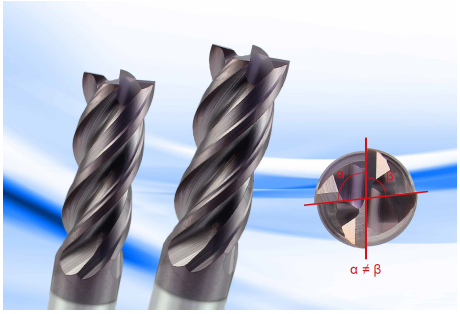
V470 Series



- For carbon steel, alloy steel & cast iron.
- High efficiency cutting, HRC < 48
- Unequal flute spacing for anti-vibration.
- TACO coating.

- 適用於碳鋼 , 合金鋼 & 鑄鐵
- 高效益、高去除率加工
- 抗震不等分割刃設計
- 高鋁鈦塗層

Appearance 外觀	Name 名稱	Code No. 編碼	Diameter 外徑	Helix 螺旋角	Coating 塗層	P	M	K	N	S	H	Page 頁碼
V470 Series for Carbon Steel / Alloy Steel / Cast Iron · Anti-Vibration · Unequal Spacing 適用碳鋼 / 合金鋼 / 鑄鐵 · 抗震 · 不等分割												
	Square · Unequal Spacing · Inch · 4F 不等分割平銑刀 · 英吋 · 4 刃	EP□□V	Ø1/8"~1"	38°	UNICO	●	●	●		●	○	B087
	Ball Nose · Unequal Spacing · Inch · 2F / 4F 不等分割球型銑刀 · 英吋 · 2 刃 /4 刃	EPB□V	Ø1/8"~5/8"	38°	UNICO	●	●	●		●	○	B090

Index 索引

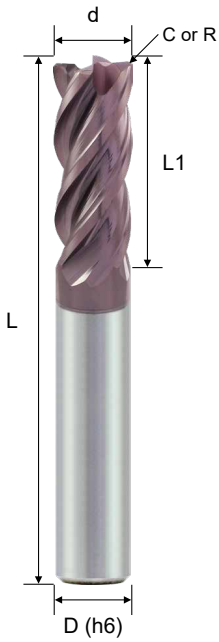
Appearance 外觀	Name 名稱	Code No. 編碼	Diameter 外徑	Helix 螺旋角	Coating 塗層	P	M	K	N	S	H	Page 頁碼
V470 Series for Carbon Steel / Alloy Steel / Cast Iron・Anti-Vibration・Unequal Spacing 適用碳鋼 / 合金鋼 / 鑄鐵・抗震・不等分割												
	Square · Unequal Spacing · Inch · 4F 不等分割平銑刀・英吋・4 刃	EP□□□V	Ø1/8"~1"	38°	UNICO	●	●	●		●	○	B087
	Ball Nose · Unequal Spacing · Inch · 2F / 4F 不等分割球型銑刀・英吋・2 刃 /4 刃	EPB□□V	Ø1/8"~5/8"	38°	UNICO	●	●	●		●	○	B090

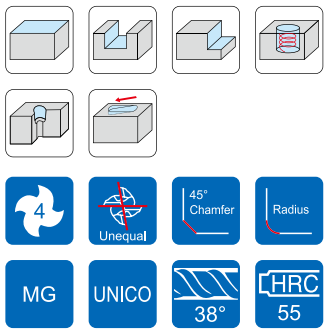
V470 - Square · Unequal Spacing · Inch · 4F 不等分割平銑刀・英吋・4 刃

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

EP□□V

P	M	K	N	S	H
●	●	●		○	○





d Tolerance	
d	.000 ~ -.002"

