

## V47X Series

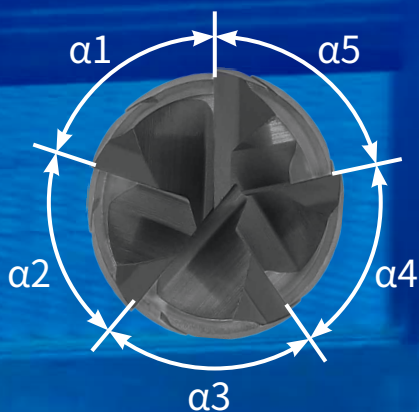
# High Performance Solid Carbide Endmills

## 高效能抗震全鎢鋼銑刀

- Unequal flute spacing for anti-vibration.
- Polished flute is good for chip evacuation.
- TACO coating for alloy steel and cast iron general milling.
- ANAX smooth coating for stainless steel, super alloy and alloy steel high efficiency milling.

P	M	K	N	S	H
●	●	●	○	○	○

- 不等分割設計大幅降低加工時產生的震動
- 拋光溝槽有出色的排屑功能
- TACO 多層塗層適用於合金鋼及鑄鐵泛用加工
- ANAX 多層平滑塗層適用於不鏽鋼，高溫合金及合金鋼高效率加工



$$\alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq \alpha_5$$



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

**V47B Carbide Endmills for Stainless Steel**  
鎢鋼銑刀 · 適用於不鏽鋼

Variable Pitch · Helix 35°  
不等分割 · 35°螺旋角

ASIA  
(Metric)

	Square · VP · Helix 35 · 4F 不等分割平銑刀 · 4 刃	EPSSVB	35°	Ø1~Ø20	TACO	●	○	●				04
					ANAX	●	●	●		○	○	
	Square · VP · Helix 35 · 5F 不等分割平銑刀 · 5 刃	EPSSVB	35°	Ø6~Ø16	TACO	●	○	●				05
					ANAX	●	●	●		●	○	
	Corner Radius · VP · Helix 35 · 4F 不等分割圓鼻銑刀 · 4 刃	EPSSVB	35°	Ø3~Ø20	TACO	●	○	●				06
					ANAX	●	●	●		○	○	
	Corner Radius · VP · Helix 35 · 5F 不等分割圓鼻銑刀 · 5 刃	EPSSVB	35°	Ø6~Ø16	TACO	●	○	●				07
					ANAX	●	●	●		●	○	

**V47C Carbide Endmills for Stainless Steel**  
鎢鋼銑刀 · 適用於不鏽鋼

Variable Pitch · Helix 38°  
不等分割 · 38°螺旋角

ASIA  
(Metric)

	Square · VP · Helix 38 · 4F 不等分割平銑刀 · 4 刃	EPSSVC	38°	Ø1~Ø25	TACO	●	○	●				08
					ANAX	●	●	●		○	○	
	Square · VP · Helix 38 · 5F 不等分割平銑刀 · 5 刃	EPSSVC	38°	Ø6~Ø16	ANAX	●	●	●		●	○	09
	Square · VP · Helix 38 · 7F 不等分割平銑刀 · 7 刃	EPSSVC	38°	Ø10~Ø16	ANAX	○	●	○		●	○	10
	Square · VP · Helix 38 · Necked · 4F 不等分割平銑刀 · 帶頸型 · 4 刃	EPSUVC	38°	Ø6~Ø16	ANAX	●	●	●		○	○	11
	Square · VP · Helix 38 · Roughing & Finishing · 4F 不等分割平銑刀 · 粗精一體型 · 4 刃	EPSRVC	38°	Ø6~Ø16	ANAX	●	●	●		○	○	12
	Square · VP · Helix 38 · Long Shank · 5F 不等分割平銑刀 · 長柄型 · 5 刃	EPSSLVC	38°	Ø6~Ø12	ANAX	●	●	●		●	○	13
	Corner Radius · VP · Helix 38 · 4F 不等分割圓鼻銑刀 · 4 刃	EPSSVC	38°	Ø4~Ø25	TACO	●	○	●				14
					ANAX	●	●	●		○	○	
	Corner Radius · VP · Helix 38 · 5F 不等分割圓鼻銑刀 · 5 刃	EPSSVC	38°	Ø6~Ø16	ANAX	●	●	●		●	○	15
	Corner Radius · VP · Helix 38 · 7F 不等分割圓鼻銑刀 · 7 刃	EPSSVC	38°	Ø10~Ø20	ANAX	○	●	○		●	○	16
	Corner Radius · VP · Helix 38 · Necked · 4F 不等分割圓鼻銑刀 · 帶頸型 · 4 刃	EPSUVC	38°	Ø6~Ø16	ANAX	●	●	●		○	○	17
	Corner Radius · VP · Helix 38 · Long Shank · 5F 不等分割圓鼻銑刀 · 長柄型 · 5 刃	EPSSLVC	38°	Ø6~Ø12	ANAX	●	●	●		●	○	18
	Ball Nose · VP · Helix 38 · 4F 不等分割球銑刀 · 標準型 · 4 刃	EPBSVC	38°	Ø4~Ø16	ANAX	●	●	●		●	○	19

DIN  
(Metric)

	Square · VP · Helix 38 · 4F 不等分割平銑刀 · 4 刃	E113VC	38°	Ø4~Ø20	ANAX	●	●	●		●	○	20
	Corner Radius · VP · Helix 38 · 4F 不等分割圓鼻銑刀 · 4 刃	E133VC	38°	Ø4~Ø20	ANAX	●	●	●		●	○	21

ANSI  
(Inch)

	Square · VP · Helix 38 · 4F (Inch) 不等分割平銑刀 · 4 刃 (英吋)	EPSSVC	38°	Ø1/8"~1"	UNICO	●	●	●		○	○	22
	Corner Radius · VP · Helix 38 · 4F (Inch) 不等分割圓鼻銑刀 · 4 刃 (英吋)	EPSSVC	38°	Ø1/8"~1"	UNICO	●	●	●		○	○	24
	Ball Nose · VP · 2F (Inch) 不等分割球型銑刀 · 2 刃 (英吋)	EPBSVC	38°	Ø1/8"~5/8"	UNICO	●	●	●		○	○	26
	Ball Nose · VP · 4F (Inch) 不等分割球型銑刀 · 4 刃 (英吋)	EPBSVC	38°	Ø1/8"~5/8"	UNICO	●	●	●		○	○	27

Appearance 外觀	Name 名稱	Code No. 編碼	Helix 螺旋角	Diameter 外徑	Coating 塗層	P	M	K	N	S	H	Page 頁碼
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**V47D Carbide Endmills for Stainless Steel**  
鎢鋼銑刀 · 適用於不鏽鋼

Variable Pitch · Helix 43° or Helix 45°  
不等分割 · 43°或 45°螺旋角

ASIA  
(Metric)

	Square · VP · Helix 45 · 4F 不等分割平銑刀 · 4 刃	EPSSVD	45°	Ø4~Ø16	ANAX	●	●	●			●	●	28
	Square · VP · Helix 43 · 5F 不等分割平銑刀 · 5 刃	EPSSVD	43°	Ø6~Ø16	ANAX	●	●	●			●	●	29
	Square · VP · Helix 43 · 7F 不等分割平銑刀 · 7 刃	EPSSVD	43°	Ø10~Ø16	ANAX		●				●	●	30
	Square · VP · Helix 43 · Long Flute · 5F 不等分割平銑刀 · 長刃型 · 5 刃	EPSCVD	43°	Ø6~Ø16	ANAX	●	●	●			●	●	31
	Square · VP · Helix 43 · Long Flute · 7F 不等分割平銑刀 · 長刃型 · 7 刃	EPSCVD	43°	Ø10~Ø16	ANAX		●				●	●	32
	Square · VP · Helix 43 · Chip Breaker · 5F 不等分割平銑刀 · 斷屑型 · 5 刃	EPSSVH	43°	Ø6~Ø16	ANAX	●	●	●			●	●	33
	Square · VP · Chip Breaker · Helix 43 · Long Flute · 5F 不等分割平銑刀 · 斷屑長刃型 · 5 刃	EPSCVH	43°	Ø6~Ø16	ANAX	●	●	●			●	●	34
	Corner Radius · VP · Helix 45 · 4F 不等分割圓鼻銑刀 · 4 刃	EPSSVD	45°	Ø6~Ø16	ANAX	●	●	●			●	●	35
	Corner Radius · VP · Helix 43 · 7F 不等分割圓鼻銑刀 · 7 刃	EPSSVD	43°	Ø10~Ø12	ANAX		●				●	●	36
	Corner Radius · VP · Helix 43 · Long Flute · 5F 不等分割圓鼻銑刀 · 長刃型 · 5 刃	EPSCVD	43°	Ø6~Ø12	ANAX	●	●	●			●	●	37
	Corner Radius · VP · Helix 43 · Long Flute · 7F 不等分割圓鼻銑刀 · 長刃型 · 7 刃	EPSCVD	43°	Ø10~Ø16	ANAX		●				●	●	38

