

V530 Varix Carbide Endmills

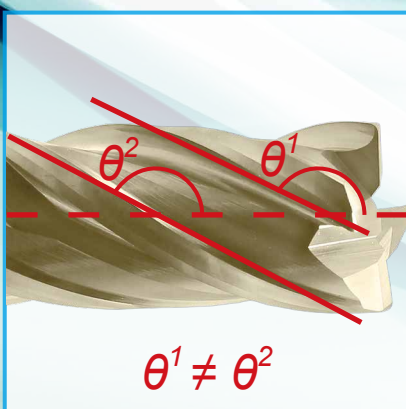
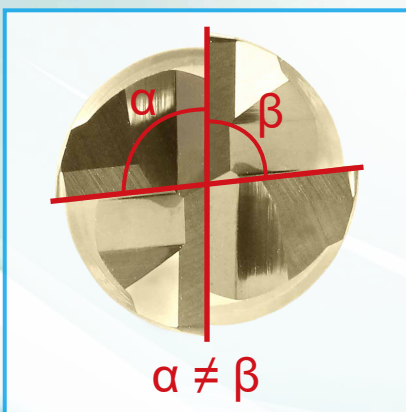
High efficiency machining

高效益變導抗震銑刀






NEW

- **High removal rate for Difficult-to-cut materials and Stainless steel.**
難切削材及不鏽鋼高去除率加工
- **Unequal Flute Spacing and variable lead design.**
不等分割與變導設計，大幅降低加工時產生的震動
- **Outstanding Anti-vibrations design.**
更佳的排屑性能，增加加工效率
- **Low cutting force and burr prevention.**
低切削阻力和抑制毛刺

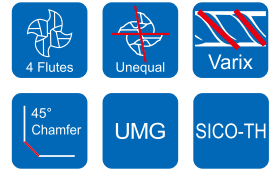
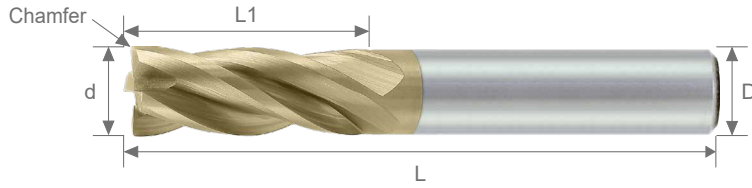
Excellent chip evacuation
易排屑設計



Select V530 tools recommended V530 刀具選擇建議

| V530 Series 刀具系列 | | Cutting Recommendation 加工形態 | | | |
|-----------------------|---|-----------------------------|-------------------|--------------------|-----------------|
| | | Slot Milling 溝銑 | Side roughing 粗側銑 | Side finishing 精側銑 | Trochoidal 擺線加工 |
| ESSSVA (30° ~ 32°) |   | ● | ● | ○ | ○ |
| ESSSVB (35° ~ 38°) |   | ● | ● | ○ | ○ |
| ESSSVC (38° ~ 41°) |   | ○ | ● | ● | ○ |
| ESSSVC (38° ~ 42°) |   | | ○ | ● | ● |
| ESSSVD (43° ~ 46°) |   | ○ | ○ | ● | ● |

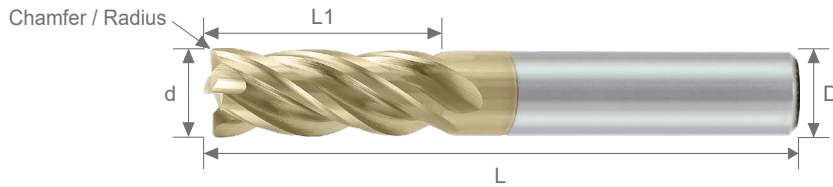
■ ESSVA Series (Helix angle : 30° ~ 32°) 產品項目