Order No. 訂購編碼	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	C or R	Flutes (Z)
INCH SIZE						
EPF2V40120210U	1/8	1/4	1 1/2	1/8	.010C	4
EPS2V40120200U	1/8	1/4	1 1/2	1/8	-	4
EPC2V40120215U	1/8	1/4	2 1/2	1/8	.015R	4
EPC4V40120515U	1/8	1/2	2	1/8	.015R	4
EPS4V40120500U	1/8	1/2	2	1/8	-	4
EPF4V40120510U	1/8	1/2	2	1/8	.010C	4
EPS9V40120500U	1/8	1/2	2 1/2	1/8	-	4
EPF2V40180310U	3/16	5/16	2 1/2	3/16	.010C	4
EPC2V40180315U	3/16	5/16	2 1/2	3/16	.015R	4
EPS7V40180300U	3/16	5/16	2 1/2	3/16	-	4
EPF3V40180610U	3/16	5/8	2 1/2	3/16	.010C	4
EPC8V40180615U	3/16	5/8	2 1/2	3/16	.015R	4
EPC8V40180630U	3/16	5/8	2 1/2	3/16	.030R	4
EPS8V40180600U	3/16	5/8	2 1/2	3/16	-	4
EPC2V40250330U	1/4	3/8	2	1/4	.030R	4
EPS2V40250300U	1/4	3/8	2	1/4	-	4
EPF2V40250315U	1/4	3/8	2	1/4	.015C	4
EPC3V40250715U	1/4	3/4	2 1/2	1/4	.015R	4
EPC3V40250730U	1/4	3/4	2 1/2	1/4	.030R	4
EPC3V40250760U	1/4	3/4	2 1/2	1/4	.060R	4
EPF3V40250715U	1/4	3/4	2 1/2	1/4	.015C	4
EPS3V40250700U	1/4	3/4	2 1/2	1/4	-	4
EPC4V40251015U	1/4	1	3	1/4	.015R	4
EPS4V40251000U	1/4	1	3	1/4	-	4
EPC5V40251215U	1/4	1 1/4	3	1/4	.015R	4
EPC5V40251230U	1/4	1 1/4	3	1/4	.030R	4
EPS5V40251200U	1/4	1 1/4	3	1/4	-	4

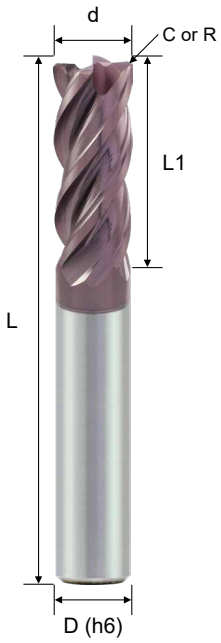
Cutting conditions：Page B263

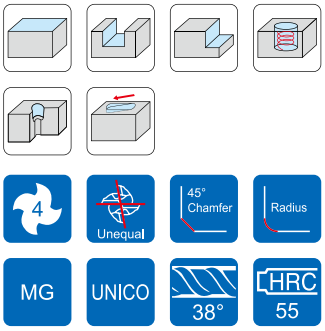
V470 - Square · Unequal Spacing · Inch · 4F 不等分割平銑刀・英吋・4 刃

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

EP□□V

P	M	K	N	S	H
●	●	●		○	○





d Tolerance	
d	.000 ~ -.002"