**V47E Carbide Endmills for Stainless Steel**  
鎢鋼銑刀 · 適用於不鏽鋼

Variable Pitch · Helix 52°  
不等分割 · 52°螺旋角

ASIA  
(Metric)

	Corner Radius · VP · Helix 52 · 5F 不等分割圓鼻銑刀 · 5 刃	EPSSVE	52°	Ø8~Ø16	ANAX		●				●	●	39
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V47B - Square · VP · Helix 35 · 4F

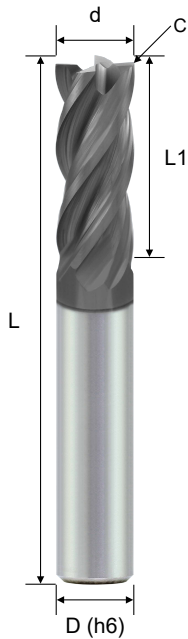
不等分割平銑刀 · 4 刃

- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- For alloy steel, cast iron and stainless steel roughing to finishing.
- V47B with TACO (AlTiN) coating for general milling.
- V47BX with ANAX (AlTiCrN) smooth coating for high efficiency milling.

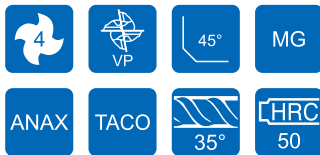
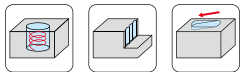
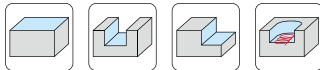
ASIA  
(Metric)

EPSSVB

	P	M	K	N	S	H
V47B	●	○	●			
V47BX	●	●	●		○	○



Order No.		Dia. (d)	Chamfer (C)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
V47B	V47BX						
EPSSVB4410000T	EPSSVB4410000A	1	-	3	50	4	4
EPSSVB4415000T	EPSSVB4415000A	1.5	-	4	50	4	4
EPSSVB4420000T	EPSSVB4420000A	2	-	5	50	4	4
EPSSVB4425000T	EPSSVB4425000A	2.5	-	6	50	4	4
EPSSVB4430000T	EPSSVB4430000A	3	-	8	50	4	4
EPSSVB4435000T	EPSSVB4435000A	3.5	-	9	50	4	4
EPSSVB4440000T	EPSSVB4440000A	4	-	10	50	4	4
EPSSVB4050000T	EPSSVB4050000A	5	-	13	50	6	4
EPSSVB4060000T	EPSSVB4060000A	6	-	15	50	6	4
EPSSVB4060011T	EPSSVB4060011A	6	0.10	15	50	6	4
EPSSVB4080000T	EPSSVB4080000A	8	-	20	60	8	4
EPSSVB4080011T	EPSSVB4080011A	8	0.15	20	60	8	4
EPSSVB4100000T	EPSSVB4100000A	10	-	25	75	10	4
EPSSVB4100011T	EPSSVB4100011A	10	0.15	25	75	10	4
EPSSVB4120000T	EPSSVB4120000A	12	-	30	75	12	4
EPSSVB4120021T	EPSSVB4120021A	12	0.20	30	75	12	4
EPSSVB4140000T	EPSSVB4140000A	14	-	30	75	14	4
EPSSVB4160000T	EPSSVB4160000A	16	-	35	100	16	4
EPSSVB4160021T	EPSSVB4160021A	16	0.25	35	100	16	4
EPSSVB4160040T	EPSSVB4160040A	16	-	40	100	16	4
EPSSVB4200000T	EPSSVB4200000A	20	-	45	100	20	4
EPSSVB4200031T	EPSSVB4200031A	20	0.30	45	100	20	4



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

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



d = tool diameter

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

V47B - Square · VP · Helix 35 · 5F

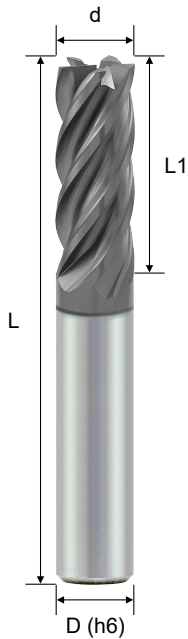
不等分割平銑刀 · 5 刃

- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- For alloy steel, cast iron and stainless steel roughing to finishing.
- V47B with TACO (AlTiN) coating for general milling.
- V47BX with ANAX (AlTiCrN) smooth coating for high efficiency milling.

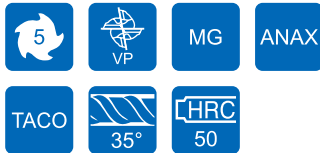
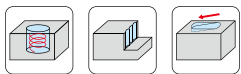
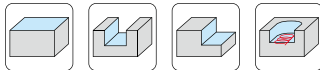
ASIA  
(Metric)

EPSSVB

	P	M	K	N	S	H
V47B	●	○	●			
V47BX	●	●	●		●	○



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
V47B	V47BX					
EPSSVB5060000T	EPSSVB5060000A	6	15	50	6	5
EPSSVB5080000T	EPSSVB5080000A	8	20	60	8	5
EPSSVB5100000T	EPSSVB5100000A	10	25	75	10	5
EPSSVB5120000T	EPSSVB5120000A	12	30	75	12	5
EPSSVB5160000T	EPSSVB5160000A	16	35	100	16	5



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

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



d = tool diameter

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

V47B - Corner Radius · VP · Helix 35 · 4F

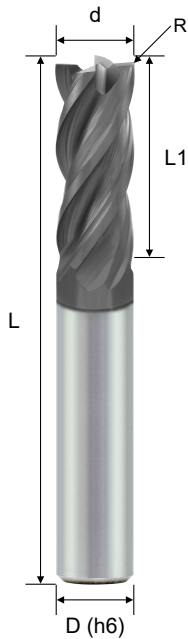
不等分割圓鼻銑刀 · 4 刃

- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- For alloy steel, cast iron and stainless steel roughing to finishing.
- V47B with TACO (AlTiN) coating for general milling.
- V47BX with ANAX (AlTiCrN) smooth coating for high efficiency milling.

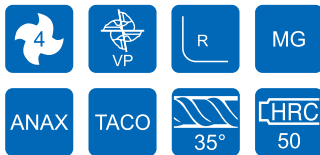
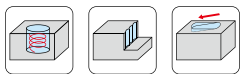
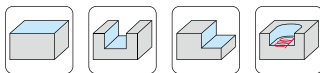


EPSSVB

	P	M	K	N	S	H
V47B	●	○	●			
V47BX	●	●	●		○	○



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
V47B	V47BX						
EPSSVB4430022T	EPSSVB4430022A	3	0.2R	6	50	4	4
EPSSVB4430052T	EPSSVB4430052A	3	0.5R	6	50	4	4
EPSSVB4440032T	EPSSVB4440032A	4	0.3R	8	50	4	4
EPSSVB4440052T	EPSSVB4440052A	4	0.5R	8	50	4	4
EPSSVB4060032T	EPSSVB4060032A	6	0.3R	12	50	6	4
EPSSVB4060052T	EPSSVB4060052A	6	0.5R	12	50	6	4
EPSSVB4060102T	EPSSVB4060102A	6	1.0R	12	50	6	4
EPSSVB4080052T	EPSSVB4080052A	8	0.5R	16	60	8	4
EPSSVB4080102T	EPSSVB4080102A	8	1.0R	16	60	8	4
EPSSVB4080152T	EPSSVB4080152A	8	1.5R	16	60	8	4
EPSSVB4100052T	EPSSVB4100052A	10	0.5R	20	75	10	4
EPSSVB4100102T	EPSSVB4100102A	10	1.0R	20	75	10	4
EPSSVB4100202T	EPSSVB4100202A	10	2.0R	20	75	10	4
EPSSVB4120052T	EPSSVB4120052A	12	0.5R	24	75	12	4
EPSSVB4120102T	EPSSVB4120102A	12	1.0R	24	75	12	4
EPSSVB4120202T	EPSSVB4120202A	12	2.0R	24	75	12	4
EPSSVB4160102T	EPSSVB4160102A	16	1.0R	32	100	16	4
EPSSVB4160202T	EPSSVB4160202A	16	2.0R	32	100	16	4
EPSSVB4160302T	EPSSVB4160302A	16	3.0R	32	100	16	4
EPSSVB4200102T	EPSSVB4200102A	20	1.0R	40	100	20	4
EPSSVB4200302T	EPSSVB4200302A	20	3.0R	40	100	20	4



