

M500 Series for Stainless, Titanium, Inconel & Mold Steel



- Ultra grain carbide rods with better abrasion resistance.
- ARCO coating shows good performance in coolant machining.
- Anti-vibrations capabilities at high speeds and high remove rate.
- Varix Technology with different helix angles(35°and 38°) improves cutting performance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.

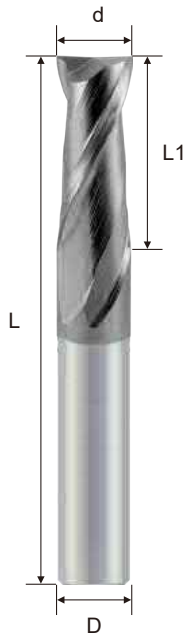
Appearance	Series	Code No.	Ø Range	Num. of Teeth	Helix Angle	Coating	Working Materials										Page
							P	M	K	N	S	H					

M500 Series for Stainless, Titanium & Inconel

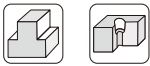
	Square Type - 2F 鎢鋼平銑刀 - 標準型 - 2 刃	ESSFA2, ESSSA2	Ø3~Ø16			ARCO	✓	✓					✓	✓	A126
	Square Type - 4F 鎢鋼平銑刀 - 標準型 - 4 刃	ESSFA4, ESSSA4	Ø3~Ø16			ARCO	✓	✓					✓	✓	A127
	High Helix Square U Type - 4F 鎢鋼平銑刀 - 高導高能效 U 型 - 4 刃	ESSFB4, ESSSB4	Ø4~Ø16			ARCO	✓	✓					✓	✓	A128
	Varix & Anti-Vibration Square U Type - 4F 鎢鋼平銑刀 - 抗震變導高能效 U 型 - 4 刃	ESSFU4, ESSSU4	Ø4~Ø16			ARCO	✓	✓					✓	✓	A129
	High Helix & Anti-Vibration Square U Type - 4F 鎢鋼平銑刀 - 高導抗震高能效 U 型 - 4 刃	ESSSM4	Ø8~Ø16			ARCO	✓	✓					✓	✓	A130
	Anti-Vibration Square Type - 4F 鎢鋼平銑刀 - 抗震不等 SD 型 - 4 刃	ESSSD4	Ø5~Ø16			ARCO	✓	✓					✓	✓	A131
	Varix & Anti-Vibration Square Type - 4F 鎢鋼平銑刀 - 抗震變導 SV 型 - 4 刃	ESSSV4	Ø4~Ø16			ARCO	✓	✓					✓	✓	A132
	Wave Edge Square Type - 3F 鎢鋼平銑刀 - 波浪型 - 3 刃	ESSSW3	Ø6~Ø20			ARCO	✓	✓					✓	✓	A133
	Wave Edge Square Type - 4F 鎢鋼平銑刀 - 波浪型 - 4 刃	ESSSW4	Ø6~Ø20			ARCO	✓	✓					✓	✓	A134
	Ball Nose Type - 2F 鎢鋼球型銑刀 - 標準型 - 2 刃	ESBFA2, ESBSA2	1R~8R			ARCO	✓	✓					✓	✓	A135
	Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 標準型 - 4 刃	ESCSA4	Ø3~Ø12			ARCO	✓	✓					✓	✓	A136
	High Helix & Anti-Vibration Corner Radius U Type - 4F 鎢鋼圓鼻銑刀 - 高導抗震高能效 U 型 - 4 刃	ESCSM4	Ø8~Ø16			ARCO	✓	✓					✓	✓	A137
	Varix & Anti-Vibration Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 抗震變導 SV 型 - 4 刃	ESCSV4	Ø4~Ø16			ARCO	✓	✓					✓	✓	A138

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.

ESSFA2 ESSSA2



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSFA203000A	3	8	50	4	2
ESSFA204000A	4	10	50	4	2
ESSSA204000A	4	10	50	6	2
ESSSA205000A	5	13	50	6	2
ESSSA206000A	6	15	50	6	2
ESSSA208000A	8	20	60	8	2
ESSSA210000A	10	25	75	10	2
ESSSA212000A	12	30	75	12	2
ESSSA214000A	14	30	75	14	2
ESSSA216000A	16	35	100	16	2



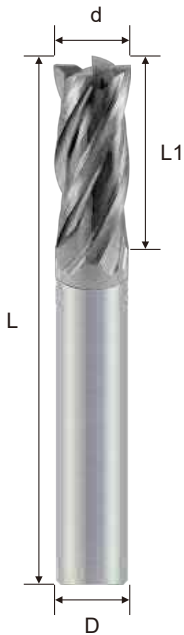
d	Tolerance
∅ ≤ 12	0 ~ -0.02
∅ > 12	0 ~ -0.03

Cutting conditions (建議切削參數表) : Table 055

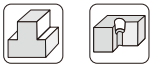
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- High precise tolerance EndMills.
- UMG carbide grade is suitable for cutting difficult materials.

