

鎢鋼成型銑刀 系列

Carbide Special End Mills Series

泛用鋼材 $\leq 50\text{HRC}$

不銹鋼

鋁合金 / 銅合金

鑄鐵

For general steel ($\leq 50\text{HRC}$), stainless steel,
cast iron and aluminum/copper alloy machining.



產品選擇表 Product Selection Table

刀型 Type	刃數 Flute	型號 Model Number	產品類別 Product Classification	形狀 Appearance	尺寸 Size	頁數 Page
鎢鋼成型銑刀系列 Carbide Special End Mills						
T型刀 T-Slot Keyseat End Mills	四/六刃 4/6 Flutes	CEK000000000A			Ø4 ~ Ø12	166
	10/12/16刃 10/12/16 Flutes	AEK000000000			Ø16 ~ Ø30	167
外圓槽銑刀 Convex End Mills	四/六刃 4/6 Flutes	CEC000000000A			Ø4 ~ Ø12	168
	10/12/16刃 10/12/16 Flutes	AEC000000000			Ø16 ~ Ø30	169
鳩尾槽銑刀 Dovetail End Mills	四/六刃 4/6 Flutes	CECS0000000000A	45°		Ø3 ~ Ø12	170
		CECS0000000000A	60°		Ø3 ~ Ø12	170
等角鳩尾槽 銑刀 V-Type Dovetail End Mills	四/六刃 4/6 Flutes	CECSW000000000A	60°		Ø6 ~ Ø12	171
		CECSW000000000A	90°		Ø6 ~ Ø12	171
倒角兼用銑刀 V-Pointed End Mills	二刃 2 Flutes	CEC20000000A	90°		Ø3 ~ Ø20	172
		CEC20000000A	120°		Ø3 ~ Ø20	172
扁形倒角銑刀 Chamfering End Mills	二刃 2 Flutes	CEFC00000	標準型-Standard 60 / 90 / 120°		Ø3 ~ Ø16	173
多功能 倒角銑刀 Multifunctional Chamfer End Mills (Chamfering- Spotting- Engraving)	單刃 1 Flute	CEFC100000	標準型-Standard 60 / 90°		Ø3 ~ Ø12	174
		CEFCL100000	長柄型-Long Shank 60 / 90°		Ø3 ~ Ø12	174
	三刃 3 Flutes	MEFCD300000A	標準型-Standard 60 / 90°		Ø3 ~ Ø12	175
		MEFCDL300000A	長柄型-Long Shank 60 / 90°		Ø3 ~ Ø12	175
		MEFC300000A	標準型-Standard 60 / 90°		Ø3 ~ Ø12	176
		MEFCL300000A	長柄型-Long Shank 60 / 90°		Ø3 ~ Ø12	176
雕刻銑刀 Engraving End Mills	單刃 1 Flute	CEU(M)000000	標準型-Standard 30 / 60 / 90°		Ø0.1 ~ Ø1.5	177
內R角銑刀 Inner Radius End Mills	二刃 2 Flutes	CEIR200000000			0.5R ~ 6.0R	178

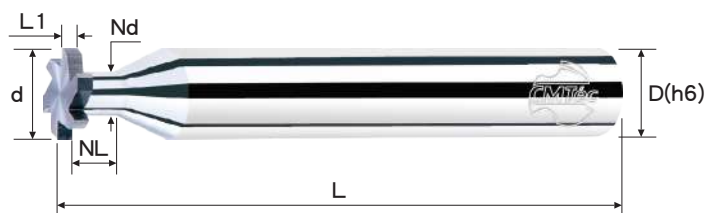
碳素鋼 Carbon Steels (<20HRC)	合金鋼 Alloy Steels (20~30HRC)	合金鋼 Alloy Steels (30~45HRC)	調質鋼 Hardened Steels (45~55HRC)	調質鋼 Hardened Steels (55~65HRC)	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	銅 Copper	非金屬 Non-metal	高溫合金 High-Temp Alloys	冷卻方式推薦 Suitable Coolant	加工型態 Type of Finishing			
P	P	P	H	H	M	K	N	N	X	S		A	B	C	D
○	○	○	—	—	○	○	○	○	—	—	濕式(Wet)				
○	○	○	—	—	○	○	○	○	—	—	濕式(Wet)				
○	○	○	—	—	○	○	○	○	—	—	濕式(Wet)				
○	○	○	—	—	○	○	○	○	—	—	濕式(Wet)				
○	○	○	—	—	○	○	○	○	—	—	濕式(Wet)				
○	○	○	—	—	○	○	○	○	—	—	濕式(Wet)				
○	○	○	—	—	○	○	○	○	—	—	濕式(Wet)				
○	○	○	—	—	○	○	○	○	—	—	濕式(Wet)				
○	○	○	—	—	○	○	—	—	—	—	乾式 / 濕式 (Dry / Wet)				
○	○	○	—	—	○	○	—	—	—	—	乾式 / 濕式 (Dry / Wet)				
○	○	—	—	—	○	○	○	○	—	—	濕式(Wet)				
—	—	—	—	—	—	—	○	○	○	—	濕式(Wet)				
—	—	—	—	—	—	—	○	○	○	—	濕式(Wet)				
○	○	○	○	○	○	○	—	—	—	—	乾式 / 濕式 (Dry / Wet)				
○	○	○	○	○	○	○	—	—	—	—	乾式 / 濕式 (Dry / Wet)				
○	○	○	○	○	○	○	—	—	—	—	乾式 / 濕式 (Dry / Wet)				
○	○	○	○	○	○	○	—	—	—	—	乾式 / 濕式 (Dry / Wet)				
○	—	—	—	—	—	—	○	○	○	○	濕式(Wet)				
○	○	○	—	—	○	○	—	—	—	—	乾式 / 濕式 (Dry / Wet)				