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

R Tolerance	
R	±0.020

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



d = tool diameter

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

V47B - Corner Radius · VP · Helix 35 · 4F

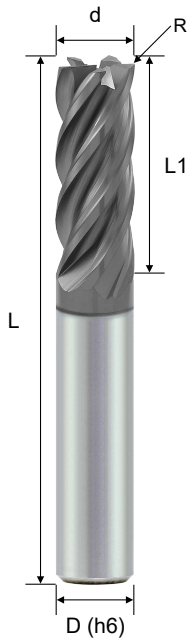
不等分割圓鼻銑刀 · 4 刃

- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- For alloy steel, cast iron and stainless steel roughing to finishing.
- V47B with TACO (AlTiN) coating for general milling.
- V47BX with ANAX (AlTiCrN) smooth coating for high efficiency milling.

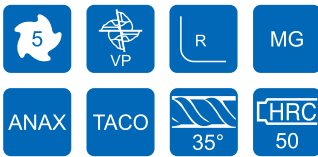
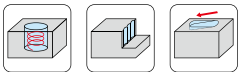
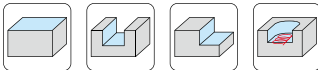


EPSSVB

	P	M	K	N	S	H
V47B	●	○	●			
V47BX	●	●	●		●	○



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
V47B	V47BX						
EPSSVB5060032T	EPSSVB5060032A	6	0.3R	12	50	6	5
EPSSVB5060052T	EPSSVB5060052A	6	0.5R	12	50	6	5
EPSSVB5080052T	EPSSVB5080052A	8	0.5R	16	60	8	5
EPSSVB5080102T	EPSSVB5080102A	8	1.0R	16	60	8	5
EPSSVB5100052T	EPSSVB5100052A	10	0.5R	20	75	10	5
EPSSVB5100102T	EPSSVB5100102A	10	1.0R	20	75	10	5
EPSSVB5100202T	EPSSVB5100202A	10	2.0R	20	75	10	5
EPSSVB5120052T	EPSSVB5120052A	12	0.5R	24	75	12	5
EPSSVB5120102T	EPSSVB5120102A	12	1.0R	24	75	12	5
EPSSVB5120202T	EPSSVB5120202A	12	2.0R	24	75	12	5
EPSSVB5160102T	EPSSVB5160102A	16	1.0R	32	100	16	5
EPSSVB5160202T	EPSSVB5160202A	16	2.0R	32	100	16	5
EPSSVB5160302T	EPSSVB5160302A	16	3.0R	32	100	16	5



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04
R Tolerance	
R	±0.020

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



d = tool diameter

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

V47C - Square · VP · Helix 38 · 4F

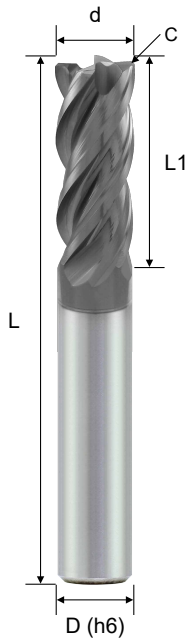
不等分割平銑刀 · 4 刃

- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Sharp geometry design for stainless steel, alloy steel and cast iron high efficiency slot and side milling.
- V47C with TACO (AlTiN) coating for general milling.
- V47CX with ANAX (AlTiCrN) smooth coating for high efficiency milling.

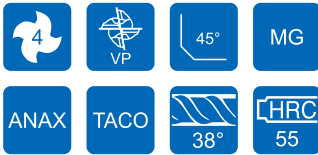
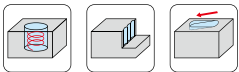
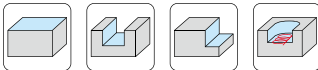
ASIA  
(Metric)

EPSSVC

	P	M	K	N	S	H
V47C	●	○	●			
V47CX	●	●	●		○	○



Order No.		Dia. (d)	Chamfer (C)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
V47C	V47CX						
EPSSVC4410000T	EPSSVC4410000A	1	-	3	50	4	4
EPSSVC4420000T	EPSSVC4420000A	2	-	5	50	4	4
EPSSVC4430000T	EPSSVC4430000A	3	-	8	50	4	4
EPSSVC4030000T	EPSSVC4030000A	3	-	8	50	6	4
EPSSVC4440000T	EPSSVC4440000A	4	-	10	50	4	4
EPSSVC4040000T	EPSSVC4040000A	4	-	10	50	6	4
EPSSVC4050000T	EPSSVC4050000A	5	-	13	50	6	4
EPSSVC4060000T	EPSSVC4060000A	6	-	15	50	6	4
EPSSVC4060011T	EPSSVC4060011A	6	0.10	15	50	6	4
EPSSVC4080000T	EPSSVC4080000A	8	-	20	60	8	4
EPSSVC4080003T	EPSSVC4080003A	8	-	24	60	8	4
EPSSVC4080011T	EPSSVC4080011A	8	0.15	20	60	8	4
EPSSVC4100000T	EPSSVC4100000A	10	-	25	75	10	4
EPSSVC4100003T	EPSSVC4100003A	10	-	30	75	10	4
EPSSVC4100011T	EPSSVC4100011A	10	0.15	25	75	10	4
EPSSVC4120000T	EPSSVC4120000A	12	-	30	75	12	4
EPSSVC4120003T	EPSSVC4120003A	12	-	36	75	12	4
EPSSVC4120021T	EPSSVC4120021A	12	0.20	30	75	12	4
EPSSVC4140000T	EPSSVC4140000A	14	-	30	75	14	4
EPSSVC4160000T	EPSSVC4160000A	16	-	35	100	16	4
EPSSVC4160021T	EPSSVC4160021A	16	0.25	35	100	16	4
EPSSVC4200000T	EPSSVC4200000A	20	-	45	100	20	4
EPSSVC4250000T	EPSSVC4250000A	25	-	45	100	25	4



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

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



d = tool diameter

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

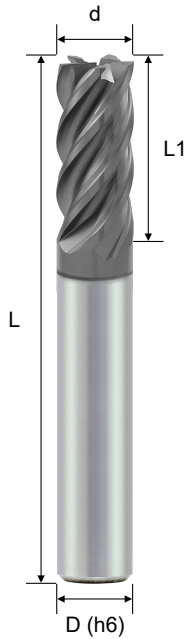
V47C - Square · VP · Helix 38 · 5F

不等分割平銑刀 · 5 刃

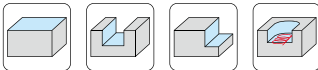
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

ASIA  
(Metric)

EPSSVC



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



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

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



d = tool diameter

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

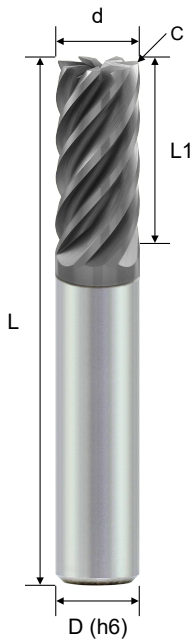
V47C - Square · VP · Helix 38 · 7F

不等分割平銑刀 · 7 刃

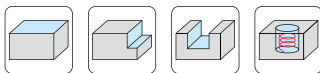
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, super alloys, alloy steel and cast iron high efficiency milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

ASIA  
(Metric)

EPSSVC



Order No.	Dia. (d)	Chamfer (C)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVC7100000A	10	-	25	75	10	7
EPSSVC7100011A	10	0.15	25	75	10	7
EPSSVC7120000A	12	-	30	75	12	7
EPSSVC7120021A	12	0.20	30	75	12	7
EPSSVC7160000A	16	-	35	100	16	7
EPSSVC7160021A	16	0.25	35	100	16	7



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

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



d = tool diameter

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

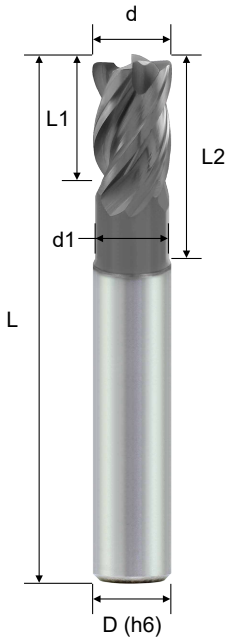
V47C - Square · VP · Helix 38 · Necked · 4F

不等分割平銑刀 · 帶頸型 · 4 刃

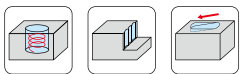
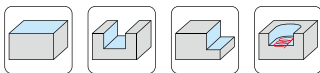
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron, high efficiency slot and side milling.
- Necked design is able to increase feed rate.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend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



EPSUVC



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



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

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



d = tool diameter

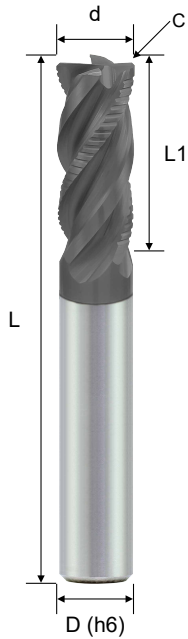
※If the machine not stable, please reduce the feed about 20%.

