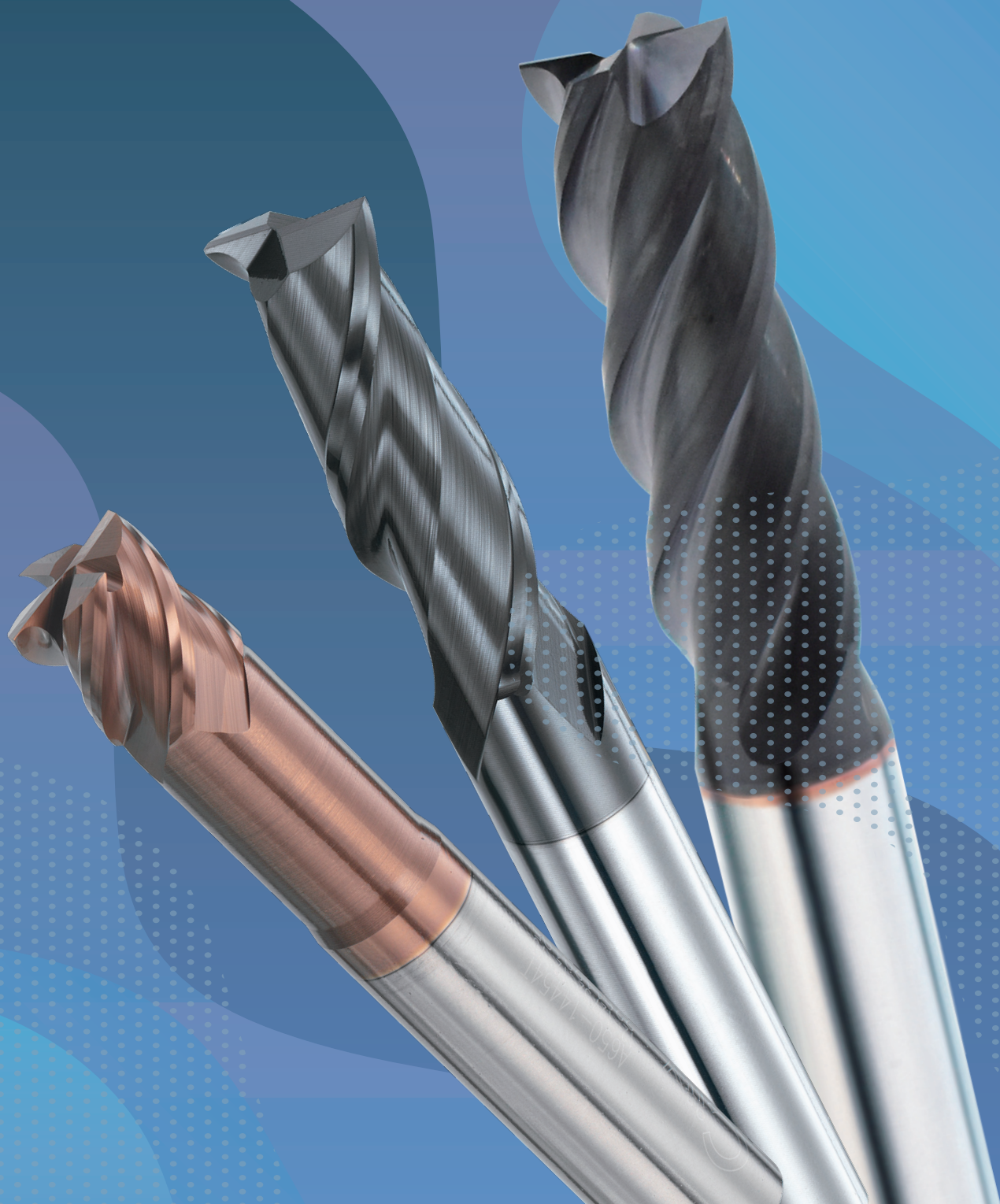
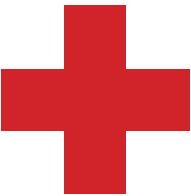


CUTTING TOOLS



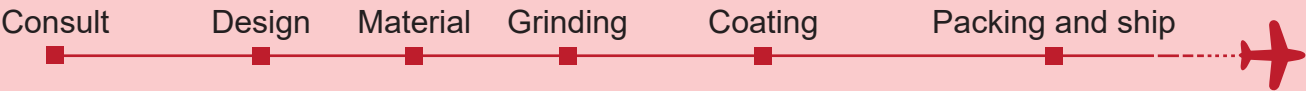
- UPGRADE COATING
- UPGRADE R W MATERIAL
- UPGRADE PARAMETERS





- UPGRADE COATING** Implementing the latest nano layer technology
- UPGRADE RAW MATERIAL** Using European raw materials to increase stability of the tools
- UPGRADE PARAMETERS** Adopt the latest parameter, increase production efficiency