Solid Carbide Endmills

ESSFA4 ESSSA4



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSFA403000A	3	8	50	4	4
ESSFA404000A	4	10	50	4	4
ESSSA404000A	4	10	50	6	4
ESSSA405000A	5	13	50	6	4
ESSSA406000A	6	15	50	6	4
ESSSA408000A	8	20	60	8	4
ESSSA410000A	10	25	75	10	4
ESSSA412000A	12	30	75	12	4
ESSSA414000A	14	30	75	14	4
ESSSA416000A	16	35	100	16	4

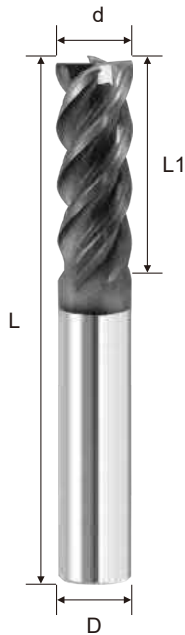


Cutting conditions (建議切削參數表) : Table 056

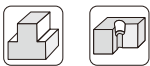
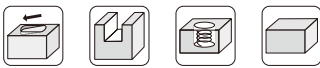
d	Tolerance
∅ ≤ 12	0 ~ -0.02
∅ > 12	0 ~ -0.03

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- U-flute design with high chips volume space and easy to remove chips.
- UMG carbide grade is suitable for cutting difficult materials.

ESSFB4 ESSSB4



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSFB404000A	4	10	50	4	4
ESSSB404000A	4	10	50	6	4
ESSSB405000A	5	13	50	6	4
ESSSB406000A	6	15	50	6	4
ESSSB408000A	8	20	60	8	4
ESSSB410000A	10	25	75	10	4
ESSSB412000A	12	30	75	12	4
ESSSB414000A	14	30	75	14	4
ESSSB416000A	16	35	100	16	4

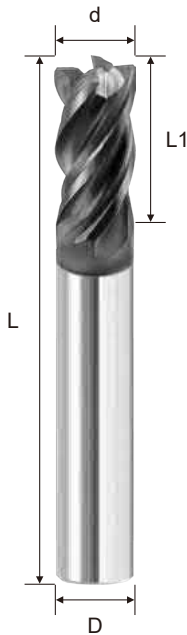


d	Tolerance
∅ ≤ 12	0 ~ -0.02
∅ > 12	0 ~ -0.03

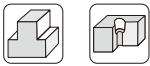
M500 - Varix & Anti-Vibration Square U Type - 4F 鎢鋼平銑刀 - 抗震變導高效能U型 - 4刃

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities at high speeds.
- Varix Technology with different helix angles (35 ° and 38 °) improves cutting performance.
Provides the highest cutting action for aerospace applications.

ESSFU4 ESSSU4



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSFU404000A	4	10	50	4	4
ESSSU404000A	4	10	50	6	4
ESSSU405000A	5	13	50	6	4
ESSSU406000A	6	15	50	6	4
ESSSU408000A	8	20	60	8	4
ESSSU410000A	10	25	75	10	4
ESSSU412000A	12	30	75	12	4
ESSSU414000A	14	30	75	14	4
ESSSU416000A	16	35	100	16	4



d	Tolerance
∅ ≤ 12	0 ~ -0.02
∅ > 12	0 ~ -0.03

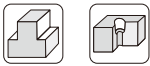
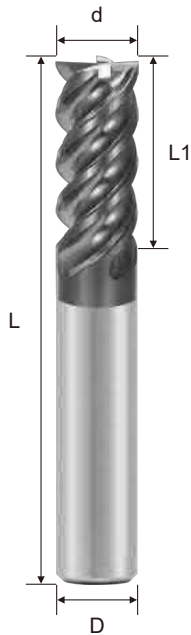
Solid Carbide Endmills

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- U-flute design with high chips volume space and easy to remove chips.
- UMG carbide grade is suitable for cutting difficult materials.