加工型態 Type of Finishing → A=超精銑 Bright Finishing B=精銑 Finishing C=中銑 Semi Finishing D=粗銑 Roughing

鎢鋼T型刀- 直刃

CARBIDE END MILLS- T-Slot Keyseat- Flat Flute

· CEK000000000A



刃長	公差 Tolerance
L1	±0.02



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※ 螺旋刃依需求生產。
Helix flute is on request.

刃徑 d	刃長 L1	頸徑 Nd	頸長 NL	全長 L	柄徑 D	刃數 F	白刀訂購編號 Uncoated Order No.	鍍膜訂購編號 Coated Order No.
4.0	0.5	2.5	3.5	50	4	4	CEK040005004	CEK040005004A
4.0	0.6	2.5	3.5	50	4	4	CEK040006004	CEK040006004A
4.0	0.7	2.5	3.5	50	4	4	CEK040007004	CEK040007004A
4.0	0.8	2.5	3.5	50	4	4	CEK040008004	CEK040008004A
4.0	0.9	2.5	3.5	50	4	4	CEK040009004	CEK040009004A
4.0	1.0	2.5	3.5	50	4	4	CEK040010004	CEK040010004A
4.0	1.5	2.5	3.5	50	4	4	CEK040015004	CEK040015004A
4.0	2.0	2.5	3.5	50	4	4	CEK040020004	CEK040020004A
5.0	0.5	2.5	4.0	50	6	4	CEK050005004	CEK050005004A
5.0	0.6	2.5	4.0	50	6	4	CEK050006004	CEK050006004A
5.0	0.7	2.5	4.0	50	6	4	CEK050007004	CEK050007004A
5.0	0.8	2.5	4.0	50	6	4	CEK050008004	CEK050008004A
5.0	0.9	2.5	4.0	50	6	4	CEK050009004	CEK050009004A
5.0	1.0	2.5	4.0	50	6	4	CEK050010004	CEK050010004A
5.0	1.5	2.5	4.0	50	6	4	CEK050015004	CEK050015004A
5.0	2.0	2.5	4.0	50	6	4	CEK050020004	CEK050020004A
6.0	0.5	3.0	4.0	50	6	6	CEK060005006	CEK060005006A
6.0	0.6	3.0	4.0	50	6	6	CEK060006006	CEK060006006A
6.0	0.7	3.0	4.0	50	6	6	CEK060007006	CEK060007006A
6.0	0.8	3.0	4.0	50	6	6	CEK060008006	CEK060008006A
6.0	0.9	3.0	4.0	50	6	6	CEK060009006	CEK060009006A
6.0	1.0	3.0	4.0	50	6	6	CEK060010006	CEK060010006A
6.0	1.5	3.0	4.0	50	6	6	CEK060015006	CEK060015006A
6.0	2.0	3.0	4.0	50	6	6	CEK060020006	CEK060020006A
8.0	1.0	4.0	4.0	60	8	6	CEK080010006	CEK080010006A
8.0	1.5	4.0	4.0	60	8	6	CEK080015006	CEK080015006A
8.0	2.0	4.0	4.0	60	8	6	CEK080020006	CEK080020006A
10.0	1.0	5.0	6.0	75	10	6	CEK100010006	CEK100010006A
10.0	1.5	5.0	6.0	75	10	6	CEK100015006	CEK100015006A
10.0	2.0	5.0	6.0	75	10	6	CEK100020006	CEK100020006A
12.0	1.0	6.0	7.0	75	12	6	CEK120010006	CEK120010006A
12.0	1.5	6.0	7.0	75	12	6	CEK120015006	CEK120015006A
12.0	2.0	6.0	7.0	75	12	6	CEK120020006	CEK120020006A