Manufacturing



Walter Grinding Machine

Production
Ensure accuracy quality tools and Increase productivity



Walter Helicheck Plus

Full inspection on each tool with precised accuracy
100% comprehensive inspection with precised accuracy



Material CHART

Application group	Material examples
P	Steels,high- alloyed steels
M	Stainless steels
K	Grey cast irons , spher , graphite-mall, cast irons
N	Aluminum and other non-ferrous metals
S	Special, super and titanium alloys
H	Hardened steels and chilled cast irons

Icon Guide

Flutes



Coating

aerlikon **FLATITE**
balzers
※ Coated by Balzers & Platit



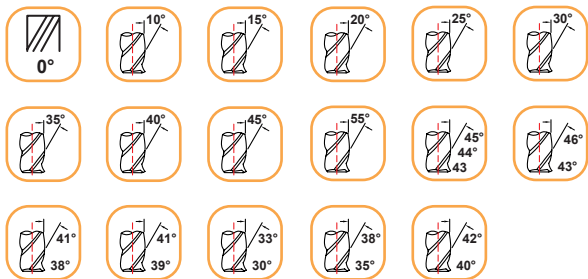
Processing direction



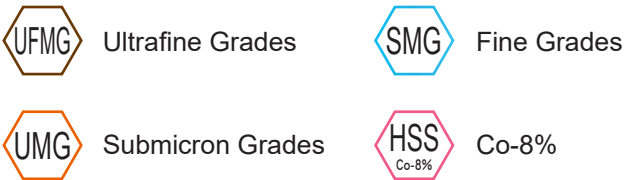
Cutting edge protection



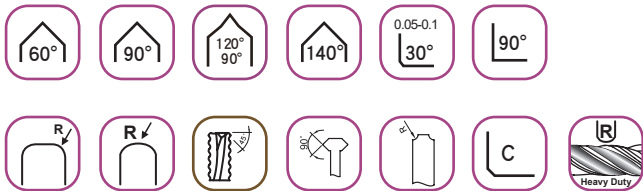
Helix angle



Material



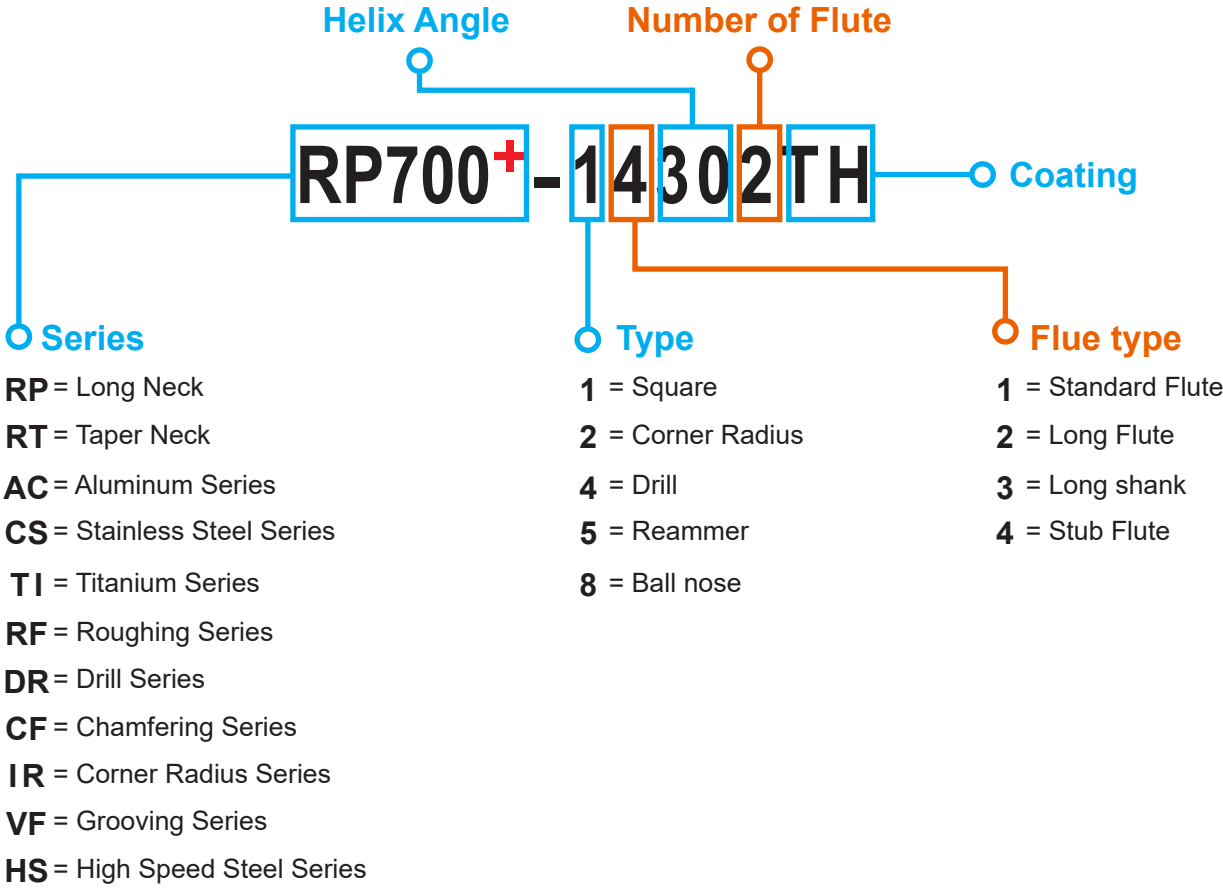
Angle



Working Material Hardness



Coding Principle



A700IE+11384TH

I = Uneven flute
E = Variable helix angle

S500M+11302TN

M = Miniature

AC100RN+11403

R = Heavy Duty Operation
N = with no edge protection

A700+ Series *High Speed High Feed & Finishing*

Description	Size	Helix	Type	NO.
2F End Mills 35°-Long Neck-1.5D	0.5~2mm	35°	RP700+-14352TH	8
2F Ball Nose 30° -Long Neck	0.25R~1R	30°	RP700+-84302TH	9
2F End Mills 35°-Taper Neck-1.5D	0.5~2mm	35°	RT700+-14352TH	10
2F Ball Nose 30° -Taper Neck	0.25R~1R	30°	RT700+-84302TH	11
4F End Mills 45°-3D	1~20mm	45°	A700+-11454TH	12
4F End Mills 45°-4D	4~20mm	45°	A700+-11454TH	13
6F End Mills 45°-3D	6~20mm	45°	A700+-11456TH	14
4F End Mills 45°-Long Shank-3D	6~16mm	45°	A700+-13454TH	15
NEW 4F(IE) End Mills 38°/41° -Uneven flute and Variable helix angle-3D	6~12mm	38°/41°	A700IE+-11384TH	16
