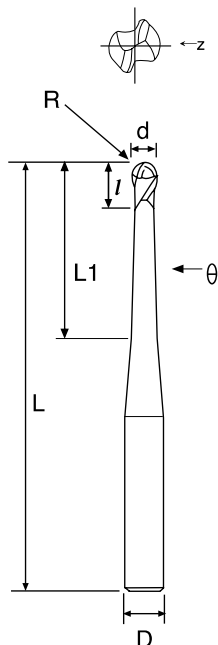
Pencil Neck Ball Nose - 2 flutes

2刃深溝專用斜頸球型立銑刀



● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Bevel	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	θ 斜度	Z 刃數
UPBT101520 nBS	1	0.5	2	20	75	6	1.5°	2
UPBT151520 nBS	1.5	0.75	3	20	75	6	1.5°	2
UPBT201025 nBS	2	1	4	25	75	6	1°	2
UPBT251025 nBS	2.5	1.25	5	25	75	6	1°	2
UPBT301030 nBS	3	1.5	6	30	75	6	1°	2
UPBT401035 nBS	4	2	7	35	75	6	1°	2
UPBT402545 nBS	4	2	7	45	150	8	2.5°	2
UPBT502550 nBS	5	2.5	9	50	150	10	2.5°	2
UPBT603038 nBS	6	3	10	38	150	10	3°	2
UPBT803038 nBS	8	4	13	38	150	12	3°	2
UPBT904042 nBS	10	5	16	42	150	16	4°	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		



Pencil Neck Ball Nose - Long Neck - 2 flutes

■ 2刃深溝專用長斜頸球型立銑刀

400
NanoHRC
60

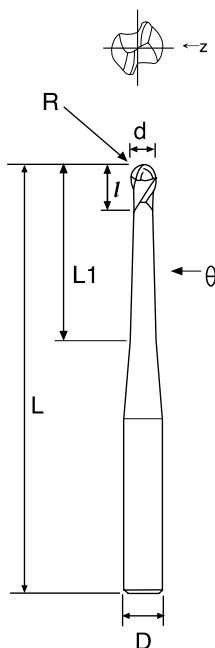
35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm

Mode	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Bevel	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	θ 斜度	Z 刃數
ULPBT200560 nBS	2	1	3	60	100	6	0.5°	2
ULPBT201060 nBS	2	1	3	60	100	6	1°	2
ULPBT201560 nBS	2	1	3	60	100	6	1.5°	2
ULPBT202057 nBS	2	1	3	57	100	6	2°	2
ULPBT300560 nBS	3	1.5	4	60	100	6	0.5°	2
ULPBT301060 nBS	3	1.5	4	60	100	6	1°	2
ULPBT301557 nBS	3	1.5	4	57	100	6	1.5°	2
ULPBT302043 nBS	3	1.5	4	43	100	6	2°	2
ULPBT400560 nBS	4	2	5	60	100	6	0.5°	2
ULPBT401057 nBS	4	2	5	57	100	6	1°	2
ULPBT401538 nBS	4	2	5	38	100	6	1.5°	2
ULPBT402029 nBS	4	2	5	29	100	6	2°	2



Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金, 銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
○	◎	◎	◎	◎	○	○			

Note



Ball Nose - 2 flutes

2刃球型立銑刀

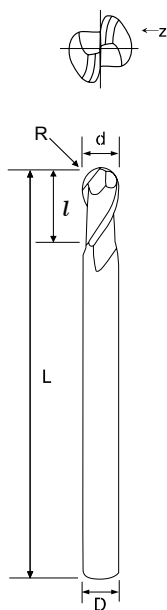
600
Nano

HRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SSB0102	1	0.5	2	50	3	2
MSB0102	1	0.5	2	50	4	2
SSB0152	1.5	0.75	3	50	3	2
MSB0152	1.5	0.75	3	50	4	2
SSB0202	2	1	4	50	3	2
MSB0202	2	1	4	50	4	2
SSB0252	2.5	1.25	5	50	3	2
MSB0252	2.5	1.25	5	50	4	2
SSB0302	3	1.5	6	50	3	2
MSB0302	3	1.5	6	50	4	2
MSB0352	3.5	1.75	7	50	4	2
MSB0402	4	2	8	50	4	2
SB0102	1	0.5	2	50	6	2
SB0152	1.5	0.75	3	50	6	2
SB0202	2	1	4	50	6	2
SB0252	2.5	1.25	5	50	6	2
SB0302	3	1.5	6	50	6	2
SB0352	3.5	1.75	7	50	6	2
SB0402	4	2	8	50	6	2
SB0452	4.5	2.25	9	50	6	2
SB0502	5	2.5	10	50	6	2
SB0552	5.5	2.75	11	50	6	2
SB0602	6	3	12	50	6	2
SB0702	7	3.5	14	60	8	2
SB0802	8	4	16	60	8	2
SB0902	9	4.5	18	75	10	2
SB1002	10	5	20	75	10	2
SB1102	11	5.5	22	75	12	2
SB1202	12	6	24	75	12	2
SB1402	14	7	28	100	16	2
SB1602	16	8	32	100	16	2
SB1802	18	9	36	100	20	2
SB2002	20	10	40	100	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○