→ 切削條件表
Cutting Condition P.557

→ 技術資料
Technical Data P.622

BRAZED- CARBIDE END MILLS- T-Slot Keyseat- Flat Flute

Technical drawing of a screwdriver bit. The drawing shows a side view of the bit with the following dimensions labeled:

- $L1$: Length of the tip section.
- d : Diameter of the tip section.
- Nd : Diameter of the neck section.
- NL : Length of the neck section.
- L : Total length of the bit.
- $D(h6)$: Diameter of the shaft section.



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※ 刃徑(d)≥16mm，柄部為焊接設計。
Dia.(d)≥16mm is brazed shank.

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Carbide Special End Mills

鎢鋼成型銑刀系列

→ 技術資料
Technical Data

CARBIDE END MILLS- Convex

Technical drawing of a tapered shaft. The drawing shows a shaft with a tapered section on the left and a cylindrical section on the right. The dimensions are labeled as follows: $L1$ (length of the tapered section), Nd (height of the tapered section), d (diameter of the tapered section), R (radius of the tapered section), NL (length of the cylindrical section), L (total length), and $D(h6)$ (diameter of the cylindrical section).



R角	公差 Tolerance
R	±0.02



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→ 切削條件表 P.557
Cutting Condition

→ 技術資料
Technical Data

BRAZED- CARBIDE END MILLS- Convex

Technical drawing of a 3-flute end mill. The drawing shows the tool from a perspective view. Dimensions are indicated as follows: $L1$ is the length of the flutes; Nd is the distance from the tip to the start of the flutes; d is the cutting diameter; R is the corner radius at the tip; NL is the length of the tool body; L is the total length of the tool; and $D(h6)$ is the diameter of the tool holder.



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CARBIDE END MILLS- Dovetail- Flat Flute

Diagram illustrating the geometry of a tapered pin. The pin has a conical tip with a taper angle δ° . The diameter at the base of the cone is d . The length of the conical part is $L1$. The length of the cylindrical part is NL . The total length of the pin is L . The diameter of the cylindrical part is $D(h6)$. A force Nd is applied at the base of the pin.



角度(單邊)	公差 Tolerance
δ°	$\pm 1^\circ$



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※ 螺旋刃依需求生產。
Helix Flute is on request.

➡ 切削條件表 P.557
Cutting Condition

➡ 技術資料 P.622
Technical Data

CARBIDE END MILLS- V-Type Dovetail- Flat Flute

Technical drawing of a ballpoint pen nib. The drawing shows a side view of the nib with various dimensions and labels. The tip of the nib is labeled δ° . The diameter of the tip is labeled d . The length of the tip section is labeled $L1$. The length of the main body section is labeled NL . The total length of the nib is labeled L . The diameter of the main body is labeled $D(h6)$. The nib is labeled Nd . The nib is shown with a cross-section view.



角度	公差 Tolerance
δ°	$\pm 1^\circ$



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[illegible]

→ 切削條件表 P.557
Cutting Condition

→ 技術資料
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CARBIDE END MILLS- V-Pointed- 2F

Technical drawing of a double-flute drill bit. The drawing shows the bit's geometry with the following dimensions and labels:

- d : Diameter of the drill bit.
- ϵ° : Angle of the drill bit tip.
- L_1 : Length of the cutting edge.
- L : Total length of the drill bit.
- $D(h6)$: Diameter of the drill bit shank.