2F Ball Nose 30°-2D	2R~8R	30°	A700+-81302TH	17
4F Ball Nose 30°-2D	2R~8R	30°	A700+-81304TH	18
4F Ball Nose 30°-Long Shank-2D	2R~8R	30°	A700+-83304TH	19
4F Corner Radius 35°-Stub Length-1.5D	4~16mm	35°	A700+-24354TH	20
4F Corner Radius 35°-3D	2~12mm	35°	A700+-21354TH	21
4F Corner Radius 35°-Long Shank-3D	4~12mm	35°	A700+-23354TH	22

X600⁺ Series

Mold Processing & Part Processing

Description	Size	Helix	Type	NO.
4F End Mills 35°-3D	1~20mm	35°	X600 ⁺ -11354TE	26
4F End Mills 45°-3D	1~20mm	45°	X600 ⁺ -11454TE	27
4F End Mills 35°-Long Shank-3D	1~20mm	35°	X600 ⁺ -13354TE	28
NEW 4F(IR) Heavy Duty Operation End Mills 35° -Uneven flute	4~20mm	35°	X600IR ⁺ -11354TE	29
NEW 4F(ER) Heavy Duty Operation End Mills 35°/38° - Variable helix angle	4~20mm	35°/38°	X600ER ⁺ -11354TE	30
2F Ball Nose 30°-2D	1R~8R	30°	X600 ⁺ -81302TE	31
2F Ball Nose 30°-Long Shank-2D	2R~10R	30°	X600 ⁺ -83302TE	32
4F Corner Radius 35°-3D	4~12mm	35°	X600 ⁺ -21354TE	33
4F Corner Radius 35°-Long Shank-3D	4~12mm	35°	X600 ⁺ -23354TE	34

X550⁺ Series

Mold Processing & Part Processing

Description	Size	Helix	Type	NO.
4F End Mills 35°-3D	1~20mm	35°	X550 ⁺ -11354TA	38
4F End Mills 45°-3D	1~20mm	45°	X550 ⁺ -11454TA	39
6F End Mills 40°-3D	6~20mm	40°	X550 ⁺ -11406TA	40
4F End Mills 35°-Long Shank-3D	1~20mm	35°	X550 ⁺ -13354TA	41
NEW 4F(R) Heavy Duty Operation End Mills 40°-2.5D	4~12mm	40°	X550R ⁺ -11404TA	42
2F Ball Nose 30°-3D	1R~8R	30°	X550 ⁺ -81302TA	43
2F Ball Nose 30°-Long Shank-3D	3R~10R	30°	X550 ⁺ -83302TA	44
4F Corner Radius 35°-3D	4mm~12mm	35°	X550 ⁺ -21354TA	45
4F Corner Radius 35°-Long Shank-3D	4mm~12mm	35°	X550 ⁺ -23354TA	46