| Work Material 加工材料 | | | | | | | |
|-------------------------------------|---------------------------------|---|----------|---|-----------------|------------------|-------------------|
| Carbon Steel 碳素鋼 (S45C, S55C) | Alloy Steel 合金鋼 (SK, SCM) | Pre-Hardened / Hardened Steel 預硬鋼 / 硬度鋼 | | Stainless Steel 不鏽鋼 (SUS304, 316) | Cast Iron 鑄鐵 | Ti. Alloy 鈦合金 | Ni. Alloy 鎳基合金 |
| | | ~ HRC 40 | ~ HRC 55 | | | | |
| ◎ | ◎ | ◎ | ○ | ◎ | ◎ | ○ | ○ |

| Order No. 訂購編碼 | Dia (d) 刃徑 | Flute Length (L1) 刃長 | OAL (L) 全長 | Shank (D) 柄徑 | Chamfer | Flutes (F) 刃數 |
|-------------------|---------------|-------------------------|---------------|-----------------|---------|------------------|
| ESSVA4060011S | 6 | 15 | 50 | 6 | 0.10C | 4 |
| ESSVA4080011S | 8 | 20 | 60 | 8 | 0.15C | 4 |
| ESSVA4100021S | 10 | 25 | 75 | 10 | 0.20C | 4 |
| ESSVA4120021S | 12 | 30 | 75 | 12 | 0.20C | 4 |
| ESSVA4160031S | 16 | 35 | 100 | 16 | 0.32C | 4 |

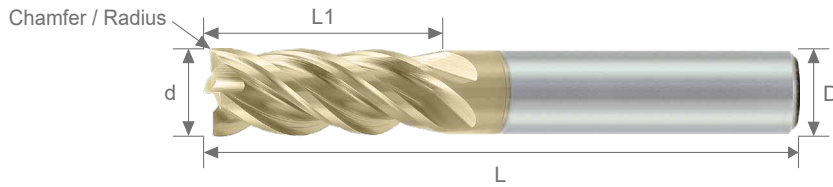
ESSSVB Series (Helix angle : 35° ~ 38°) 產品項目



| Work Material 加工材料 | | | | | | | |
|-------------------------------------|---------------------------------|---|----------|---|-----------------|------------------|-------------------|
| Carbon Steel 碳素鋼 (S45C, S55C) | Alloy Steel 合金鋼 (SK, SCM) | Pre-Hardened / Hardened Steel 預硬鋼 / 硬度鋼 | | Stainless Steel 不鏽鋼 (SUS304, 316) | Cast Iron 鑄鐵 | Ti. Alloy 鈦合金 | Ni. Alloy 鎳基合金 |
| | | ~ HRC 40 | ~ HRC 55 | | | | |
| ◎ | ◎ | ◎ | ○ | ◎ | ◎ | ○ | ○ |