Ball Nose - 2 flutes

■ 2刃球型立銑刀



● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SSB0102 AlTiN	1	0.5	2	50	3	2
MSB0102 AlTiN	1	0.5	2	50	4	2
SSB0152 AlTiN	1.5	0.75	3	50	3	2
MSB0152 AlTiN	1.5	0.75	3	50	4	2
SSB0202 AlTiN	2	1	4	50	3	2
MSB0202 AlTiN	2	1	4	50	4	2
SSB0252 AlTiN	2.5	1.25	5	50	3	2
MSB0252 AlTiN	2.5	1.25	5	50	4	2
SSB0302 AlTiN	3	1.5	6	50	3	2
MSB0302 AlTiN	3	1.5	6	50	4	2
MSB0352 AlTiN	3.5	1.75	7	50	4	2
MSB0402 AlTiN	4	2	8	50	4	2
SB0102 AlTiN	1	0.5	2	50	6	2
SB0152 AlTiN	1.5	0.75	3	50	6	2
SB0202 AlTiN	2	1	4	50	6	2
SB0252 AlTiN	2.5	1.25	5	50	6	2
SB0302 AlTiN	3	1.5	6	50	6	2
SB0352 AlTiN	3.5	1.75	7	50	6	2
SB0402 AlTiN	4	2	8	50	6	2
SB0452 AlTiN	4.5	2.25	9	50	6	2
SB0502 AlTiN	5	2.5	10	50	6	2
SB0552 AlTiN	5.5	2.75	11	50	6	2
SB0602 AlTiN	6	3	12	50	6	2
SB0702 AlTiN	7	3.5	14	60	8	2
SB0802 AlTiN	8	4	16	60	8	2
SB0902 AlTiN	9	4.5	18	75	10	2
SB1002 AlTiN	10	5	20	75	10	2
SB1102 AlTiN	11	5.5	22	75	12	2
SB1202 AlTiN	12	6	24	75	12	2
SB1402 AlTiN	14	7	28	100	16	2
SB1602 AlTiN	16	8	32	100	16	2
SB1802 AlTiN	18	9	36	100	20	2
SB2002 AlTiN	20	10	40	100	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		



Ball Nose - 2 flutes

2刃球型立銑刀

400
Nano

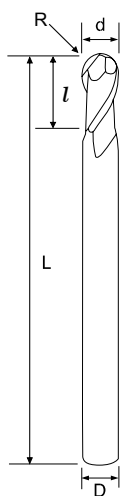
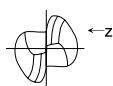
HRC
60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm



Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
UBT0102 nBS	1	0.5	2	50	4	2
UBT0152 nBS	1.5	0.75	3	50	4	2
UBT0202 nBS	2	1	4	50	4	2
UBT0252 nBS	2.5	1.25	5	50	4	2
UBT0302 nBS	3	1.5	6	50	4	2
UBT0352 nBS	3.5	1.75	7	50	4	2
UBT0402 nBS	4	2	8	50	4	2
UBT0452 nBS	4.5	2.25	9	50	6	2
UBT0502 nBS	5	2.5	10	50	6	2
UBT0552 nBS	5.5	2.75	11	50	6	2
UBT0602 nBS	6	3	12	50	6	2
UBT0702 nBS	7	3.5	14	50	8	2
UBT0802 nBS	8	4	16	60	8	2
UBT0812 nBS	8	4	16	75	8	2
UBT0902 nBS	9	4.5	18	75	10	2
UBT1002 nBS	10	5	20	75	10	2
UBT1202 nBS	12	6	24	75	12	2
UBT1402 nBS	14	7	28	75	14	2
UBT1602 nBS	16	8	32	100	16	2
UBT2002 nBS	20	10	40	150	20	2
UBT2502 nBS	25	12.5	45	150	25	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

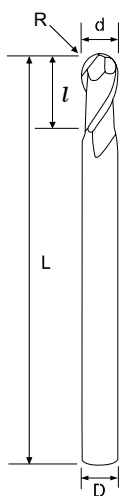
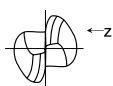
carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		