Cutting Table

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 鑽孔加工 Drilling	 側銑加工 Side Milling	 倒角(外)加工 Chamfering	 倒角(內)加工 Countersinking	 定點加工 Spotting	 V槽加工 V-Grooving
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→ 技術資料
Technical Data

鎢鋼扁形倒角銑刀- 2刃

CARBIDE CHAMFERING END MILLS- Flat- 2F

· CEFC00000



角度	公差 Tolerance
ε°	$\pm 1^\circ$

代碼	角度
C0	120

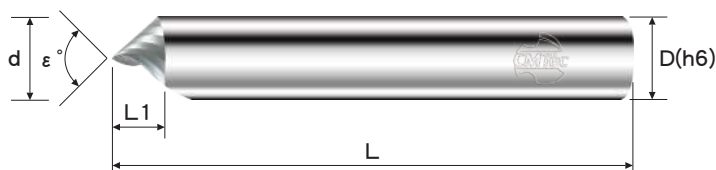


頂角 ε°	刃徑 d	刃長 L1	全長 L	柄徑 D	白刀訂購編號 Uncoated Order No.
60°	3	2.59	50	3	CEFC03060
60°	4	3.46	50	4	CEFC04060
60°	6	5.19	50	6	CEFC06060
60°	8	6.92	50	8	CEFC08060
60°	10	8.66	75	10	CEFC10060
60°	12	10.39	75	12	CEFC12060
60°	16	13.85	75	16	CEFC16060
60°	3	2.59	75	3	CEFCL03060
60°	4	3.46	75	4	CEFCL04060
60°	6	5.19	75	6	CEFCL06060
60°	8	6.92	75	8	CEFCL08060
60°	10	8.66	100	10	CEFCL10060
60°	12	10.39	100	12	CEFCL12060
90°	3	1.50	50	3	CEFC03090
90°	4	2.00	50	4	CEFC04090
90°	6	3.00	50	6	CEFC06090
90°	8	4.00	50	8	CEFC08090
90°	10	5.00	75	10	CEFC10090
90°	12	6.00	75	12	CEFC12090
90°	16	8.00	75	16	CEFC16090
90°	3	1.50	75	3	CEFCL03090
90°	4	2.00	75	4	CEFCL04090
90°	6	3.00	75	6	CEFCL06090
90°	8	4.00	75	8	CEFCL08090
90°	10	5.00	100	10	CEFCL10090
90°	12	6.00	100	12	CEFCL12090
120°	3	0.86	50	3	CEFC030C0
120°	4	1.15	50	4	CEFC040C0
120°	6	1.73	50	6	CEFC060C0
120°	8	2.30	50	8	CEFC080C0
120°	10	2.88	75	10	CEFC100C0
120°	12	3.46	75	12	CEFC120C0
120°	16	4.61	75	16	CEFC160C0

鎢鋼鋁用倒角銑刀- 標準 & 長柄型- 1 刃

CARBIDE CHAMFERING END MILLS FOR ALUMINUM- Standard & Long Shank- 1F

· CEFC100000
· CEFCL100000



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※ 切削刃中心小平面 ≤ 刃徑的10%。
The cutting edge center flat is
≤ 10% of the cutting diameter.



切 削 實 例
CUT EXAMPLES

角度	Tolerance(公差)
ε °	± 1 °

頂角 ε °	刃徑 d	刃長 L1	全長 L	柄徑 D	白刀訂購編號 Uncoated Order No.
60°	3	2.59	50	3	CEFC103060
60°	4	3.46	50	4	CEFC104060
60°	6	5.19	50	6	CEFC106060
60°	8	6.92	60	8	CEFC108060
60°	10	8.66	60	10	CEFC110060
60°	12	10.39	60	12	CEFC112060
60°	3	2.59	75	3	CEFCL103060
60°	4	3.46	75	4	CEFCL104060
60°	6	5.19	75	6	CEFCL106060
60°	8	6.92	100	8	CEFCL108060
60°	10	8.66	100	10	CEFCL110060
60°	12	10.39	100	12	CEFCL112060
90°	3	1.50	50	3	CEFC103090
90°	4	2.00	50	4	CEFC104090
90°	6	3.00	50	6	CEFC106090
90°	8	4.00	60	8	CEFC108090
90°	10	5.00	60	10	CEFC110090
90°	12	6.00	60	12	CEFC112090
90°	3	1.50	75	3	CEFCL103090
90°	4	2.00	75	4	CEFCL104090
90°	6	3.00	75	6	CEFCL106090
90°	8	4.00	100	8	CEFCL108090
90°	10	5.00	100	10	CEFCL110090
90°	12	6.00	100	12	CEFCL112090