ESSSM4



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSM408000A	8	20	60	8	4
ESSSM410000A	10	30	75	10	4
ESSSM412000A	12	30	75	12	4
ESSSM416000A	16	32	100	16	4

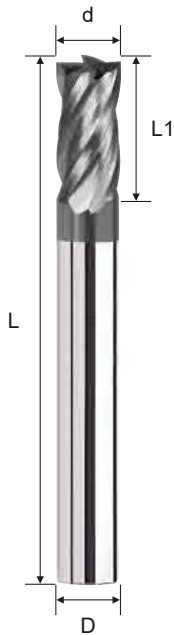


d	Tolerance
$\varnothing \leq 12$	0 ~ -0.02
$\varnothing > 12$	0 ~ -0.03

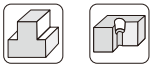
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.

ESSSD4

P	M	K	N	S	H
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Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSD405000A	5	13	50	6	4
ESSSD406000A	6	13	50	6	4
ESSSD408000A	8	16	60	8	4
ESSSD410000A	10	20	75	10	4
ESSSD412000A	12	24	75	12	4
ESSSD416000A	16	30	100	16	4



Cutting conditions (建議切削參數表) : Table 057

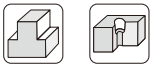
d	Tolerance
∅ ≤ 12	0 ~ -0.02
∅ > 12	0 ~ -0.03

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities at high speeds.
- Varix Technology with different helix angles (35 ° and 38 °) improves cutting performance.
- Provides the highest cutting action for aerospace applications.

ESSSV4



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSV404000A	4	10	50	6	4
ESSSV405000A	5	13	50	6	4
ESSSV406000A	6	13	50	6	4
ESSSV408000A	8	16	60	8	4
ESSSV410000A	10	20	75	10	4
ESSSV412000A	12	24	75	12	4
ESSSV416000A	16	32	100	16	4



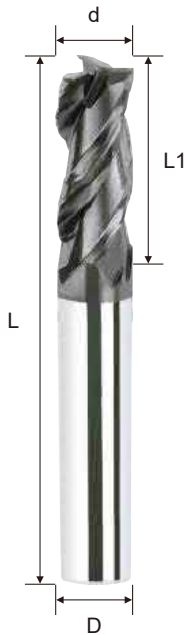
d	Tolerance
$\varnothing \leq 12$	0 ~ -0.02
$\varnothing > 12$	0 ~ -0.03

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.
- Wave type increases the performance.

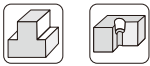
Solid Carbide Endmills

ESSSW3

P M K N S H



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSW306000A	6	15	50	6	3
ESSSW308000A	8	20	60	8	3
ESSSW310000A	10	25	75	10	3
ESSSW312000A	12	30	75	12	3
ESSSW316000A	16	40	100	16	3
ESSSW320000A	20	45	100	20	3



Cutting conditions (建議切削參數表) : Table 058

d	Tolerance
∅ ≤ 12	0 ~ -0.02
∅ > 12	0 ~ -0.03

M500 - Wave Edge Square Type - 4F

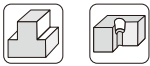
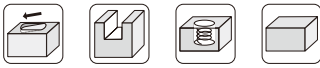
鎢鋼平銑刀 - 波浪型 - 4 刃

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.
- Wave type increases the performance.

ESSSW4



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSW406000A	6	15	50	6	4
ESSSW408000A	8	20	60	8	4
ESSSW410000A	10	25	75	10	4
ESSSW412000A	12	30	75	12	4
ESSSW416000A	16	40	100	16	4
ESSSW420000A	20	45	100	20	4

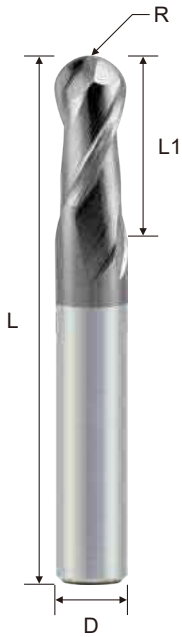


Cutting conditions (建議切削參數表) : Table 058

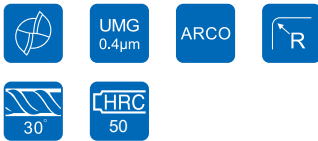
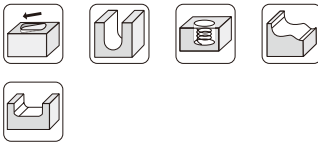
d	Tolerance
$\varnothing \leq 12$	0 ~ -0.02
$\varnothing > 12$	0 ~ -0.03

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at hi speeds, suitable for high performance profile milling.
- New tool geometry increases wear resistance and cutting force is decreased
- UMG carbide grade is suitable for cutting difficult materials.