Ball Nose - 2 flutes

■ 2刃球型立銑刀



● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm

Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SFUBT0102 TiSiN	1	0.5	1.5	50	4	2
SFUBT0152 TiSiN	1.5	0.75	2.5	50	4	2
SFUBT0202 TiSiN	2	1	3	50	4	2
SFUBT0252 TiSiN	2.5	1.25	4	50	4	2
SFUBT0302 TiSiN	3	1.5	5	50	4	2
SFUBT0402 TiSiN	4	2	6	50	4	2
SFUBT0502 TiSiN	5	2.5	8	60	6	2
SFUBT0602 TiSiN	6	3	9	60	6	2
SFUBT0702 TiSiN	7	3.5	14	60	8	2
SFUBT0802 TiSiN	8	4	16	60	8	2
SFUBT0902 TiSiN	9	4.5	18	75	10	2
SFUBT1002 TiSiN	10	5	20	75	10	2
SFUBT1202 TiSiN	12	6	24	75	12	2
SFUBT1402 TiSiN	14	7	24	80	16	2
SFUBT1602 TiSiN	16	8	24	100	16	2
SFUBT2002 TiSiN	20	10	30	150	20	2
SFUBT2502 TiSiN	25	12.5	35	150	25	2

HRC
▶ 40HRC
▶ 45HRC
▶ 50HRC
▶ 55HRC
▶ 60HRC
▶ 65

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		



Ball Nose - 2 flutes

2刃球型立銑刀

500
Nano

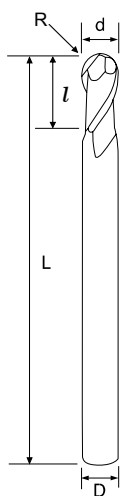
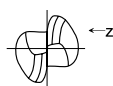
HRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm



MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SUBT0102	1	0.5	2	50	6	2
SUBT3102	1	0.5	2	50	3	2
SUBT4102	1.5	0.5	2	50	4	2
SUBT0152	1.5	0.75	3	50	6	2
SUBT3152	2	0.75	3	50	3	2
SUBT4152	2	0.75	3	50	4	2
SUBT0202	2.5	1	4	50	6	2
SUBT3202	2.5	1	4	50	3	2
SUBT4202	3	1	4	50	4	2
SUBT0252	3	1.25	5	50	6	2
SUBT3252	3.5	1.25	5	50	3	2
SUBT4252	4	1.25	5	50	4	2
SUBT0302	1	1.5	6	50	6	2
SUBT3302	1.5	1.5	6	50	3	2
SUBT4302	2	1.5	6	50	4	2
SUBT0352	2.5	1.75	7	50	6	2
SUBT4352	3	1.75	7	50	4	2
SUBT0402	3.5	2	8	50	6	2
SUBT4402	4	2	8	50	4	2
SUBT0452	4.5	2.25	9	50	6	2
SUBT0502	5	2.5	10	50	6	2
SUBT0552	5.5	2.75	11	50	6	2
SUBT0602	6	3	12	50	6	2
SUBT0702	7	3.5	14	60	8	2
SUBT0802	8	4	16	60	8	2
SUBT0902	9	4.5	18	75	10	2
SUBT1002	10	5	20	75	10	2
SUBT1102	11	5.5	22	75	12	2
SUBT1202	12	6	24	75	12	2
SUBT1402	14	7	28	100	16	2
SUBT1602	16	8	32	100	16	2
SUBT1802	18	9	36	100	20	2
SUBT2002	20	10	40	100	20	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼					Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminum alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC				
◎	◎	◎	○				◎	○	○

Ball Nose Short Flute - 2 flutes

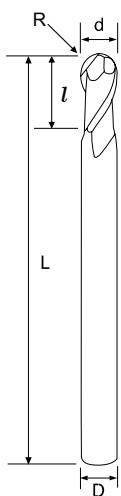
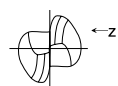
■ 2刃強力短刃球型立銑刀

400
NanoHRC
▶ 60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm

Mode	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
UBTSX010 nBS	1	0.5	1	2.5	50	4	2
UBTSX015 nBS	1.5	0.75	1.5	4	50	4	2
UBTSX020 nBS	2	1	2	5	50	4	2
UBTSX025 nBS	2.5	1.25	2.5	6	50	4	2
UBTSX030 nBS	3	1.5	3	8	50	4	2
UBTSX035 nBS	3.5	1.75	3.5	8	50	4	2
UBTSX036 nBS	3	1.5	3	8	50	6	2
UBTSX044 nBS	4	2	4	10	50	4	2
UBTSX045 nBS	4.5	2.25	4.5	11	50	6	2
UBTSX046 nBS	4	2	4	10	50	6	2
UBTSX050 nBS	5	2.5	5	13	50	6	2
UBTSX055 nBS	5.5	2.75	5.5	14	50	6	2
UBTSX060 nBS	6	3	6	15	50	6	2
UBTSX070 nBS	7	3.5	7	16	60	8	2
UBTSX080 nBS	8	4	8	20	60	8	2
UBTSX090 nBS	9	4.5	9	22	75	10	2
UBTSX100 nBS	10	5	10	25	75	10	2
UBTSX120 nBS	12	6	12	30	75	12	2
UBTSX140 nBS	14	7	14	35	75	16	2
UBTSX160 nBS	16	8	16	40	100	16	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		