| Order No. 訂購編碼 | Dia (d) 刃徑 | Flute Length (L1) 刃長 | OAL (L) 全長 | Shank (D) 柄徑 | Chamfer / Radius | Flutes (F) 刃數 |
|-------------------|---------------|-------------------------|---------------|-----------------|------------------|------------------|
| ESSSVB4040000S | 4 | 10 | 50 | 6 | - | 4 |
| ESSSVB4040011S | 4 | 10 | 50 | 6 | 0.10C | 4 |
| ESSSVB4040022S | 4 | 8 | 50 | 6 | 0.20R | 4 |
| ESSSVB4040032S | 4 | 8 | 50 | 6 | 0.30R | 4 |
| ESSSVB4040052S | 4 | 8 | 50 | 6 | 0.50R | 4 |
| ESSSVB4060000S | 6 | 13 | 50 | 6 | - | 4 |
| ESSSVB4060011S | 6 | 13 | 50 | 6 | 0.15C | 4 |
| ESSSVB4060022S | 6 | 12 | 50 | 6 | 0.20R | 4 |
| ESSSVB4060052S | 6 | 12 | 50 | 6 | 0.50R | 4 |
| ESSSVB4080000S | 8 | 20 | 60 | 8 | - | 4 |
| ESSSVB4080011S | 8 | 20 | 60 | 8 | 0.15C | 4 |
| ESSSVB4080022S | 8 | 16 | 60 | 8 | 0.20R | 4 |
| ESSSVB4080052S | 8 | 16 | 60 | 8 | 0.50R | 4 |
| ESSSVB4100000S | 10 | 25 | 75 | 10 | - | 4 |
| ESSSVB4100021S | 10 | 25 | 75 | 10 | 0.20C | 4 |
| ESSSVB4100032S | 10 | 20 | 75 | 10 | 0.30R | 4 |
| ESSSVB4100052S | 10 | 20 | 75 | 10 | 0.50R | 4 |
| ESSSVB4120000S | 12 | 30 | 75 | 12 | - | 4 |
| ESSSVB4120021S | 12 | 30 | 75 | 12 | 0.20C | 4 |
| ESSSVB4120032S | 12 | 24 | 75 | 12 | 0.30R | 4 |
| ESSSVB4120052S | 12 | 24 | 75 | 12 | 0.50R | 4 |
| ESSSVB4120102S | 12 | 24 | 75 | 12 | 1.00R | 4 |
| ESSSVB4120302S | 12 | 24 | 75 | 12 | 3.00R | 4 |
| ESSSVB4160000S | 16 | 35 | 100 | 16 | - | 4 |
| ESSSVB4160031S | 16 | 35 | 100 | 16 | 0.32C | 4 |
| ESSSVB4160102S | 16 | 32 | 100 | 16 | 1.00R | 4 |
| ESSSVB4160302S | 16 | 32 | 100 | 16 | 3.00R | 4 |
| ESSSVB4200000S | 20 | 45 | 100 | 20 | - | 4 |

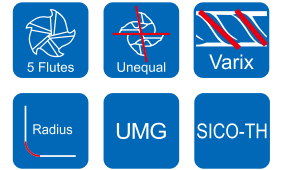
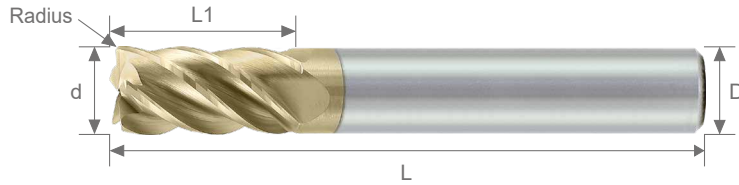
■ ESSVC Series (Helix angle : 38° ~ 41°) 產品項目



| Work Material 加工材料 | | | | | | | |
|-------------------------------------|---------------------------------|---|----------|---|-----------------|------------------|-------------------|
| Carbon Steel 碳素鋼 (S45C, S55C) | Alloy Steel 合金鋼 (SK, SCM) | Pre-Hardened / Hardened Steel 預硬鋼 / 硬度鋼 | | Stainless Steel 不鏽鋼 (SUS304, 316) | Cast Iron 鑄鐵 | Ti. Alloy 鈦合金 | Ni. Alloy 鎳基合金 |
| | | ~ HRC 40 | ~ HRC 55 | | | | |
| ◎ | ◎ | ◎ | ○ | ◎ | ◎ | ○ | ○ |

| Order No. 訂購編碼 | Dia (d) 刃徑 | Flute Length (L1) 刃長 | OAL (L) 全長 | Shank (D) 柄徑 | Chamfer / Radius | Flutes (F) 刃數 |
|-------------------|---------------|-------------------------|---------------|-----------------|------------------|------------------|
| ESSVC4040011S | 4 | 10 | 50 | 6 | 0.10C | 4 |
| ESSVC4040012S | 4 | 10 | 50 | 6 | 0.10R | 4 |
| ESSVC4060011S | 6 | 15 | 50 | 6 | 0.15C | 4 |
| ESSVC4060012S | 6 | 15 | 50 | 6 | 0.15R | 4 |
| ESSVC4080011S | 8 | 20 | 60 | 8 | 0.15C | 4 |
| ESSVC4080012S | 8 | 20 | 60 | 8 | 0.15R | 4 |
| ESSVC4100021S | 10 | 25 | 75 | 10 | 0.20C | 4 |
| ESSVC4100022S | 10 | 25 | 75 | 10 | 0.20R | 4 |
| ESSVC4120021S | 12 | 30 | 75 | 12 | 0.20C | 4 |
| ESSVC4120022S | 12 | 30 | 75 | 12 | 0.20R | 4 |
| ESSVC4120052S | 12 | 30 | 75 | 12 | 0.50R | 4 |