V47C - Square · VP · Helix 38 · Roughing & Finishing · 4F 不等分割平銑刀 · 粗精一體型 · 4 刃

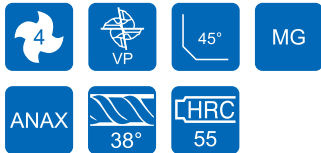
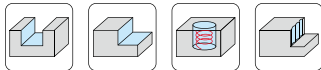
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron, high efficiency slot milling and side roughing.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

ASIA  
(Metric)

EPSRVC



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



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

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



d = tool diameter

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

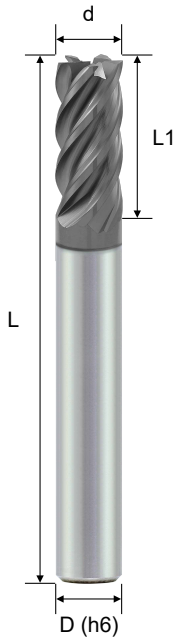
V47C - Square · VP · Helix 38 · Long Shank · 5F

不等分割平銑刀 · 長柄型 · 5 刃

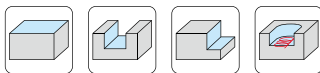
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

ASIA  
(Metric)

EPSLVC



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSLVC5060000A	6	15	75	6	5
EPSLVC5080000A	8	20	75	8	5
EPSLVC5100000A	10	25	100	10	5
EPSLVC5120000A	12	30	100	12	5



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

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



d = tool diameter

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

V47C - Corner Radius · VP · Helix 38 · 4F

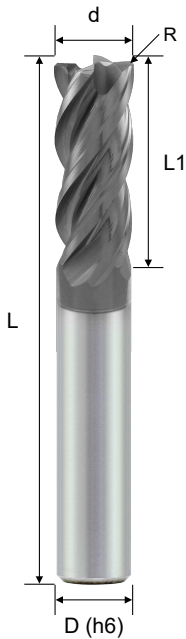
不等分割圓鼻銑刀 · 4 刃

- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Sharp geometry design for stainless steel, alloy steel and cast iron high efficiency slot and side milling.
- V47C with TACO (AlTiN) coating for general milling.
- V47CX with ANAX (AlTiCrN) smooth coating for high efficiency milling.

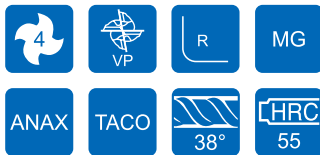
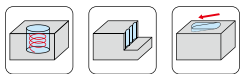
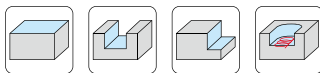
ASIA  
(Metric)

EPSSVC

	P	M	K	N	S	H
V47C	●	○	●			
V47CX	●	●	●		○	○



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
V47C	V47CX						
EPSSVC4440052T	EPSSVC4440052A	4	0.5R	8	50	4	4
EPSSVC4060032T	EPSSVC4060032A	6	0.3R	12	50	6	4
EPSSVC4060052T	EPSSVC4060052A	6	0.5R	12	50	6	4
EPSSVC4060102T	EPSSVC4060102A	6	1.0R	12	50	6	4
EPSSVC4080052T	EPSSVC4080052A	8	0.5R	16	60	8	4
EPSSVC4080102T	EPSSVC4080102A	8	1.0R	16	60	8	4
EPSSVC4080152T	EPSSVC4080152A	8	1.5R	16	60	8	4
EPSSVC4100052T	EPSSVC4100052A	10	0.5R	20	75	10	4
EPSSVC4100102T	EPSSVC4100102A	10	1.0R	20	75	10	4
EPSSVC4100202T	EPSSVC4100202A	10	2.0R	20	75	10	4
EPSSVC4120052T	EPSSVC4120052A	12	0.5R	24	75	12	4
EPSSVC4120102T	EPSSVC4120102A	12	1.0R	24	75	12	4
EPSSVC4120202T	EPSSVC4120202A	12	2.0R	24	75	12	4
EPSSVC4160102T	EPSSVC4160102A	16	1.0R	32	100	16	4
EPSSVC4160202T	EPSSVC4160202A	16	2.0R	32	100	16	4
EPSSVC4160302T	EPSSVC4160302A	16	3.0R	32	100	16	4
EPSSVC4200052T	EPSSVC4200052A	20	0.5R	40	100	20	4
EPSSVC4200102T	EPSSVC4200102A	20	1.0R	40	100	20	4
EPSSVC4200302T	EPSSVC4200302A	20	3.0R	45	100	25	4
EPSSVC4250052T	EPSSVC4250052A	25	0.5R	45	100	25	4
EPSSVC4250102T	EPSSVC4250102A	25	1.0R	45	100	25	4



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

R Tolerance	
R	±0.020

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



d = tool diameter

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

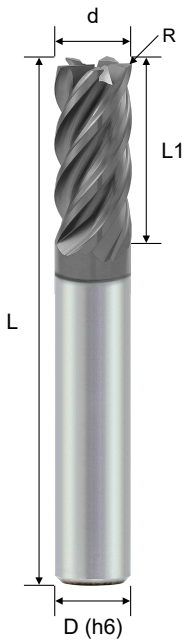
V47C - Corner Radius · VP · Helix 38 · 5F

不等分割圓鼻銑刀 · 5 刃

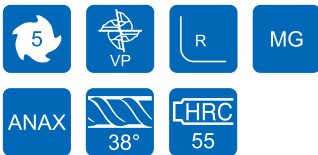
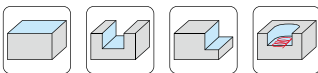
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.



EPSSVC



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



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

R Tolerance	
R	±0.020

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



d = tool diameter

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

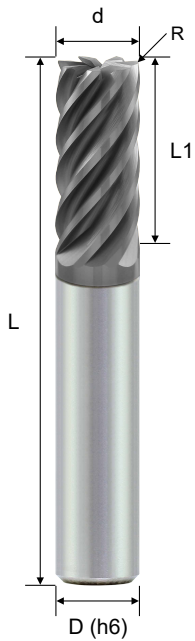
V47C - Corner Radius · VP · Helix 38 · 7F

不等分割圓鼻銑刀 · 7 刃

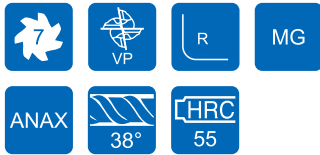
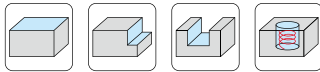
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, super alloys, alloy steel and cast iron high efficiency milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

ASIA  
(Metric)

EPSSVC



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVC7100052A	10	0.5R	20	75	10	7
EPSSVC7120102A	12	1.0R	24	75	12	7
EPSSVC7160202A	16	2.0R	32	100	16	7
EPSSVC7200052A	20	0.5R	50	100	20	7



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

R Tolerance	
R	±0.020

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



d = tool diameter

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

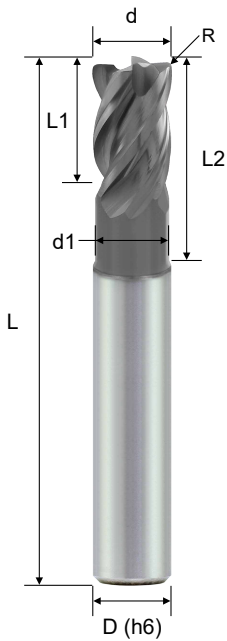
V47C - Corner Radius · VP · Helix 38 · Necked · 4F