S500⁺ Series

Parts Processing & General Processing

Description	Size	Helix	Type	NO.
2F(M) End Mills 35°-Miniature-2D	0.2~0.9mm	35°	S500M ⁺ -11352TN	50
2F(M) Ball Nose 30°-Miniature	0.15R~0.45R	30°	S500M ⁺ -81302TN	51
2F End Mills 35-Long Neck	0.5~2mm	35°	RP500 ⁺ -14352TN	52
2F Ball Nose 30°-Long Neck	0.25R~1R	30°	RP500 ⁺ -84302TN	53
2F End Mills 35°-Taper Neck	0.5~2mm	35°	RT500 ⁺ -14352TN	54
2F Ball Nose 30°-Taper Neck	0.25R~1R	30°	RT500 ⁺ -84302TN	55
4F Stub Length 35°-1.5D	0.5~6mm	35°	S500 ⁺ -14354TN	56
2F End Mills 35°	1~12mm	35°	S500 ⁺ -11352TN	57
3F End Mills 35°	1~12mm	35°	S500 ⁺ -11353TN	58
4F End Mills 35°	1~20mm	35°	S500 ⁺ -11354TN	59
2F End Mills 45°	1~12mm	45°	S500 ⁺ -11452TN	60
3F End Mills 45°	1~12mm	45°	S500 ⁺ -11453TN	61
4F End Mills 45°	1~20mm	45°	S500 ⁺ -11454TN	62
4F End Mills 35°-Long Flute-4D	6~20mm	35°	S500 ⁺ -12354TN	63
4F End Mills 45°-Long Flute-5D	6~20mm	45°	S500 ⁺ -12454TN	64
2F End Mills 35°-Long Shank-3D	4~12mm	35°	S500 ⁺ -13352TN	65
4F End Mills 35°-Long Shank-3D	4~12mm	35°	S500 ⁺ -13354TN	66
6F End Mills 45°-3D	6~20mm	45°	S500 ⁺ -11456TN	67
NEW 4F(R) Heavy Duty Operation End Mills 40°-2.5D	4~12mm	40°	S500R ⁺ -11404TN	68
NEW 4F(I) End Mills 35°-Uneven flute-2.5D	1~12mm	35°	S500I ⁺ -11354TA	69
NEW 4F(E) End Mills 35°/38°-Variable helix angle-2.5D	1~12mm	35°/38°	S500E ⁺ -11384TA	70

S500⁺ Series

Parts Processing & General Processing

	Description	Size	Helix	Type	NO.
NEW	4F(IE) End Mills 38°/41° -Uneven flute and Variable helix angle	1~20mm	38°/41°	S500IE+-11384TA	71
NEW	4F(IE) End Mills 43°/46° -Uneven flute and Variable helix angle	1~20mm	43°/46°	S500IE+-11434TA	72
NEW	4F(IE) End Mills 43°/46°-4D -Uneven flute and Variable helix angle	4~20mm	43°/46°	S500IE+-11434TA	73
NEW	4F(IE) End Mills 43°/46°-5D -Uneven flute and Variable helix angle -Long Flute	4~20mm	43°/46°	S500IE+-12434TA	74
NEW	4F(IE) End Mills 38°/41°-1.5D -Uneven flute and Variable helix angle-Stub Length	6~12mm	38°/41°	S500IE+-14384TA	75
	2F Ball Nose 30°-2D	1R~10R	30°	S500+-81302TN	76
	4F Ball Nose 30°-2D	1R~10R	30°	S500+-81304TN	77
	2F Ball Nose 30°-Long Shank	3R~10R	30°	S500+-83302TN	78
NEW	4F(IE) Ball Nose 35°/38° -Uneven flute and Variable helix angle	2R~6R	35°/38°	S500IE+-81354TA	79
	4F Corner Radius 35°	4~12mm	35°	S500+-21354TN	80
	4F Corner Radius 35°-Long Shank-3D	4~12mm	35°	S500+-23354TN	81
NEW	4F(IE) Corner Radius 43°/46° -Uneven flute and Variable helix angle	4~12mm	43°/46°	S500IE+-21434TA	82