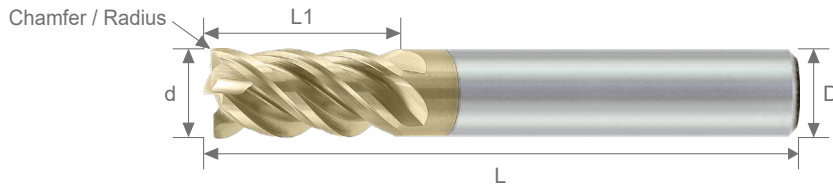
■ ESSVC Series (Helix angle : 38° ~ 42°) 產品項目



| Work Material 加工材料 | | | | | | | |
|-------------------------------------|---------------------------------|---|----------|---|-----------------|------------------|-------------------|
| Carbon Steel 碳素鋼 (S45C, S55C) | Alloy Steel 合金鋼 (SK, SCM) | Pre-Hardened / Hardened Steel 預硬鋼 / 硬度鋼 | | Stainless Steel 不鏽鋼 (SUS304, 316) | Cast Iron 鑄鐵 | Ti. Alloy 鈦合金 | Ni. Alloy 鎳基合金 |
| | | ~ HRC 40 | ~ HRC 55 | | | | |
| ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |

| Order No. 訂購編碼 | Dia (d) 刃徑 | Flute Length (L1) 刃長 | OAL (L) 全長 | Shank (D) 柄徑 | Radius | Flutes (F) 刃數 |
|-------------------|---------------|-------------------------|---------------|-----------------|--------|------------------|
| ESSVC5040022S | 4 | 8 | 50 | 6 | 0.25R | 5 |
| ESSVC5060000S | 6 | 15 | 50 | 6 | - | 5 |
| ESSVC5060042S | 6 | 12 | 50 | 6 | 0.40R | 5 |
| ESSVC5080000S | 8 | 20 | 60 | 8 | - | 5 |
| ESSVC5080012S | 8 | 16 | 60 | 8 | 0.15R | 5 |
| ESSVC5080052S | 8 | 16 | 60 | 8 | 0.50R | 5 |
| ESSVC5100000S | 10 | 25 | 75 | 10 | - | 5 |
| ESSVC5100052S | 10 | 20 | 75 | 10 | 0.50R | 5 |
| ESSVC5100102S | 10 | 20 | 75 | 10 | 1.00R | 5 |
| ESSVC5120000S | 12 | 30 | 75 | 12 | - | 5 |
| ESSVC5120052S | 12 | 24 | 75 | 12 | 0.50R | 5 |
| ESSVC5120072S | 12 | 24 | 75 | 12 | 0.75R | 5 |
| ESSVC5120102S | 12 | 24 | 75 | 12 | 1.00R | 5 |
| ESSVC5120202S | 12 | 24 | 75 | 12 | 2.00R | 5 |
| ESSVC5160072S | 16 | 32 | 100 | 16 | 0.75R | 5 |
| ESSVC5160102S | 16 | 32 | 100 | 16 | 1.00R | 5 |
| ESSVC5160202S | 16 | 32 | 100 | 16 | 2.00R | 5 |
| ESSVC5160302S | 16 | 32 | 100 | 16 | 3.00R | 5 |
| ESSVC5160402S | 16 | 32 | 100 | 16 | 4.00R | 5 |