Ball Nose Short Flute - 2 flutes

2刃短刃強力球型刀

200
Nano

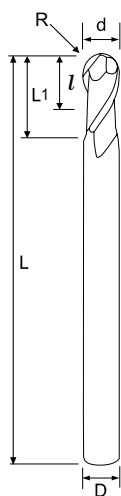
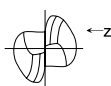
HRC
65

35°

TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



Mode	Diameter	Radius	Flute Length	Efficient Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L1 有效長	L 全長	D 柄徑	Z 刃數
SFUBTSX010 TiSiN	1	0.5	1	2.5	50	4	2
SFUBTSX015 TiSiN	1.5	0.75	1.5	4	50	4	2
SFUBTSX020 TiSiN	2	1	2	5	50	4	2
SFUBTSX025 TiSiN	2.5	1.25	2.5	6	50	4	2
SFUBTSX030 TiSiN	3	1.5	3	8	50	4	2
SFUBTSX630 TiSiN	3	1.5	3	8	50	6	2
SFUBTSX035 TiSiN	3.5	1.75	3.5	8	50	4	2
SFUBTSX040 TiSiN	4	2	4	10	50	4	2
SFUBTSX640 TiSiN	4	2	4	10	50	6	2
SFUBTSX045 TiSiN	4.5	2.25	4.5	11	50	6	2
SFUBTSX050 TiSiN	5	2.5	5	13	50	6	2
SFUBTSX055 TiSiN	5.5	2.75	5.5	14	50	6	2
SFUBTSX060 TiSiN	6	3	6	15	50	6	2
SFUBTSX070 TiSiN	7	3.5	7	16	60	8	2
SFUBTSX080 TiSiN	8	4	8	20	60	8	2
SFUBTSX090 TiSiN	9	4.5	9	22	75	10	2
SFUBTSX100 TiSiN	10	5	10	25	75	10	2
SFUBTSX120 TiSiN	12	6	12	30	75	12	2
SFUBTSX140 TiSiN	14	7	14	35	75	16	2
SFUBTSX160 TiSiN	16	8	16	40	100	16	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		

Ball Nose - Long Shank - 2 flutes

■ 2刃長柄球型立銑刀

600
NanoHRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SLB0102	1	0.5	2	75	6	2
MLB0102	1	0.5	2	100	6	2
SLB0152	1.5	0.75	3	75	6	2
MLB0152	1.5	0.75	3	100	6	2
SLB0202	2	1	4	75	6	2
MLB0202	2	1	4	100	6	2
SLB0252	2.5	1.25	5	75	6	2
MLB0252	2.5	1.25	5	100	6	2
SLB0302	3	1.5	6	75	6	2
MLB0302	3	1.5	6	100	6	2
MLB0352	3.5	1.75	7	100	6	2
SLB0402	4	2	8	75	6	2
MLB0402	4	2	8	100	6	2
SLB0502	5	2.5	10	75	6	2
MLB0502	5	2.5	10	100	6	2
SLB0602	6	3	12	75	6	2
MLB0602	6	3	12	100	6	2
LLB0602	6	3	12	150	6	2
SLB0802	8	4	16	75	8	2
MLB0802	8	4	16	100	8	2
LLB0802	8	4	16	150	8	2
MLB1002	10	5	20	100	10	2
LLB1002	10	5	20	150	10	2
XLB1002	10	5	20	200	10	2
MLB1202	12	6	24	100	12	2
LLB1202	12	6	24	150	12	2
XLB1202	12	6	24	200	12	2
LLB1602	16	8	32	150	16	2
XLB1602	16	8	32	200	16	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-harden steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○