不等分割圓鼻銑刀 · 帶頸型 · 4 刃

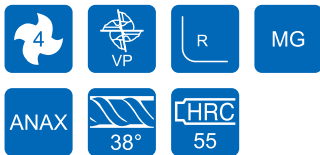
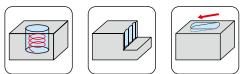
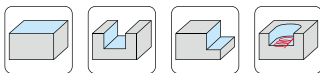
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron, high efficiency slot and side milling.
- Necked design is able to increase feed rate.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend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



EPSUVC



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



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

R Tolerance	
R	±0.020

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



d = tool diameter

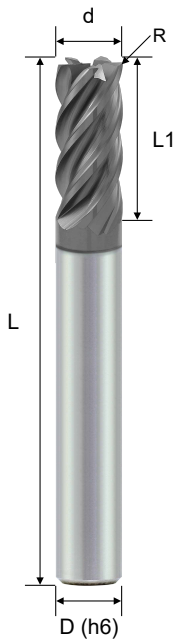
※If the machine not stable, please reduce the feed about 20%.

V47C - Corner Radius · VP · Helix 38 · Long Shank · 5F 不等分割圓鼻銑刀 · 長柄型 · 5 刃

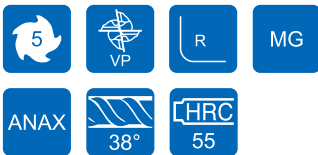
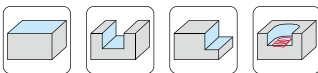
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.



EPSLVC



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSLVC5060032A	6	0.3R	12	75	6	5
EPSLVC5060052A	6	0.5R	12	75	6	5
EPSLVC5080052A	8	0.5R	16	75	8	5
EPSLVC5080102A	8	1.0R	16	75	8	5
EPSLVC5100052A	10	0.5R	20	100	10	5
EPSLVC5100102A	10	1.0R	20	100	10	5
EPSLVC5100202A	10	2.0R	20	100	10	5
EPSLVC5120052A	12	0.5R	24	100	12	5
EPSLVC5120102A	12	1.0R	24	100	12	5
EPSLVC5120202A	12	2.0R	24	100	12	5



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

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



d = tool diameter

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

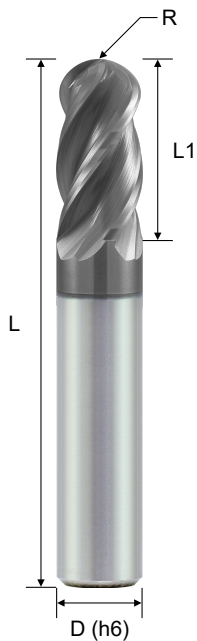
V47C - Ball Nose · VP · Helix 38 · 4F

不等分割球銑刀 · 4 刃

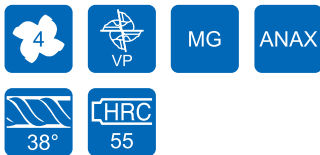
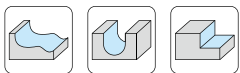
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron, high efficiency profile milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.



EPBSVC



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



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

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



d = tool diameter

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

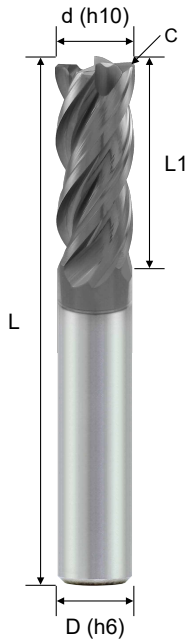
V47C - Square · VP · Helix 38 · 4F

不等分割平銑刀 · 4 刃

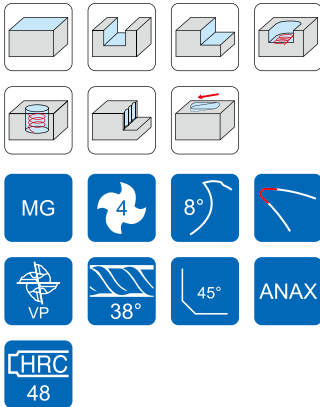
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

DIN  
(Metric)

E113VC



Order No. Cylindrical	Order No. Weldon	Dia. (d)	Chamfer (c)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
E113VC404001A	-	4	0.10	11	57	6	4
E113VC406001A	E113VC406001AW	6	0.15	13	57	6	4
E113VC408001A	E113VC408001AW	8	0.15	19	63	8	4
E113VC410002A	E113VC410002AW	10	0.20	22	72	10	4
E113VC412002A	E113VC412002AW	12	0.20	26	83	12	4
E113VC416003A	E113VC416003AW	16	0.30	32	92	16	4
E113VC420004A	E113VC420004AW	20	0.40	38	104	20	4



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



d = tool diameter

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

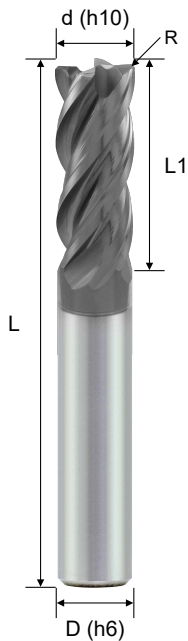
V47C - Corner Radius · VP · Helix 38 · 4F

不等分割圓鼻銑刀 · 4 刃

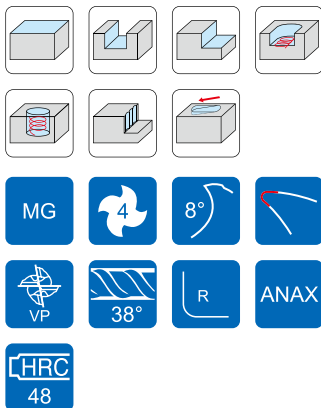
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

DIN  
(Metric)

E133VC



Order No. Cylindrical	Order No. Weldon	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
E133VC404005A	-	4	0.5R	11	57	6	4
E133VC406005A	E133VC406005AW	6	0.5R	13	57	6	4
E133VC408005A	E133VC408005AW	8	0.5R	19	63	8	4
E133VC408010A	E133VC408010AW	8	1.0R	19	63	8	4
E133VC410005A	E133VC410005AW	10	0.5R	22	72	10	4
E133VC410010A	E133VC410010AW	10	1.0R	22	72	10	4
E133VC412005A	E133VC412005AW	12	0.5R	26	83	12	4
E133VC412010A	E133VC412010AW	12	1.0R	26	83	12	4
E133VC412020A	E133VC412020AW	12	2.0R	26	83	12	4
E133VC416005A	E133VC416005AW	16	0.5R	32	92	16	4
E133VC416010A	E133VC416010AW	16	1.0R	32	92	16	4
E133VC416030A	E133VC416030AW	16	3.0R	32	92	16	4
E133VC420010A	E133VC420010AW	20	1.0R	38	104	20	4
E133VC420030A	E133VC420030AW	20	3.0R	38	104	20	4



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



d = tool diameter

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

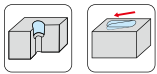
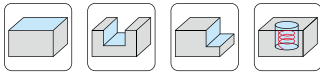
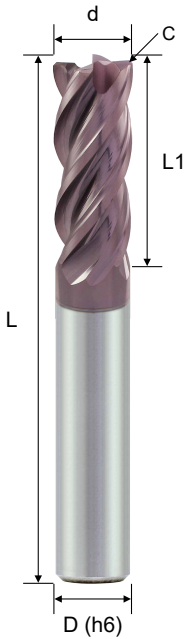
V47C - Square · VP · Helix 38 · 4F (Inch)

不等分割平銑刀 · 4 刃 ( 英吋 )

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

ANSI  
(Inch)