ESBFA2 ESBSA2



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESBFA202000A	1.0R	2	4	50	4	2
ESBFA203000A	1.5R	3	6	50	4	2
ESBFA204000A	2.0R	4	8	50	4	2
ESBSA204000A	2.0R	4	8	50	6	2
ESBSA205000A	2.5R	5	10	50	6	2
ESBSA206000A	3.0R	6	12	50	6	2
ESBSA208000A	4.0R	8	16	60	8	2
ESBSA210000A	5.0R	10	20	75	10	2
ESBSA212000A	6.0R	12	24	75	12	2
ESBSA214000A	7.0R	14	28	75	14	2
ESBSA216000A	8.0R	16	32	100	16	2



d	R Tolerance
∅ ≤ 12	± 0.01
∅ > 12	± 0.015

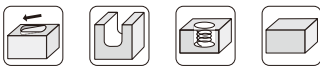
Cutting conditions (建議切削參數表) : Table 059

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- Corner geometry and stronger design makes it suitable for cutting difficult material.

ESCSA4



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESCSA403003A	3	0.3R	6	50	6	4
ESCSA403005A	3	0.5R	6	50	6	4
ESCSA403010A	3	1.0R	6	50	6	4
ESCSA404003A	4	0.3R	8	50	6	4
ESCSA404005A	4	0.5R	8	50	6	4
ESCSA404010A	4	1.0R	8	50	6	4
ESCSA405003A	5	0.3R	10	50	6	4
ESCSA405005A	5	0.5R	10	50	6	4
ESCSA406003A	6	0.3R	12	50	6	4
ESCSA406005A	6	0.5R	12	50	6	4
ESCSA406010A	6	1.0R	12	50	6	4
ESCSA408005A	8	0.5R	16	60	8	4
ESCSA408010A	8	1.0R	16	60	8	4
ESCSA408015A	8	1.5R	16	60	8	4
ESCSA410005A	10	0.5R	20	75	10	4
ESCSA410010A	10	1.0R	20	75	10	4
ESCSA410015A	10	1.5R	20	75	10	4
ESCSA410020A	10	2.0R	20	75	10	4
ESCSA412005A	12	0.5R	24	75	12	4
ESCSA412010A	12	1.0R	24	75	12	4
ESCSA412015A	12	1.5R	24	75	12	4
ESCSA412020A	12	2.0R	24	75	12	4
ESCSA412030A	12	3.0R	24	75	12	4



Cutting conditions (建議切削參數表) : Table 060

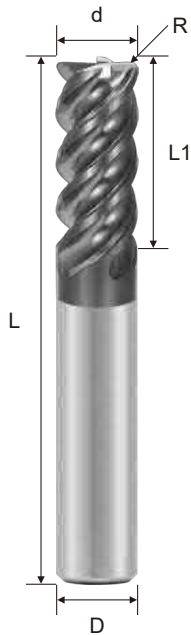
d	Tolerance
∅ < 3	0 ~ -0.03
3 ≤ ∅ ≤ 10	0 ~ -0.04
∅ > 10	0 ~ -0.05
R	± 0.015

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- Corner geometry and stronger design makes it suitable for cutting difficult material.
- U-flute design with high chips volume space and easy to remove chips.

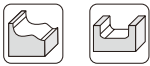
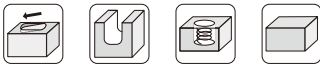
Solid Carbide Endmills

ESCSM4

P
M
K
N
S
H



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESCSM408005A	8	0.5R	16	60	8	4
ESCSM410010A	10	1.0R	20	75	10	4
ESCSM412010A	12	1.0R	24	75	12	4
ESCSM416015A	16	1.5R	32	100	16	4



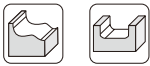
d	Tolerance
$\varnothing < 3$	0 ~ -0.03
$3 \leq \varnothing \leq 10$	0 ~ -0.04
$\varnothing > 10$	0 ~ -0.05
R	± 0.015

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities at high speeds.
- Varix Technology to improve cutting performance.

ESCSV4



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESCSV404003A	4	0.3R	8	50	4	4
ESCSV405003A	5	0.3R	10	50	6	4
ESCSV406005A	6	0.5R	12	50	6	4
ESCSV408005A	8	0.5R	16	60	8	4
ESCSV410005A	10	0.5R	20	75	10	4
ESCSV412005A	12	0.5R	24	75	12	4
ESCSV412010A	12	1.0R	24	75	12	4
ESCSV416010A	16	1.0R	32	100	16	4



d	Tolerance
∅ < 3	0 ~ -0.03
3 ≤ ∅ ≤ 10	0 ~ -0.04
∅ > 10	0 ~ -0.05
R	± 0.015

Cutting conditions (建議切削參數表) : Table 061