Specialized⁺ Series

	Description	Size	Helix	Type	NO.
	2F Aluminum End Mills 45°	4~16mm	45°	AC100+-11452	86
	3F Aluminum End Mills 45°	4~16mm	45°	AC100+-11453	87
	2F Aluminum End Mills 55°	4~16mm	55°	AC100+-11552	88
	3F Aluminum End Mills 55°	4~16mm	55°	AC100+-11553	89
NEW	3F(RN) Aluminum Heavy Duty Operation End Mills 40°	4~16mm	40°	AC100RN+-11403	90
NEW	3F(IEN) Aluminum End Mills 43°/44°/45° -Uneven flute and Variable helix angle	4~16mm	43°/44°/45°	AC100IEN+-11433	91
	4F Stainless Steel End Mills 40°	4~12mm	40°	CS100+-11404TE	92
	4F(IE) Stainless Steel End Mills 43°/46°-2.5D -Uneven flute and Variable helix angle	4~12mm	43°/46°	CS100IE+-11404TE	93
NEW	4F(IE) Stainless Steel Corner Radius 43°/46°-2.5D -Uneven flute and Variable helix angle	4~12mm	43°/46°	CS300IE+-21434TE	94
	4F Titanium Alloy End Mills 40°	4~12mm	40°	TI100+-11404TE	95
NEW	4F(IE) Titanium Alloy End Mills 43°/46°-2.5D -Uneven flute and Variable helix angle	4~12mm	43°/46°	TI100IE+-11434TE	96
NEW	4F(IE) Titanium Alloy Corner Radius 43°/46°-2.5D -Uneven flute and Variable helix angle	4~12mm	43°/46°	TI100IE+-21434TE	97
	4F Roughing End Mills 30°	4~20mm	30°	RF100+-11304TN	98
NEW	4F(IE) Roughing End Mills 39°/41° -Uneven flute and Variable helix angle	4~20mm	39°/41°	RF100IE+-11394TN	99
	2F Spot Drills 90°	4~12mm	10°	DR100+-40902TN	100
	2F Spot Drills 90°/120°	4~12mm	20°	DR100+-90120TN	
	2F Center Drills 60°	1~5mm	25°	DR200+-40602TN	101
	3F Chamfering End Mills 90°	4~10mm	20°	CF300+-40903TN	
	6F Chamfering End Mills 90°	6~16mm	0°	CF300+-40906TN	102
	3F Chamfering End Mills 90°	12.4~25mm	15°	CF100+-40903TN	101

	2F Carbide Drill 140°	3~20mm	30°	DR300+~41402TN	104-105
	Carbide Hard Cut Drill	2~6mm	0°	HCD+	106
	Carbide Spiral Cutter	25mm	20°	CC100+	

High Speed Steel Series

NEW	4F(IE) Roughing End Mills 30°/33° -Uneven flute and Variable helix angle	6~50mm	30°/33°	HS400IE+-11304TN	109
	2F Spot Drills 90°	4~20mm	10°	HRD100+-40902TN	110
	2F Spot Drills 90° /120°	4~20mm	20°	HPRD100+-90120TN	
	3F Chamfer Series 90°	6.3~25mm	15°	HCF100+-40903TN	111
NEW	3F(I) Chamfer Series-Uneven flute	6.3~25mm	90°	HCF100I+-40903TN	

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light blue horizontal and vertical lines. There are no margins, text, or other markings on the page.

A700⁺ Series

**High Speed High Feed
& Finishing**



Helix angle 1° / 15° / 25° / 30° / 35° / 40° / 42° / 45°

! Please kindly visit our CityTools website to check available stock.

Customization available

Customized acceptable !

From **Coating, flute, Helix angle, cutting length, to total length.**

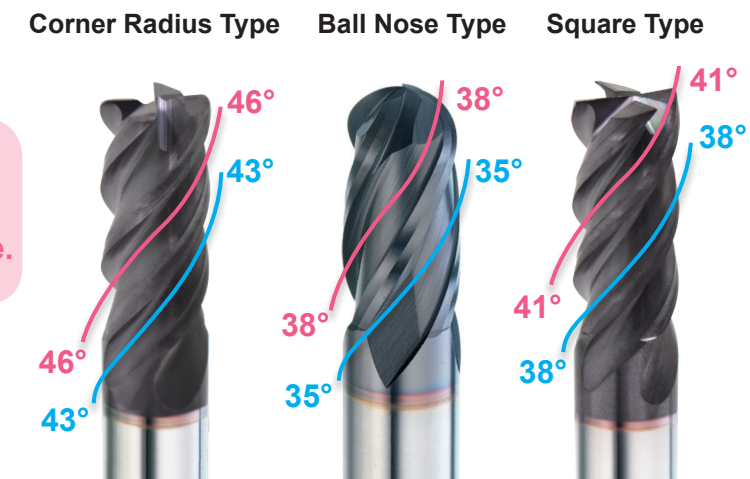
Flute Design

Variable helix angle
Uneven flute

Anti-Vibration
less noise.

Ideal for Mild steels,
Cast Irons, Hardened steels
with extended tool life.

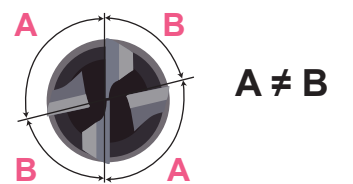
Unique coating
for wear reduction
and heat resistance.



End Mills - Variable helix angle

End Mills- Uneven flute

Anti-Vibration, Providing
smooth and steady chip
evaluation.

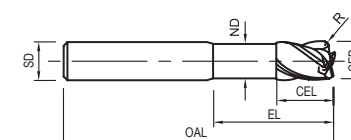


Adjustable helix angle.

Short Flute Provide

1 degree flute

Heavy Duty Cutter design



Ideal for cutting different
hard metals.



Adopting 1 degree flute design to
enable high efficiency machining for
higher degree hardness materials.
Applicable for roughing.



Ideal for heavy duty
cutting operation.