■ ESSSVD Series (Helix angle : 43° ~ 46°) 產品項目



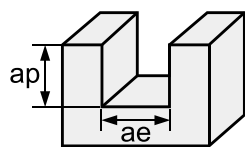
| Work Material 加工材料 | | | | | | | |
|-------------------------------------|---------------------------------|---|----------|---|-----------------|------------------|-------------------|
| Carbon Steel 碳素鋼 (S45C, S55C) | Alloy Steel 合金鋼 (SK, SCM) | Pre-Hardened / Hardened Steel 預硬鋼 / 硬度鋼 | | Stainless Steel 不鏽鋼 (SUS304, 316) | Cast Iron 鑄鐵 | Ti. Alloy 鈦合金 | Ni. Alloy 鎳基合金 |
| | | ~ HRC 40 | ~ HRC 55 | | | | |
| ◎ | ◎ | ◎ | ○ | ◎ | ◎ | ○ | ○ |

| Order No. 訂購編碼 | Dia (d) 刃徑 | Flute Length (L1) 刃長 | OAL (L) 全長 | Shank (D) 柄徑 | Chamfer / Radius | Flutes (F) 刃數 |
|-------------------|---------------|-------------------------|---------------|-----------------|------------------|------------------|
| ESSSVD4040000S | 4 | 8 | 50 | 6 | - | 4 |
| ESSSVD4040011S | 4 | 8 | 50 | 6 | 0.10C | 4 |
| ESSSVD4040032S | 4 | 8 | 50 | 6 | 0.30R | 4 |
| ESSSVD4060000S | 6 | 12 | 50 | 6 | - | 4 |
| ESSSVD4060011S | 6 | 12 | 50 | 6 | 0.15C | 4 |
| ESSSVD4060052S | 6 | 12 | 50 | 6 | 0.50R | 4 |
| ESSSVD4080000S | 8 | 16 | 60 | 8 | - | 4 |
| ESSSVD4080011S | 8 | 16 | 60 | 8 | 0.15C | 4 |
| ESSSVD4080052S | 8 | 16 | 60 | 8 | 0.50R | 4 |
| ESSSVD4100000S | 10 | 20 | 75 | 10 | - | 4 |
| ESSSVD4100021S | 10 | 20 | 75 | 10 | 0.20C | 4 |
| ESSSVD4100052S | 10 | 20 | 75 | 10 | 0.50R | 4 |
| ESSSVD4120000S | 12 | 24 | 75 | 12 | - | 4 |
| ESSSVD4120021S | 12 | 24 | 75 | 12 | 0.20C | 4 |
| ESSSVD4120052S | 12 | 24 | 75 | 12 | 0.50R | 4 |