EPV



d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	Chamfer (C)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPF2V40120210U	1/8	.010C	1/4	1 1/2	1/8	4
EPS2V40120200U	1/8	-	1/4	1 1/2	1/8	4
EPS4V40120500U	1/8	-	1/2	2	1/8	4
EPF4V40120510U	1/8	.010C	1/2	2	1/8	4
EPS9V40120500U	1/8	-	1/2	2 1/2	1/8	4
EPF2V40180310U	3/16	.010C	5/16	2 1/2	3/16	4
EPS7V40180300U	3/16	-	5/16	2 1/2	3/16	4
EPF3V40180610U	3/16	.010C	5/8	2 1/2	3/16	4
EPS8V40180600U	3/16	-	5/8	2 1/2	3/16	4
EPS2V40250300U	1/4	-	3/8	2	1/4	4
EPF2V40250315U	1/4	.015C	3/8	2	1/4	4
EPF3V40250715U	1/4	.015C	3/4	2 1/2	1/4	4
EPS3V40250700U	1/4	-	3/4	2 1/2	1/4	4
EPS4V40251000U	1/4	-	1	3	1/4	4
EPS5V40251200U	1/4	-	1 1/4	3	1/4	4
EPF2V40310515U	5/16	.015C	1/2	2 1/2	5/16	4
EPS2V40310500U	5/16	-	1/2	2 1/2	5/16	4
EPF2V40310715U	5/16	.015C	3/4	2 1/2	5/16	4
EPS2V40310700U	5/16	-	3/4	2 1/2	5/16	4
EPS4V40311200U	5/16	-	1 1/4	3	5/16	4
EPF2V40370820U	3/8	.020C	7/8	2 1/2	3/8	4
EPS2V40370800U	3/8	-	7/8	2 1/2	3/8	4
EPS3V40371000U	3/8	-	1	3	3/8	4
EPS4V40371500U	3/8	-	1 1/2	4	3/8	4
EPF1V40430620U	7/16	.020C	5/8	2 3/4	7/16	4
EPS1V40430600U	7/16	-	5/8	2 3/4	7/16	4
EPF2V40430820U	7/16	.020C	7/8	2 3/4	7/16	4
EPS2V40430800U	7/16	-	7/8	2 3/4	7/16	4
EPS2V40501000U	1/2	-	1	3	1/2	4
EPF2V40501020U	1/2	.020C	1	3	1/2	4
EPF3V40501220U	1/2	.020C	1 1/4	3	1/2	4
EPS3V40501200U	1/2	-	1 1/4	3	1/2	4
EPF3V40501520U	1/2	.020C	1 1/2	4	1/2	4
EPS3V40501500U	1/2	-	1 1/2	4	1/2	4
EPS4V40502000U	1/2	-	2	4	1/2	4
EPS2V40621200U	5/8	-	1 1/4	3 1/2	5/8	4
EPF2V40621220U	5/8	.020C	1 1/4	3 1/2	5/8	4

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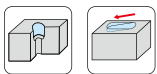
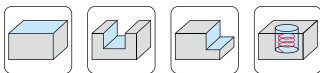
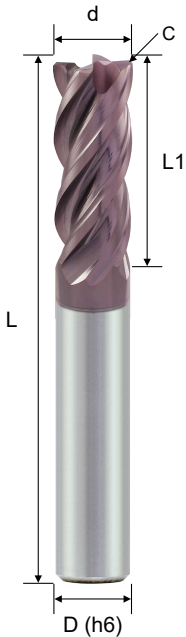
V47C - Square · VP · Helix 38 · 4F (Inch)

不等分割平銑刀 · 4 刃 ( 英寸 )

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- High removal rate for steel and alloy steel machining.
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ANSI  
(Inch)

EPV



d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	Chamfer (C)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPF2V40751520U	3/4	.020C	1 1/2	4	3/4	4
EPS2V40751500U	3/4	-	1 1/2	4	3/4	4
EPF2V41002020U	1	.020C	2	5	1	4
EPS2V41002000U	1	-	2	5	1	4
EPS2V41002200U	1	-	2 1/4	5	1	4
EPF2V41002220U	1	.020C	2 1/4	5	1	4

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



d = tool diameter

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

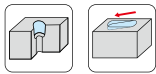
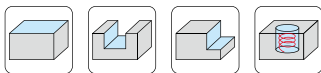
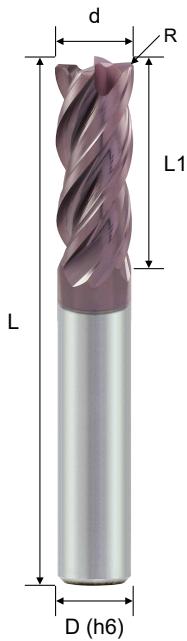
V47C - Corner Radius · VP · Helix 38 · 4F (Inch)

不等分割圓鼻銑刀 · 4 刃 ( 英吋 )

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EPCV



d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPC2V40120215U	1/8	.015R	1/4	2 1/2	1/8	4
EPC4V40120515U	1/8	.015R	1/2	2	1/8	4
EPC2V40180315U	3/16	.015R	5/16	2 1/2	3/16	4
EPC8V40180615U	3/16	.015R	5/8	2 1/2	3/16	4
EPC8V40180630U	3/16	.030R	5/8	2 1/2	3/16	4
EPC2V40250330U	1/4	.030R	3/8	2	1/4	4
EPC3V40250715U	1/4	.015R	3/4	2 1/2	1/4	4
EPC3V40250730U	1/4	.030R	3/4	2 1/2	1/4	4
EPC3V40250760U	1/4	.060R	3/4	2 1/2	1/4	4
EPC4V40251015U	1/4	.015R	1	3	1/4	4
EPC5V40251215U	1/4	.015R	1 1/4	3	1/4	4
EPC5V40251230U	1/4	.030R	1 1/4	3	1/4	4
EPC2V40310530U	5/16	.030R	1/2	2 1/2	5/16	4
EPC2V40310715U	5/16	.015R	3/4	2 1/2	5/16	4
EPC2V40310730U	5/16	.030R	3/4	2 1/2	5/16	4
EPC2V40310760U	5/16	.060R	3/4	2 1/2	5/16	4
EPC4V40311230U	5/16	.030R	1 1/4	3	5/16	4
EPC2V40370815U	3/8	.015R	7/8	2 1/2	3/8	4
EPC2V40370830U	3/8	.030R	7/8	2 1/2	3/8	4
EPC2V40370860U	3/8	.060R	7/8	2 1/2	3/8	4
EPC2V40370890U	3/8	.090R	7/8	2 1/2	3/8	4
EPC3V40371015U	3/8	.015R	1	3	3/8	4
EPC3V40371030U	3/8	.030R	1	3	3/8	4
EPC3V40371060U	3/8	.060R	1	3	3/8	4
EPC4V40371530U	3/8	.030R	1 1/2	4	3/8	4
EPC4V40371560U	3/8	.060R	1 1/2	4	3/8	4
EPC7V40372530U	3/8	.030R	2 1/2	4	3/8	4
EPC7V40372560U	3/8	.060R	2 1/2	4	3/8	4
EPC2V40501030U	1/2	.030R	1	3	1/2	4
EPC2V40501060U	1/2	.060R	1	3	1/2	4
EPC3V40501215U	1/2	.015R	1 1/4	3	1/2	4
EPC3V40501230U	1/2	.030R	1 1/4	3	1/2	4
EPC3V40501260U	1/2	.060R	1 1/4	3	1/2	4
EPC3V40501290U	1/2	.090R	1 1/4	3	1/2	4
EPC3V405012C0U	1/2	.120R	1 1/4	3	1/2	4
EPC3V40501530U	1/2	.030R	1 1/2	4	1/2	4
EPC3V40501560U	1/2	.060R	1 1/2	4	1/2	4

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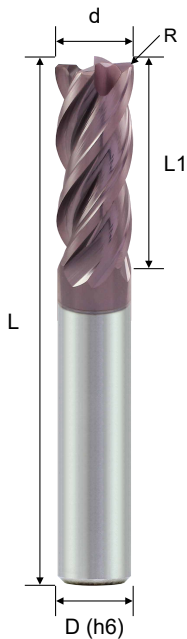
V47C - Corner Radius · VP · Helix 38 · 4F (Inch)

不等分割圓鼻銑刀 · 4 刃 ( 英吋 )

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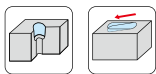
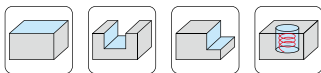
ANSI  
(Inch)

EPV



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPC4V40502030U	1/2	.030R	2	4	1/2	4
EPC4V40502060U	1/2	.060R	2	4	1/2	4
EPC2V40621230U	5/8	.030R	1 1/4	3 1/2	5/8	4
EPC2V40621260U	5/8	.060R	1 1/4	3 1/2	5/8	4
EPC2V40621290U	5/8	.090R	1 1/4	3 1/2	5/8	4
EPC2V406212C0U	5/8	.120R	1 1/4	3 1/2	5/8	4
EPC2V40751530U	3/4	.030R	1 1/2	4	3/4	4
EPC2V40751560U	3/4	.060R	1 1/2	4	3/4	4
EPC2V40751590U	3/4	.090R	1 1/2	4	3/4	4
EPC2V41002230U	1	.030R	2 1/4	5	1	4
EPC2V41002260U	1	.060R	2 1/4	5	1	4