RP700⁺-14352TH

◆ Square Type - 2F End Mills 35° - Long Neck-1.5D

**High Speed High Feed
& Finishing**

RP700⁺-84302TH

◆ Ball Nose Type - 2F- 30°-Long Neck

**High Speed High Feed
& Finishing**



Dia.(mm)		Tolerance (mm)
Above	Up to	
0.5	1	0~-0.015
1	3	0~-0.020
3	6	0~-0.025



※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

RP700 ⁺ -14352TH	CED	CEL	EL	SD	OAL
	0.5	0.7	4	4	50
			6		
			8		
	1	1.5	6	4	50
			8		
			10		
	1.5	2.3	6	4	50
			8		
			10		
	2	3	6	4	50
			8		
			10		

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.5MM	24200	440	24200	385	24200	242	22000	198	0.4	0.1
1MM	22000	770	20900	660	19800	550	16500	330	0.06	0.2
1.5MM	20900	990	17600	880	16500	770	13200	440	0.08	0.3
2MM	15400	990	14300	880	13200	770	9900	550	0.11	0.4

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Radius(mm)	Tolerance (mm)
R	±0.01



※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

RP700 ⁺ -84302TH	Radius	CEL	EL	SD	OAL
	0.25R	0.35	4	4	50
			6		
			8		
	0.5R	0.75	6	4	50
			8		
			10		
	0.75R	1.1	6	4	50
			8		
			10		
	1R	1.5	6	4	50
			8		
			10		

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
025R	10010	81	10010	77	7315	46	6122	23	0.04	0.16
0.5R	6853	96	6853	89	4890	54	4081	23	0.06	0.24
0.75R	5121	104	5121	89	3658	62	3042	31	0.08	0.32
1R	3927	107	3889	92	2772	65	2310	31	0.10	0.4

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



RT700⁺-14352TH

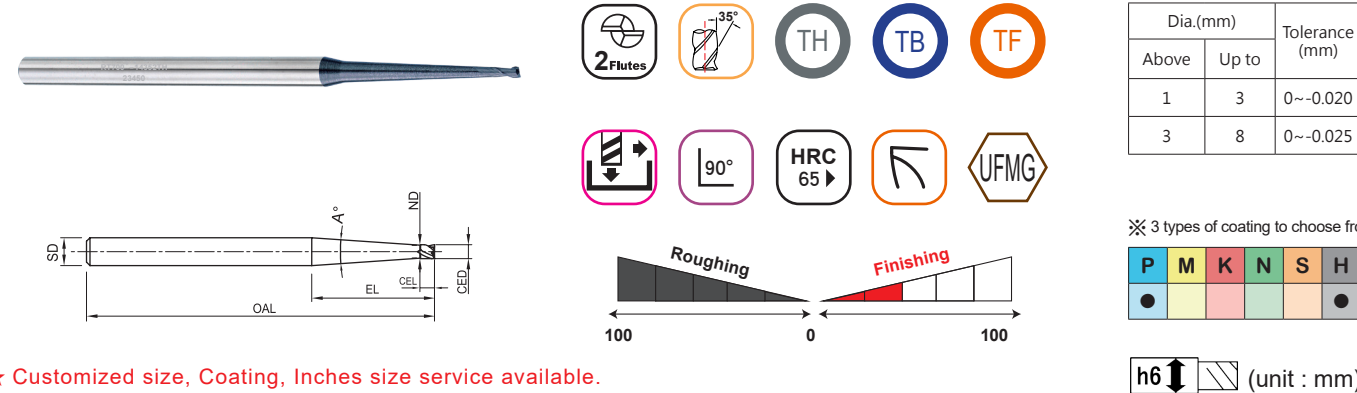
◆ Square Type - 2F End Mills 35° -Taper Neck-1.5D

High Speed High Feed
& Finishing

RT700⁺-84302TH

◆ Ball Nose Type - 2F - 30° -Taper Neck

High Speed High Feed
& Finishing

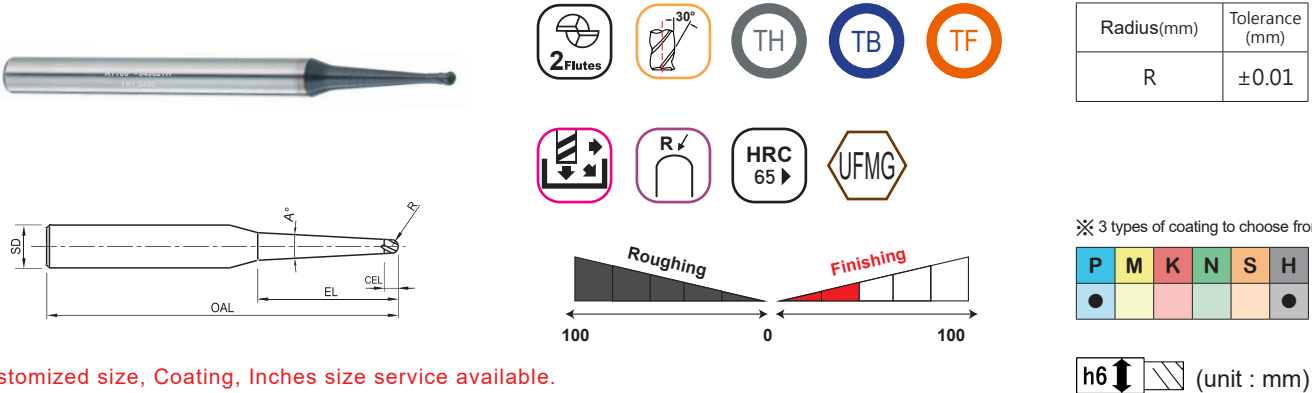


★ Customized size, Coating, Inches size service available.