Ball Nose - Long Shank - 2 flutes

2刃長柄球型立銑刀

600
Nano

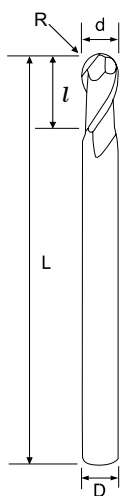
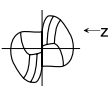
HRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SLB0102 AlTiN	1	0.5	2	75	6	2
MLB0102 AlTiN	1	0.5	2	100	6	2
SLB0152 AlTiN	1.5	0.75	3	75	6	2
MLB0152 AlTiN	1.5	0.75	3	100	6	2
SLB0202 AlTiN	2	1	4	75	6	2
MLB0202 AlTiN	2	1	4	100	6	2
SLB0252 AlTiN	2.5	1.25	5	75	6	2
MLB0252 AlTiN	2.5	1.25	5	100	6	2
SLB0302 AlTiN	3	1.5	6	75	6	2
MLB0302 AlTiN	3	1.5	6	100	6	2
MLB0352 AlTiN	3.5	1.75	7	100	6	2
SLB0402 AlTiN	4	2	8	75	6	2
MLB0402 AlTiN	4	2	8	100	6	2
SLB0502 AlTiN	5	2.5	10	75	6	2
MLB0502 AlTiN	5	2.5	10	100	6	2
SLB0602 AlTiN	6	3	12	75	6	2
MLB0602 AlTiN	6	3	12	100	6	2
LLB0602 AlTiN	6	3	12	150	6	2
SLB0802 AlTiN	8	4	16	75	8	2
MLB0802 AlTiN	8	4	16	100	8	2
LLB0802 AlTiN	8	4	16	150	8	2
MLB1002 AlTiN	10	5	20	100	10	2
LLB1002 AlTiN	10	5	20	150	10	2
SLB1202 AlTiN	12	6	24	100	12	2
MLB1202 AlTiN	12	6	24	150	12	2
SLB1602 AlTiN	16	8	32	150	16	2
MLB1602 AlTiN	16	8	32	200	16	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		

Ball Nose - Long Shank - 2 flutes

■ 2刃長柄球型立銑刀

400
NanoHRC
60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm

Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
ULBTS0102 nBS	1	0.5	2	75	6	2
ULBTS0152 nBS	1.5	0.75	3	75	6	2
ULBTS0202 nBS	2	1	4	75	6	2
ULBTS0252 nBS	2.5	1.25	5	75	6	2
ULBTS0302 nBS	3	1.5	6	75	6	2
ULBTS0352 nBS	3.5	1.75	7	75	6	2
ULBTS0402 nBS	4	2	8	75	6	2
ULBTS0452 nBS	4.5	2.25	9	75	6	2
ULBTS0502 nBS	5	2.5	10	75	6	2
ULBTS0552 nBS	5.5	2.75	11	75	6	2
ULBTS0602 nBS	6	3	12	75	6	2
ULBTS0702 nBS	7	3.5	14	75	8	2
ULBTS0802 nBS	8	4	16	100	8	2
ULBTS0902 nBS	9	4.5	18	100	10	2
ULBTS1002 nBS	10	5	20	100	10	2
ULBTS1202 nBS	12	6	24	100	12	2
ULBTS1402 nBS	14	7	28	100	14	2
ULBTS1602 nBS	16	8	32	150	16	2
ULBTM0602 nBS	6	3	12	100	6	2
ULBTM0802 nBS	8	4	16	150	8	2
ULBTM1002 nBS	10	5	20	150	10	2
ULBTM1202 nBS	12	6	24	150	12	2
ULBTM1602 nBS	16	8	32	200	16	2
ULBTL0602 nBS	6	3	12	150	6	2
ULBTL2002 nBS	20	10	40	200	20	2
ULBTL2502 nBS	25	12.5	45	200	25	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		



Ball Nose - Long Shank - 2 flutes

2刃長柄球型立銑刀

200
Nano

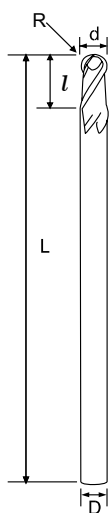
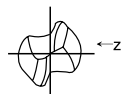
HRC
65

35°

TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SFULBT0102 TiSiN	1	0.5	3	75	6	2
SFULBT0202 TiSiN	2	1	4	75	6	2
SFULBT0302 TiSiN	3	1.5	5	75	6	2
SFULBT0402 TiSiN	4	2	6	75	6	2
SFULBT0502 TiSiN	5	2.5	8	75	6	2
SFULBT0602 TiSiN	6	3	9	75	6	2
SFULBT0612 TiSiN	6	3	9	100	6	2
SFULBT0702 TiSiN	7	3.5	14	75	8	2
SFULBT0802 TiSiN	8	4	16	75	8	2
SFULBT0812 TiSiN	8	4	16	100	8	2
SFULBT0902 TiSiN	9	4.5	18	100	10	2
SFULBT1002 TiSiN	10	5	20	100	10	2
SFULBT1012 TiSiN	10	5	20	150	10	2
SFULBT1202 TiSiN	12	6	24	100	12	2
SFULBT1212 TiSiN	12	6	24	150	12	2
SFULBT1402 TiSiN	14	7	28	100	16	2
SFULBT1602 TiSiN	16	8	32	150	16	2
SFULBT1612 TiSiN	16	8	32	200	16	2
SFULBT2002 TiSiN	20	10	40	200	20	2
SFULBT2502 TiSiN	25	12.5	50	200	25	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		