Order No. 訂購編碼	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	C or R	Flutes (Z)
INCH SIZE						
EPC2V40310530U	5/16	1/2	2 1/2	5/16	.030R	4
EPF2V40310515U	5/16	1/2	2 1/2	5/16	.015C	4
EPS2V40310500U	5/16	1/2	2 1/2	5/16	-	4
EPC2V40310715U	5/16	3/4	2 1/2	5/16	.015R	4
EPC2V40310730U	5/16	3/4	2 1/2	5/16	.030R	4
EPC2V40310760U	5/16	3/4	2 1/2	5/16	.060R	4
EPF2V40310715U	5/16	3/4	2 1/2	5/16	.015C	4
EPS2V40310700U	5/16	3/4	2 1/2	5/16	-	4
EPC4V40311230U	5/16	1 1/4	3	5/16	.030R	4
EPS4V40311200U	5/16	1 1/4	3	5/16	-	4
EPC2V40370815U	3/8	7/8	2 1/2	3/8	.015R	4
EPC2V40370830U	3/8	7/8	2 1/2	3/8	.030R	4
EPC2V40370860U	3/8	7/8	2 1/2	3/8	.060R	4
EPC2V40370890U	3/8	7/8	2 1/2	3/8	.090R	4
EPF2V40370820U	3/8	7/8	2 1/2	3/8	.020C	4
EPS2V40370800U	3/8	7/8	2 1/2	3/8	-	4
EPC3V40371015U	3/8	1	3	3/8	.015R	4
EPC3V40371030U	3/8	1	3	3/8	.030R	4
EPC3V40371060U	3/8	1	3	3/8	.060R	4
EPS3V40371000U	3/8	1	3	3/8	-	4
EPC4V40371530U	3/8	1 1/2	4	3/8	.030R	4
EPC4V40371560U	3/8	1 1/2	4	3/8	.060R	4
EPS4V40371500U	3/8	1 1/2	4	3/8	-	4
EPC7V40372530U	3/8	2 1/2	4	3/8	.030R	4
EPC7V40372560U	3/8	2 1/2	4	3/8	.060R	4
EPF1V40430620U	7/16	5/8	2 3/4	7/16	.020C	4
EPS1V40430600U	7/16	5/8	2 3/4	7/16	-	4
EPF2V40430820U	7/16	7/8	2 3/4	7/16	.020C	4
EPS2V40430800U	7/16	7/8	2 3/4	7/16	-	4

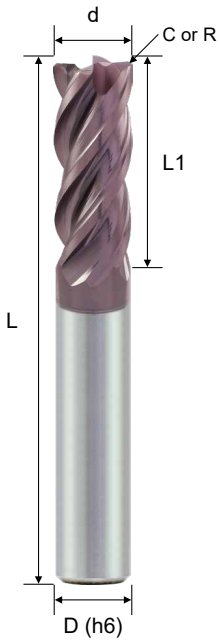
Cutting conditions：Page B263

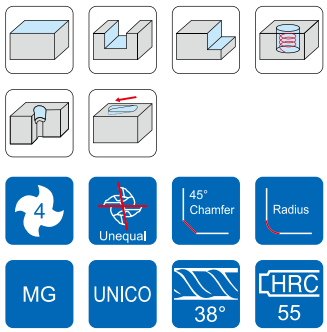
V470 - Square · Unequal Spacing · Inch · 4F 不等分割平銑刀・英吋・4 刃

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

EP□□V

P	M	K	N	S	H
●	●	●		○	○





d Tolerance	
d	.000 ~ -.002"