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



d Tolerance	
d	.000 ~ -.002"



d = tool diameter

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

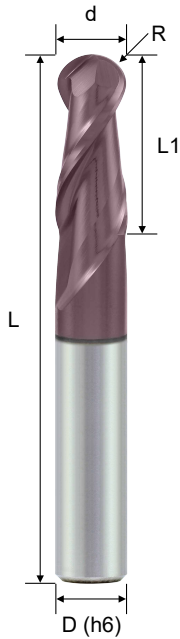
V47C - Ball Nose · VP · Helix 38 · 2F (Inch)

不等分割球型銑刀 · 2 刃 ( 英吋 )

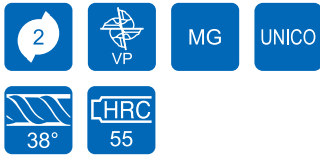
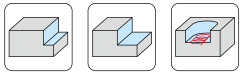
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- High removal rate for steel and alloy steel machining.
- UNICO (Ti, Al, N) coating provides superior wear resistance.

ANSI  
(Inch)

EPB V

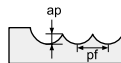


Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPB4V20120500U	1/16	1/8	1/2	2	1/8	2
EPB3V20180600U	3/32	3/16	5/8	2 1/2	3/16	2
EPB3V20250700U	1/8	1/4	3/4	2 1/2	1/4	2
EPB2V20310700U	5/32	5/16	3/4	2 1/2	5/16	2
EPB2V20370800U	3/16	3/8	7/8	2 1/2	3/8	2
EPB2V20430800U	7/32	7/16	7/8	2 3/4	7/16	2
EPB2V20501000U	1/4	1/2	1	3	1/2	2
EPB2V20621200U	5/16	5/8	1 1/4	3 1/2	5/8	2



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

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



d = tool diameter

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

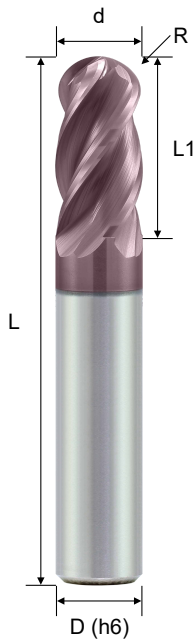
V47C - Ball Nose · VP · Helix 38 · 4F (Inch)

不等分割球型銑刀 · 4 刃 ( 英寸 )

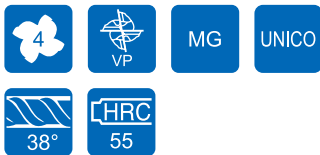
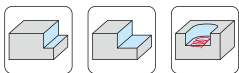
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- High removal rate for steel and alloy steel machining.
- UNICO (Ti, Al, N) coating provides superior wear resistance.

ANSI  
(Inch)

EPB□V



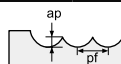
Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPB4V40120500U	1/16	1/8	1/2	2	1/8	4
EPB3V40180600U	3/32	3/16	5/8	2 1/2	3/16	4
EPB3V40250700U	1/8	1/4	3/4	2 1/2	1/4	4
EPB2V40310700U	5/32	5/16	3/4	2 1/2	5/16	4
EPB2V40370800U	3/16	3/8	7/8	2 1/2	3/8	4
EPB2V40430800U	7/32	7/16	7/8	2 3/4	7/16	4
EPB2V40501000U	1/4	1/2	1	3	1/2	4
EPB2V40621200U	5/16	5/8	1 1/4	3 1/2	5/8	4



d Tolerance	
d	.000 ~ -.002"

R Tolerance	
R	.000 ~ -.001"

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



d = tool diameter

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

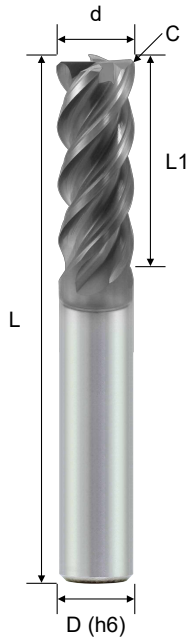
V47D - Square · VP · Helix 45 · 4F

不等分割平銑刀 · 4 刃

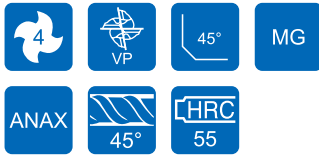
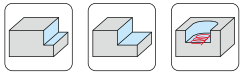
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.



EPSSVD



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



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

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



d = tool diameter

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

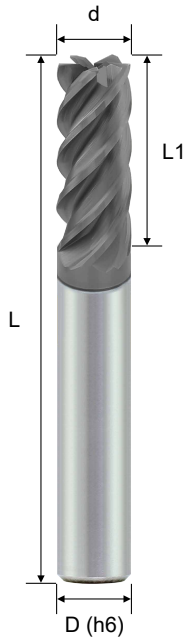
V47D - Square · VP · Helix 43 · 5F

不等分割平銑刀 · 5 刃

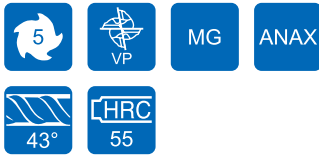
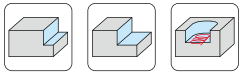
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

ASIA  
(Metric)

EPSSVD



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



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

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



d = tool diameter

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

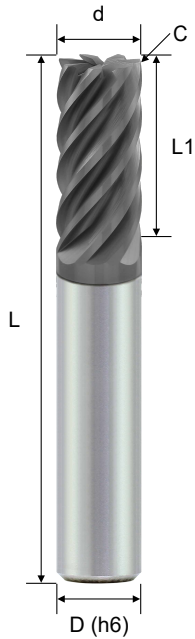
V47D - Square · VP · Helix 43 · 7F

不等分割平銑刀 · 7 刃

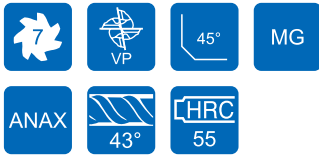
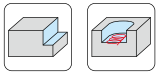
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

ASIA  
(Metric)

EPSSVD



Order No.	Dia. (d)	Chamfer (C)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVD7100000A	10	-	25	75	10	7
EPSSVD7100051A	10	0.5C	25	75	10	7
EPSSVD7120000A	12	-	30	75	12	7
EPSSVD7120051A	12	0.5C	30	75	12	7
EPSSVD7160000A	16	-	35	100	16	7



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

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



d = tool diameter

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

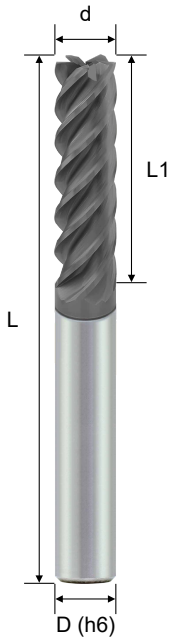
V47D - Square · VP · Helix 43 · Long Flute · 5F

不等分割平銑刀 · 長刃型 · 5 刃

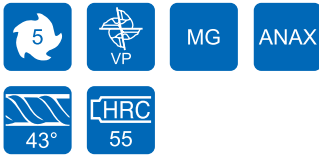
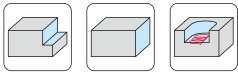
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency deep side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.