Ball Nose - Long Shank - 2 flutes

■ 2刃長柄球型立銑刀



● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刀徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SULBTS0102	1	0.5	2	75	6	2
SULBTM0102	1	0.5	2	100	6	2
SULBTS0152	1.5	0.75	3	75	6	2
SULBTM0152	1.5	0.75	3	100	6	2
SULBTS0202	2	1	4	75	6	2
SULBTM0202	2	1	4	100	6	2
SULBTS0252	2.5	1.25	5	75	6	2
SULBTM0252	2.5	1.25	5	100	6	2
SULBTS0302	3	1.5	6	75	6	2
SULBTM0302	3	1.5	6	100	6	2
SULBTM0352	3.5	1.75	7	100	6	2
SULBTS0402	4	2	8	75	6	2
SULBTM0402	4	2	8	100	6	2
SULBTS0502	5	2.5	10	75	6	2
SULBTM0502	5	2.5	10	100	6	2
SULBTS0602	6	3	12	75	6	2
SULBTM0602	6	3	12	100	6	2
SULBTL0602	6	3	12	150	6	2
SULBTS0802	8	4	16	75	8	2
SULBTM0802	8	4	16	100	8	2
SULBTL0802	8	4	16	150	8	2
SULBTM1002	10	5	20	100	10	2
SULBTL1002	10	5	20	150	10	2
SULBTX1002	10	5	20	200	10	2
SULBTM1202	12	6	24	100	12	2
SULBTL1202	12	6	24	150	12	2
SULBTX1202	12	6	24	200	12	2
SULBTL1602	16	8	32	150	16	2
SULBTX1602	16	8	32	200	16	2

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○



Ball Nose - 3 difference flutes

3刃不等分割球刀

200
Nano

HRC
65

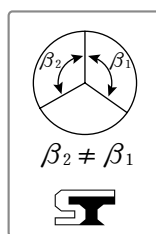
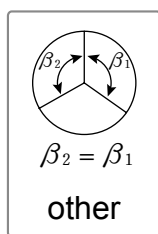
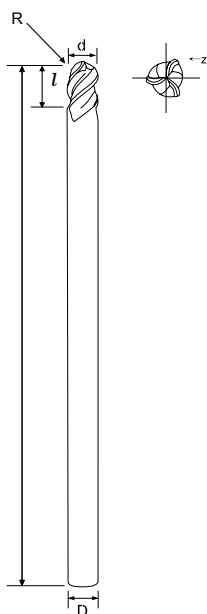
nACo

● Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刀徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
DAB0103	6	0.5	1.5	60	6	3
DAB0203	6	1	3	60	6	3
DAB0303	6	1.5	4.5	75	6	3
DAB0403	6	2	6	75	6	3
DAB0603	6	2.5	7.5	75	6	3
DABM0603	6	3	9	75	6	3
DABL0603	6	3	9	100	6	3
DAB0803	8	4	12	100	8	3
DABL0803	8	4	12	120	8	3
DAB1003	10	5	15	100	10	3
DABL1003	10	5	15	130	10	3
DAB1203	12	6	18	100	12	3
DABL1203	12	6	18	150	12	3
DAB1603	16	8	24	150	16	3
DAB2003	20	10	30	150	20	3
DABL2003	20	10	30	200	20	3



1. Milling For All Hard Working Material
適用各式難切削材
2. Unique Variable Shape, Super Vibration Resistance
不等分割設計，降低切削的震動
3. Perfect Technology, Excellent Cutting Surface
高精密度刀具，切削表面更光滑平順
4. Less Working Distress, Longer Tool Life
有效降低加工時間，刀具壽命更長。
5. Unbalance Flute Design For Fast Chip Remove
特殊排屑溝設計，排屑更順暢

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼, 合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金, 銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	◎	○		