RT700 ⁺ -14352TH	CED	CEL	EL	SD	OAL	Angle Taper
	0.5	0.7	8	4	50	1.5°
	1	1.5	10	4	50	1.5°
	1.5	2.3	12	4	50	1°
	2	3	14	4	50	1°

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.5MM	24200	440	24200	385	24200	242	22000	198	0.4	0.1
1MM	22000	770	20900	660	19800	550	16500	330	0.06	0.2
1.5MM	20900	990	17600	880	16500	770	13200	440	0.08	0.3
2MM	15400	990	14300	880	13200	770	9900	550	0.11	0.4

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



★ Customized size, Coating, Inches size service available.

RT700 ⁺ -84302TH	Radius	CEL	EL	SD	OAL	Angle Taper
	0.25R	0.35	8	4	50	1°
	0.5R	0.75	10	4	50	2°
	0.75R	1.1	12	4	50	0.5°
	1R	1.5	14	4	50	1°
						0.5°

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.25R	5121	104	5121	89	3658	62	3042	31	0.08	0.32
0.5R	3504	112	3504	100	2426	69	2041	31	0.12	0.48
0.75R	3000	120	2541	104	1810	69	1502	31	0.14	0.52
1R	2800	125	2300	110	1780	71	1450	31	0.16	0.54

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



A700⁺-11454TH

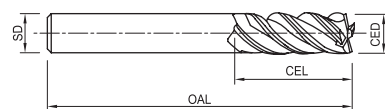
◆ Square Type - 4F End Mills 45°-3D

**High Speed High Feed
& Finishing**

A700⁺-11454TH

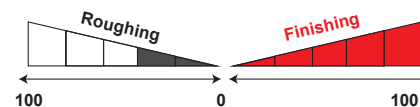
◆ Square Type - 4F End Mills 45°-4D

**High Speed High Feed
& Finishing**



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



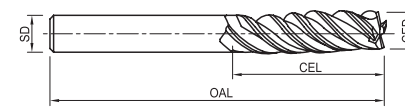
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

A700 ⁺ -11454TH	CED	CEL	SD	OAL
	1	3	4	50
	2	6		
	3	9		
	4	12	6	50
	6	18		
	8	24		
	10	30	10	75
	12	36	12	80
	14	42	16	100
	16	48	16	100
	20	60	20	120

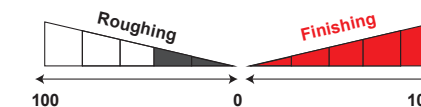
WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
1MM	42000	1000	37875	900	33750	1000	30625	700	1	0.1
2MM	33750	2000	30375	1800	27250	1563	23750	838	2	0.2
3MM	27000	2250	24250	1800	21825	1563	19625	838	4.5	0.3
4MM	21625	2250	12438	1800	9938	1563	8875	838	6	0.4
6MM	17375	3313	8313	2700	6625	2375	5000	1250	9	0.6
8MM	13750	3313	6188	2700	5000	2375	3750	1250	12	0.8
10MM	11125	3313	5000	2700	4000	2375	3000	1250	15	1
12MM	8875	3313	4125	2700	3313	2375	2500	1250	18	1.2
14MM	7000	3125	3500	2563	2813	2250	2125	1250	20	1.4
16MM	5625	3000	3000	2363	2438	2125	1813	1163	24	1.6
20MM	4250	2875	2500	2163	2063	2000	1500	1075	28	1.8

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

A700 ⁺ -11454TH	CED	CEL	SD	OAL
	4	16	4	75
	6	24	6	75
	8	32	8	100
	10	40	10	100
	12	48	12	
	16	64	16	150
	20	80	20	150

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
4MM	21625	2250	12438	1800	9938	1563	8875	838	6	0.4
6MM	17375	3313	8313	2700	6625	2375	5000	1250	9	0.6
8MM	13750	3313	6188	2700	5000	2375	3750	1250	12	0.8
10MM	11125	3313	5000	2700	4000	2375	3000	1250	15	1
12MM	8875	3313	4125	2700	3313	2375	2500	1250	18	1.2
16MM	5625	3000	3000	2363	2438	2125	1813	1163	24	1.6
20MM	4250	2875	2500	2163	2063	2000	1500	1075	28	1.8