ASIA  
(Metric)

EPSCVD



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSCVD5060000A	6	24	75	6	5
EPSCVD5080000A	8	32	75	8	5
EPSCVD5100000A	10	40	100	10	5
EPSCVD5120000A	12	48	100	12	5
EPSCVD5160000A	16	55	110	16	5



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

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



d = tool diameter

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

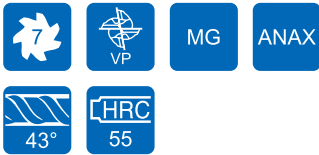
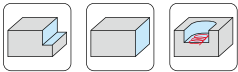
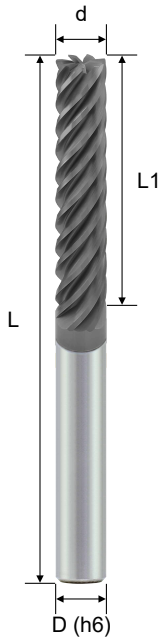
V47D - Square · VP · Helix 43 · Long Flute · 7F

不等分割平銑刀 · 長刃型 · 7 刃

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

ASIA  
(Metric)

EPSCVD



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

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSCVD7100000A	10	50	100	10	7
EPSCVD7120000A	12	60	110	12	7
EPSCVD7160000A	16	80	150	16	7

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



d = tool diameter

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

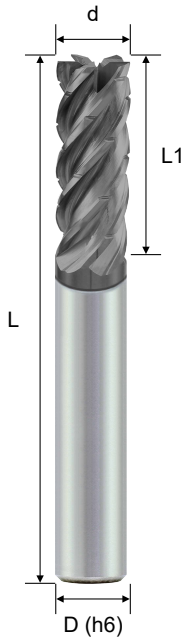
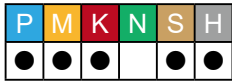
V47D - Square · VP · Helix 43 · Chip Breaker · 5F

不等分割平銑刀 · 斷屑型 · 5 刃

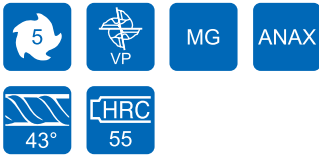
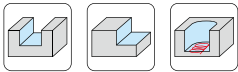
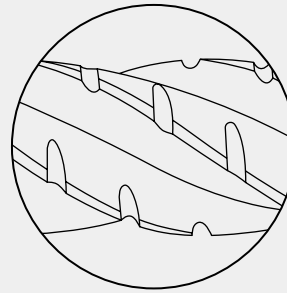
- The cutting edges incorporate chip breakers design.
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for super alloy, stainless steel, alloy steel and cast iron high efficiency deep side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance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

ASIA  
(Metric)

EPSSVH



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVH5060000A	6	15	50	6	5
EPSSVH5080000A	8	20	60	8	5
EPSSVH5100000A	10	25	75	10	5
EPSSVH5120000A	12	30	75	12	5
EPSSVH5160000A	16	35	100	16	5



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

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



d = tool diameter

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

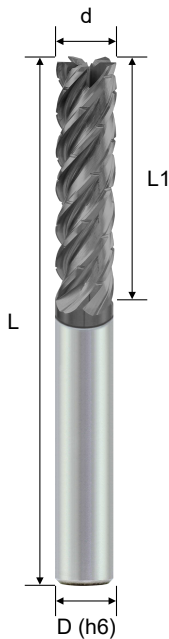
V47D - Square · VP · Chip Breaker · Helix 43 · Long Flute · 5F

不等分割平銑刀 · 斷屑長刃型 · 5 刃

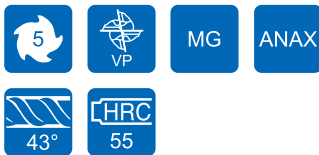
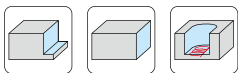
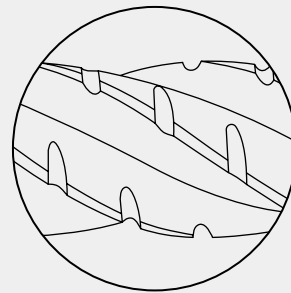
- The cutting edges incorporate chip breakers design.
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for super alloy, stainless steel, alloy steel and cast iron high efficiency deep side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance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



EPSCVH



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



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

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



d = tool diameter

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

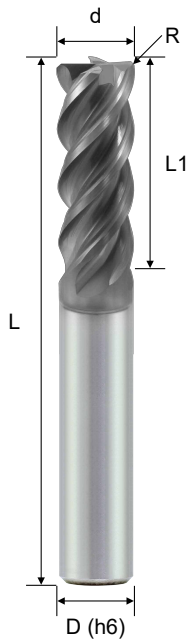
V47D - Corner Radius · VP · Helix 45 · 4F

不等分割圓鼻銑刀 · 4 刃

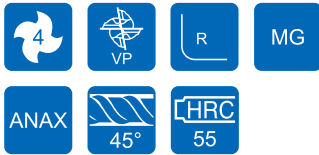
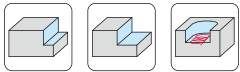
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.



EPSSVD



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



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04
R Tolerance	
R	±0.020

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



d = tool diameter

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

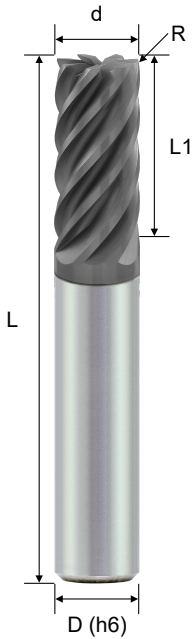
V47D - Corner Radius · VP · Helix 43 · 7F

不等分割圓鼻銑刀 · 7 刃

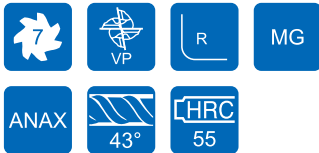
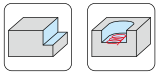
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.



EPSSVD



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVD7100052A	10	0.5R	25	75	10	7
EPSSVD7120052A	12	0.5R	30	75	12	7



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

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



d = tool diameter

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

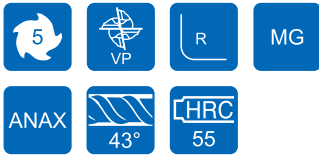
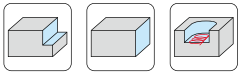
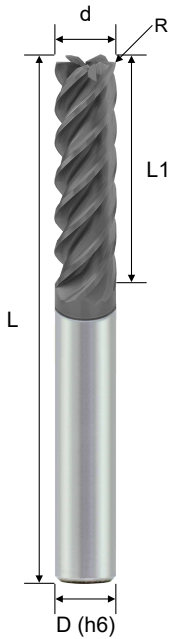
V47D - Corner Radius · VP · Helix 43 · Long Flute · 5F

不等分割圓鼻銑刀 · 長刃型 · 5 刃

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



EPSCVD



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05
R Tolerance	
R	±0.020

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSCVD5060102A	6	1.0R	24	75	6	5
EPSCVD5080102A	8	1.0R	32	75	8	5
EPSCVD5120202A	12	2.0R	48	100	12	5

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



d = tool diameter

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

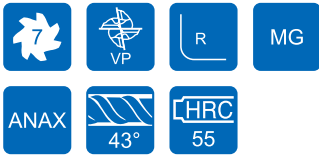
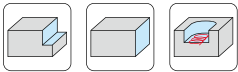
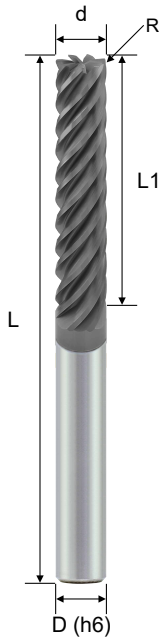
V47D - Corner Radius · VP · Helix 43 · Long Flute · 7F

不等分割圓鼻銑刀 · 長刃型 · 7 刃

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

ASIA  
(Metric)

EPSCVD



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

R Tolerance	
R	±0.020

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSCVD7100052A	10	0.5R	50	100	10	7
EPSCVD7120052A	12	0.5R	60	110	12	7
EPSCVD7160052A	16	0.5R	80	150	16	7

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



d = tool diameter

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

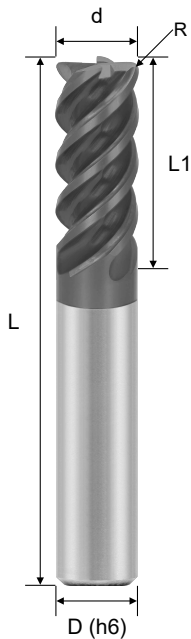
V47E - Corner Radius · VP · Helix 52 · 4F

不等分割圓鼻銑刀 · 4 刃

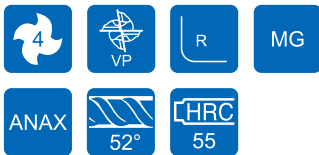
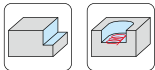
- Variable pitch (VP) is unequal flute spacing for anti-vibration machining.
- Low cutting force design for stainless steel, alloy steel and cast iron, outstanding high efficiency side finishing.
- ANAX (AlTiCrN) smooth coating provides a superior wear resistance and extend tool life.



EPSSVE



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



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

R Tolerance	
R	±0.020

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



d = tool diameter

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