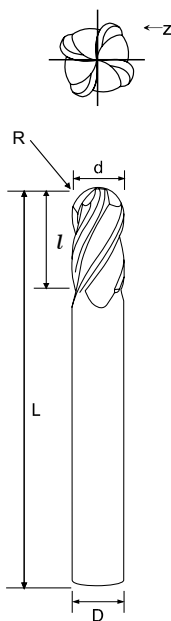
Ball Nose - 4 flutes

■ 4刃球型立銑刀

600
NanoHRC
45

35°

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm

MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
MSB0104	1	0.5	2	50	4	4
MSB0154	1.5	0.75	3	50	4	4
MSB0204	2	1	4	50	4	4
MSB0254	2.5	1.25	5	50	4	4
SSB0304	3	1.5	6	50	3	4
MSB0304	3	1.5	6	50	4	4
MSB0354	3.5	1.75	7	50	4	4
MSB0404	4	2	8	50	4	4
SB0104	1	0.5	2	50	6	4
SB0154	1.5	0.75	3	50	6	4
SB0204	2	1	4	50	6	4
SB0254	2.5	1.25	5	50	6	4
SB0304	3	1.5	6	50	6	4
SB0354	3.5	1.75	7	50	6	4
SB0404	4	2	8	50	6	4
SB0454	4.5	2.25	9	50	6	4
SB0504	5	2.5	10	50	6	4
SB0554	5.5	2.75	11	50	6	4
SB0604	6	3	12	50	6	4
SB0704	7	3.5	14	60	8	4
SB0804	8	4	16	60	8	4
SB0904	9	4.5	18	75	10	4
SB1004	10	5	20	75	10	4
SB1104	11	5.5	22	75	12	4
SB1204	12	6	24	75	12	4
SB1404	14	7	28	100	16	4
SB1604	16	8	32	100	16	4
SB1804	18	9	36	100	20	4
SB2004	20	10	40	100	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-harden steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○						○	○



Ball Nose - 4 flutes

4刃球型立銑刀

600
Nano

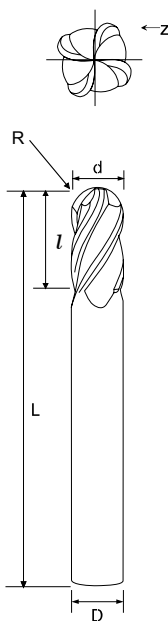
HRC
55

35°

AlTiN

● Micro Grain Carbide

● WC=90 Co=10 HV30=1571 Rupture=3750N/mm² Grain Size=0.6μm



MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刀徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
MSB0104 AlTiN	1	0.5	2	50	4	4
MSB0154 AlTiN	1.5	0.75	3	50	4	4
MSB0204 AlTiN	2	1	4	50	4	4
MSB0254 AlTiN	2.5	1.25	5	50	4	4
SSB0304 AlTiN	3	1.5	6	50	3	4
MSB0304 AlTiN	3	1.5	6	50	4	4
MSB0354 AlTiN	3.5	1.75	7	50	4	4
MSB0404 AlTiN	4	2	8	50	4	4
SB0104 AlTiN	1	0.5	2	50	6	4
SB0154 AlTiN	1.5	0.75	3	50	6	4
SB0204 AlTiN	2	1	4	50	6	4
SB0254 AlTiN	2.5	1.25	5	50	6	4
SB0304 AlTiN	3	1.5	6	50	6	4
SB0354 AlTiN	3.5	1.75	7	50	6	4
SB0404 AlTiN	4	2	8	50	6	4
SB0454 AlTiN	4.5	2.25	9	50	6	4
SB0504 AlTiN	5	2.5	10	50	6	4
SB0554 AlTiN	5.5	2.75	11	50	6	4
SB0604 AlTiN	6	3	12	50	6	4
SB0704 AlTiN	7	3.5	14	60	8	4
SB0804 AlTiN	8	4	16	60	8	4
SB0904 AlTiN	9	4.5	18	75	10	4
SB1004 AlTiN	10	5	20	75	10	4
SB1104 AlTiN	11	5.5	22	75	12	4
SB1204 AlTiN	12	6	24	75	12	4
SB1404 AlTiN	14	7	28	100	16	4
SB1604 AlTiN	16	8	32	100	16	4
SB1804 AlTiN	18	9	36	100	20	4
SB2004 AlTiN	20	10	40	100	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	○			○		

Ball Nose - 4 flutes

■ 4刃球型立銑刀

400
NanoHRC
▶ 60

35°

nBS

● Ultra Fine Micro Grain Carbide

● WC=87 Co=12 HRA=92.1 Rupture=3800N/mm² Grain Size=0.4μm

Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
UBT0104 nBS	1	0.5	2	50	4	4
UBT0204 nBS	2	1	4	50	4	4
UBT0254 nBS	2.5	1.25	5	50	4	4
UBT0304 nBS	3	1.5	6	50	4	4
UBT0404 nBS	4	2	8	50	4	4
UBT0454 nBS	4.5	2.25	9	50	6	4
UBT0504 nBS	5	2.5	10	50	6	4
UBT0604 nBS	6	3	12	50	6	4
UBT0704 nBS	7	3.5	14	60	8	4
UBT0804 nBS	8	4	16	60	8	4
UBT0814 nBS	8	4	16	75	8	4
UBT1004 nBS	10	5	20	75	10	4
UBT1204 nBS	12	6	24	75	12	4
UBT1404 nBS	14	7	28	100	14	4
UBT1604 nBS	16	8	32	100	16	4
UBT2004 nBS	20	10	40	150	20	4
UBT2504 nBS	25	12.5	50	150	25	4
ULBT0604 nBS	6	3	12	75	6	4
ULBT0804 nBS	8	4	16	100	8	4
ULBT1004 nBS	10	5	20	100	10	4
ULBT1204 nBS	12	6	24	100	12	4
ULBT1604 nBS	16	8	32	150	16	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	◎	◎	◎	◎	○	○		