Order No. 訂購編碼	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	C or R	Flutes (Z)
INCH SIZE						
EPC2V40501030U	1/2	1	3	1/2	.030R	4
EPC2V40501060U	1/2	1	3	1/2	.060R	4
EPS2V40501000U	1/2	1	3	1/2	-	4
EPF2V40501020U	1/2	1	3	1/2	.020C	4
EPC3V40501215U	1/2	1 1/4	3	1/2	.015R	4
EPC3V40501230U	1/2	1 1/4	3	1/2	.030R	4
EPC3V40501260U	1/2	1 1/4	3	1/2	.060R	4
EPC3V40501290U	1/2	1 1/4	3	1/2	.090R	4
EPC3V405012C0U	1/2	1 1/4	3	1/2	.120R	4
EPF3V40501220U	1/2	1 1/4	3	1/2	.020C	4
EPS3V40501200U	1/2	1 1/4	3	1/2	-	4
EPC3V40501530U	1/2	1 1/2	4	1/2	.030R	4
EPC3V40501560U	1/2	1 1/2	4	1/2	.060R	4
EPF3V40501520U	1/2	1 1/2	4	1/2	.020C	4
EPS3V40501500U	1/2	1 1/2	4	1/2	-	4
EPC4V40502030U	1/2	2	4	1/2	.030R	4
EPC4V40502060U	1/2	2	4	1/2	.060R	4
EPS4V40502000U	1/2	2	4	1/2	-	4
EPC2V40621230U	5/8	1 1/4	3 1/2	5/8	.030R	4
EPC2V40621260U	5/8	1 1/4	3 1/2	5/8	.060R	4
EPC2V40621290U	5/8	1 1/4	3 1/2	5/8	.090R	4
EPC2V406212C0U	5/8	1 1/4	3 1/2	5/8	.120R	4
EPS2V40621200U	5/8	1 1/4	3 1/2	5/8	-	4
EPF2V40621220U	5/8	1 1/4	3 1/2	5/8	.020C	4
EPC2V40751530U	3/4	1 1/2	4	3/4	.030R	4
EPC2V40751560U	3/4	1 1/2	4	3/4	.060R	4
EPC2V40751590U	3/4	1 1/2	4	3/4	.090R	4
EPF2V40751520U	3/4	1 1/2	4	3/4	.020C	4
EPS2V40751500U	3/4	1 1/2	4	3/4	-	4
EPF2V41002020U	1	2	5	1	.020C	4
EPS2V41002000U	1	2	5	1	-	4
EPC2V41002230U	1	2 1/4	5	1	.030R	4
EPC2V41002260U	1	2 1/4	5	1	.060R	4
EPS2V41002200U	1	2 1/4	5	1	-	4
EPF2V41002220U	1	2 1/4	5	1	.020C	4

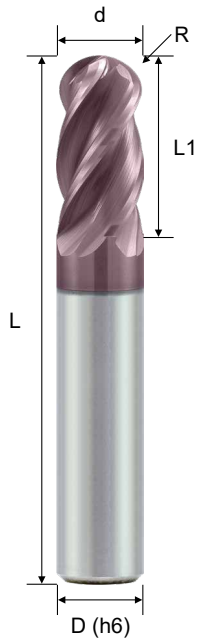
Cutting conditions：Page B263

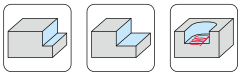
V470 - Ball Nose · Unequal Spacing · Inch · 2F / 4F 不等分割球型銑刀・英吋・2 刃 / 4 刃

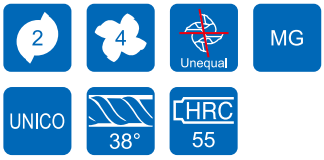
- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- UNICO coating (Al, Ti, Cr, N) provides superior wear resistance.

EPB□V

P	M	K	N	S	H
●	●	●		○	○







d Tolerance	
d	.000 ~ -.002"

R Tolerance	
R	.000 ~ -.001"

Order No. 訂購編碼	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
INCH SIZE						
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
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

Cutting conditions：Page B264

Recommended Cutting Conditions 建議切削參數

V47X Seires EPSSVE4

Working Material	Cutting Application	ae×d	ap×d	Vc	fz					
					4	6	8	10	12	16
Carbon steel (S45C，S55C)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.035	0.042	0.056	0.070	0.084	0.112
	Side finishing	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)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.031	0.038	0.050	0.066	0.078	0.104
	Side finishing	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)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.021	0.028	0.042	0.049	0.056	0.078
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.023	0.031	0.046	0.054	0.062	0.086
Superalloy	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.021	0.028	0.035	0.042	0.049	0.067
	Side finishing	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

V470 Inch Seires EP□□□V4

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

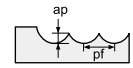
d = tool diameter

※If the machine not stable, please reduce the feed about 20%. 若機床條件較不穩定，請將進給率調降 20%

Recommended Cutting Conditions 建議切削參數

V470 Inch Seires EPB□V2, EPB□V4

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%. 若機床條件較不穩定，請將進給率調降 20%