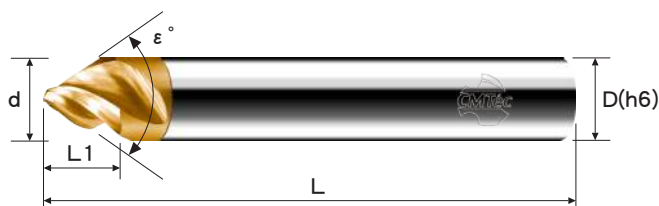


→ 切削條件表
Cutting Condition P.556

→ 技術資料
Technical Data P.622

CARBIDE CHAMFERING END MILLS FOR HIGH HARDNESS- Standard & Long Shank- 3F

- MEFCDL300000A



角度	Tolerance(公差)
ε°	$\pm 1^\circ$

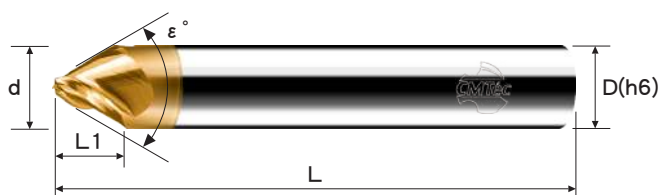
 倒角(外)加工 Chamfering	 倒角(内)加工 Countersinking	 定點加工 Spotting	 V槽加工 V-Grooving	 雕刻加工 Engraving
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→ 技術資料 P.622
Technical Data

鎢鋼成型銑刀系列

CARBIDE CHAMFERING END MILLS- Standard & Long Shank- 3F

▪ **MEFCL300000A**



※ 產品特色：可由編程精準控制倒角尺寸。
Programming control chamfer dimension.



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 倒角(外)加工 Chamfering	 倒角(内)加工 Countersinking	 定點加工 Spotting	 V槽加工 V-Grooving	 雕刻加工 Engraving
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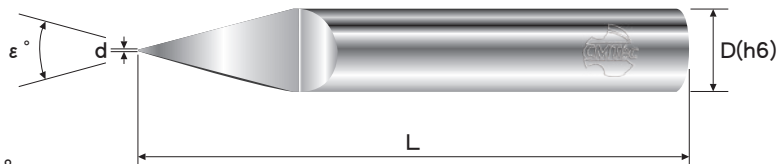
→ 技術資料
Technical Data

鎢鋼雕刻刀- 標準型- 1 刃

CARBIDE ENGRAVING END MILLS- Standard- 1F

· CEUM000000

· CEU000000



加工材質：鋼材、鋁合金、黃銅、塑膠、木材。

For steel, aluminum, brass, plastic, wood.

※ 其他刀徑公差規格依需求生產。

Special tolerance(ϕ) is on request.

超精銑 Bright Finishing	—
精銑 Finishing	◎
中銑 Semi Finishing	○
粗銑 Roughing	—



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切 削 實 例
CUT EXAMPLES

頂角 ϵ°	刃徑 d	全長 L	柄徑 D	刃數 F	白刀訂購編號 Uncoated Order No.
30°	0.10	50	4	1	CEUM001030
30°	0.25	50	4	1	CEUM002530
30°	0.50	50	4	1	CEUM005030
30°	0.75	50	4	1	CEUM007530
30°	0.10	50	6	1	CEU001030
30°	0.25	50	6	1	CEU002530
30°	0.50	50	6	1	CEU005030
30°	0.75	50	6	1	CEU007530
60°	0.10	50	4	1	CEUM001060
60°	0.25	50	4	1	CEUM002560
60°	0.50	50	4	1	CEUM005060
60°	0.75	50	4	1	CEUM007560
60°	1.50	50	4	1	CEUM015060
60°	0.10	50	6	1	CEU001060
60°	0.25	50	6	1	CEU002560
60°	0.50	50	6	1	CEU005060
60°	0.75	50	6	1	CEU007560
60°	1.50	50	6	1	CEU015060
90°	0.10	50	4	1	CEUM001090
90°	0.25	50	4	1	CEUM002590
90°	0.50	50	4	1	CEUM005090
90°	0.75	50	4	1	CEUM007590
90°	1.50	50	4	1	CEUM015090
90°	0.10	50	6	1	CEU001090
90°	0.25	50	6	1	CEU002590
90°	0.50	50	6	1	CEU005090
90°	0.75	50	6	1	CEU007590
90°	1.50	50	6	1	CEU015090

→ 切削條件表 P.555
Cutting Condition

→ 技術資料 P.622
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SPECIAL

Carbide Special End Mills

鎢鋼成型銑刀系列

CARBIDE END MILLS- Inner Radius- 2F



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Technical Data