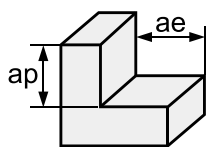
Recommended Cutting Conditions 建議切削參數

※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%

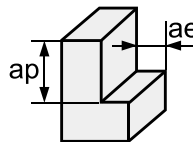
| Working Material 被加工材料 | Cutting Application 加工方式 | ae (mm) | ap (mm) | Vc (m/min) | fz (mm/z) | | | | |
|---|-----------------------------|-------------|-------------|---------------|-----------|-------|-------|-------|-------|
| | | | | | 6mm | 8mm | 10mm | 12mm | 16mm |
| Carbon Steel (S45C) 中碳鋼 | Slot Milling 溝銑 | 1×d | 0.5 ~ 1.0×d | 100 ~ 180 | 0.035 | 0.045 | 0.060 | 0.070 | 0.090 |
| | Side roughing 粗側銑 | 0.4 ~ 0.9×d | 0.7 ~ 1.0×d | 110 ~ 200 | 0.040 | 0.055 | 0.070 | 0.085 | 0.100 |
| | Side finishing 精側銑 | 0.1 ~ 0.3×d | 0.7 ~ 1.5×d | 160 ~ 280 | 0.030 | 0.040 | 0.055 | 0.065 | 0.080 |
| Carbon Steel (S50C) 中高碳鋼 | Slot Milling 溝銑 | 1×d | 0.5 ~ 1.0×d | 90 ~ 160 | 0.035 | 0.045 | 0.060 | 0.070 | 0.090 |
| | Side roughing 粗側銑 | 0.4 ~ 0.9×d | 0.7 ~ 1.0×d | 100 ~ 180 | 0.040 | 0.055 | 0.070 | 0.085 | 0.100 |
| | Side finishing 精側銑 | 0.1 ~ 0.3×d | 0.7 ~ 1.5×d | 120 ~ 220 | 0.030 | 0.040 | 0.055 | 0.065 | 0.080 |
| Tool Steel (SKD) 工具鋼 | Slot Milling 溝銑 | 1×d | 0.5 ~ 1.0×d | 80 ~ 135 | 0.030 | 0.040 | 0.055 | 0.065 | 0.080 |
| | Side roughing 粗側銑 | 0.4 ~ 0.9×d | 0.7 ~ 1.0×d | 90 ~ 160 | 0.040 | 0.050 | 0.065 | 0.080 | 0.095 |
| | Side finishing 精側銑 | 0.1 ~ 0.3×d | 0.7 ~ 1.5×d | 110 ~ 200 | 0.030 | 0.040 | 0.050 | 0.060 | 0.070 |
| Hardened Steel (HRC < 55) 熱處理高硬鋼 | Slot Milling 溝銑 | 1×d | 0.5 ~ 1.0×d | 40 ~ 70 | 0.025 | 0.030 | 0.040 | 0.045 | 0.070 |
| | Side roughing 粗側銑 | 0.4 ~ 0.9×d | 0.7 ~ 1.0×d | 65 ~ 110 | 0.025 | 0.035 | 0.045 | 0.050 | 0.080 |
| | Side finishing 精側銑 | 0.1 ~ 0.3×d | 0.7 ~ 1.5×d | 80 ~ 150 | 0.030 | 0.040 | 0.050 | 0.060 | 0.090 |
| Stainless Steel (SUS304, SUS316) 不鏽鋼 | Slot Milling 溝銑 | 1×d | 0.5 ~ 1.0×d | 60 ~ 80 | 0.025 | 0.035 | 0.045 | 0.050 | 0.065 |
| | Side roughing 粗側銑 | 0.4 ~ 0.9×d | 0.7 ~ 1.0×d | 80 ~ 120 | 0.030 | 0.040 | 0.055 | 0.065 | 0.080 |
| | Side finishing 精側銑 | 0.1 ~ 0.3×d | 0.7 ~ 1.5×d | 100 ~ 140 | 0.030 | 0.040 | 0.050 | 0.060 | 0.070 |
| Superalloy, Inconel 高溫合金、鎳基合金 | Slot Milling 溝銑 | 1×d | 0.5 ~ 1.0×d | 20 ~ 30 | 0.015 | 0.020 | 0.025 | 0.030 | 0.040 |
| | Side roughing 粗側銑 | 0.4 ~ 0.9×d | 0.7 ~ 1.0×d | 25 ~ 35 | 0.020 | 0.030 | 0.035 | 0.040 | 0.055 |
| | Side finishing 精側銑 | 0.1 ~ 0.3×d | 0.7 ~ 1.5×d | 30 ~ 45 | 0.020 | 0.030 | 0.035 | 0.040 | 0.055 |
| Titanium 鈦合金 | Slot Milling 溝銑 | 1×d | 0.5 ~ 1.0×d | 40 ~ 60 | 0.025 | 0.035 | 0.045 | 0.050 | 0.065 |
| | Side roughing 粗側銑 | 0.4 ~ 0.9×d | 0.7 ~ 1.0×d | 60 ~ 90 | 0.030 | 0.040 | 0.055 | 0.065 | 0.080 |
| | Side finishing 精側銑 | 0.1 ~ 0.3×d | 0.7 ~ 1.5×d | 90 ~ 130 | 0.030 | 0.040 | 0.055 | 0.065 | 0.080 |



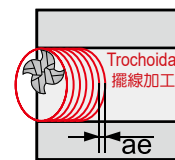
Slot Milling
溝銑



Side roughing
粗側銑



Side finishing
精側銑



Trochoidal
擺線加工

WINSTAR CUTTING TECHNOLOGIES CORP.

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