Ball Nose - 4 flutes

4刃球型立銑刀

200
Nano

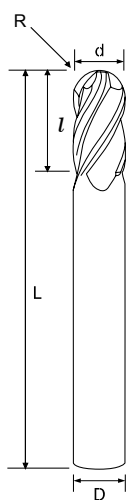
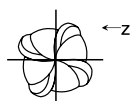
HRC
65

35°

TiSiN

● Super Ultra Fine Micro Grain Carbide

● WC=91 Co=9 HRA=93.2 Rupture=4000N/mm² Grain Size=0.2μm



Mode	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 直徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SFUBT0104 TiSiN	1	0.5	2	50	4	4
SFUBT0154 TiSiN	1.5	0.75	3	50	4	4
SFUBT0204 TiSiN	2	1	4	50	4	4
SFUBT0254 TiSiN	2.5	1.25	5	50	4	4
SFUBT0304 TiSiN	3	1.5	5.5	50	4	4
SFUBT0404 TiSiN	4	2	6	50	4	4
SFUBT0504 TiSiN	5	2.5	9	50	6	4
SFUBT0604 TiSiN	6	3	9	60	6	4
SFUBT0614 TiSiN	6	3	9	75	6	4
SFUBT0804 TiSiN	8	4	16	75	8	4
SFUBT1004 TiSiN	10	5	20	75	10	4
SFUBT1014 TiSiN	10	5	20	100	10	4
SFUBT1204 TiSiN	12	6	24	75	12	4
SFUBT1214 TiSiN	12	6	24	100	12	4
SFUBT1404 TiSiN	14	7	28	100	16	4
SFUBT1604 TiSiN	16	8	32	100	16	4
SFUBT2004 TiSiN	20	10	40	150	20	4
SFUBT2504 TiSiN	25	12.5	50	150	25	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
○	○	○	◎	◎	◎	○		

Ball Nose - 4 flutes

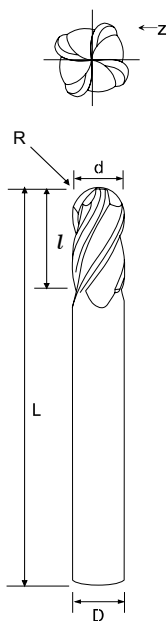
■ 4刃球型立銑刀

500
NanoHRC
50

35°

RS

● Micro Grain Carbide

● WC=88 Co=12 HRA=92.4 Rupture=3950N/mm² Grain Size=0.5μm

MODE	Diameter	Radius	Flute Length	Full Length	Shank Diameter	Flutes
型號	d 刃徑	R 值	l 刃長	L 全長	D 柄徑	Z 刃數
SUBT0104	1	0.5	2	50	6	4
SUBT4104	1	0.5	2	50	4	4
SUBT0154	1.5	0.75	3	50	6	4
SUBT4154	1.5	0.75	3	50	4	4
SUBT0204	2	1	4	50	6	4
SUBT4204	2	1	4	50	4	4
SUBT0254	2.5	1.25	5	50	6	4
SUBT4254	2.5	1.25	5	50	4	4
SUBT0304	3	1.5	6	50	6	4
SUBT3304	3	1.5	6	50	3	4
SUBT4304	3	1.5	6	50	4	4
SUBT0354	3.5	1.75	7	50	6	4
SUBT4354	3.5	1.75	7	50	4	4
SUBT0404	4	2	8	50	6	4
SUBT4404	4	2	8	50	4	4
SUBT0454	4.5	2.25	9	50	6	4
SUBT0504	5	2.5	10	50	6	4
SUBT0554	5.5	2.75	11	50	6	4
SUBT0604	6	3	12	50	6	4
SUBT0704	7	3.5	14	60	8	4
SUBT0804	8	4	16	60	8	4
SUBT0904	9	4.5	18	75	10	4
SUBT1004	10	5	20	75	10	4
SUBT1104	11	5.5	22	75	12	4
SUBT1204	12	6	24	75	12	4
SUBT1404	14	7	28	100	16	4
SUBT1604	16	8	32	100	16	4
SUBT1804	18	9	36	100	20	4
SUBT2004	20	10	40	100	20	4

Application 適用材質：

◎ Recommend 最適合 ○ Suitable 適合 X Not Recommend 不建議

carbon steel, Alloy steel 炭素鋼,合金鋼	Pre-hardened steel 預硬鋼	High-hardened 高硬度鋼				Stainless steel 不銹鋼	Copper alloy 銅合金,銅	Aluminun alloy 鋁合金
	~45HRC	~50HRC	~55HRC	~60HRC	~65HRC			
◎	◎	◎	○			◎	○	○