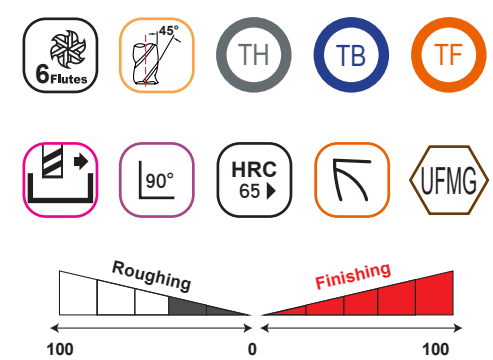
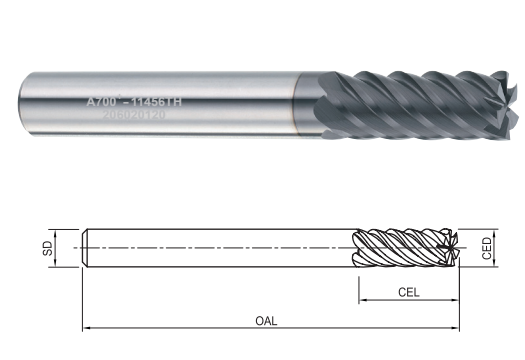
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



A700⁺-11456TH

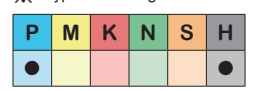
◆ Square Type - 6F End Mills 45°-3D

**High Speed High Feed
& Finishing**



Dia.(mm)		Tolerance (mm)
Above	Up to	
6	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

A700 ⁺ -11456TH	CED	CEL	SD	OAL
	6	18	6	50
	8	24	8	70
	10	30	10	75
	12	36	12	80
	16	48	16	100
	20	60	20	120

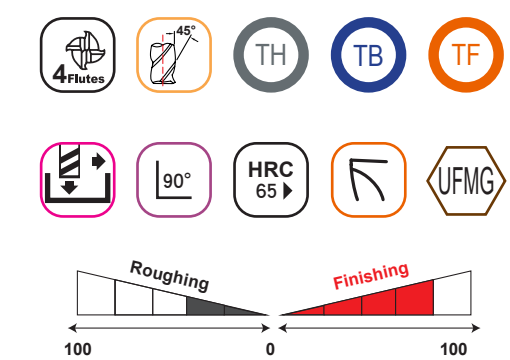
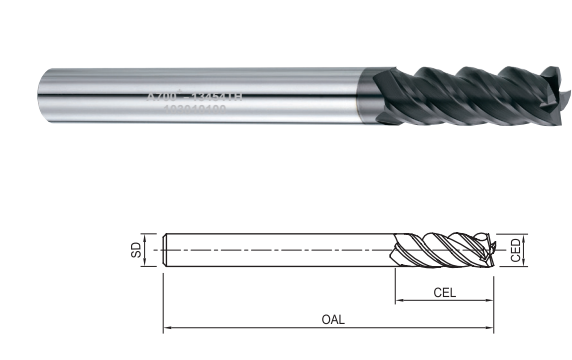
WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		40~55HRC		55~60HRC		60~65HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
6MM	6906	662	5756	553	4606	445	5756	553	7.5	0.10
8MM	5181	624	4318	521	3456	412	4318	521	12	0.10
10MM	4145	646	3456	537	2761	429	3456	537	15	0.10
12MM	3456	624	2881	521	2300	412	2881	521	18	0.10
16MM	2588	618	2159	521	1725	412	1725	521	24	0.20
20MM	2072	624	1725	515	1383	418	1383	515	30	0.20

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

A700⁺-13454TH

◆ Square Type - 4F End Mills 45° - Long Shank-3D

**High Speed High Feed
& Finishing**



Dia.(mm)		Tolerance (mm)
Above	Up to	
6	12	0~-0.025
12	16	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

A700 ⁺ -13454TH	CED	CEL	SD	OAL
	6	18	6	75
	8	24	8	100
	10	30	10	100
	12	36	12	100
	16	48	16	150

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
6MM	17375	3150	8313	2850	6625	2550	5000	2350	9	0.6
8MM	13750	2830	6188	2550	5000	2350	3750	2100	12	0.8
10MM	11125	2550	5000	2300	4000	2065	3000	1900	15	1
12MM	8875	2230	4125	2070	3313	1880	2500	1800	18	1.2
16MM	8430	2065	4050	1980	3000	1660	2450	1730	21	1.4

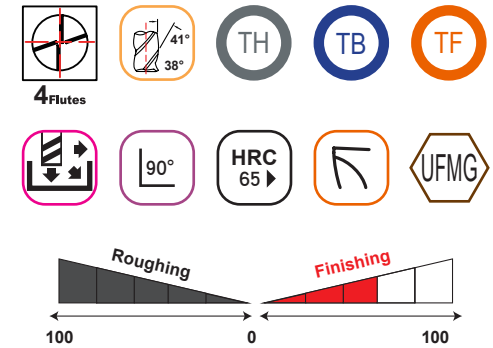
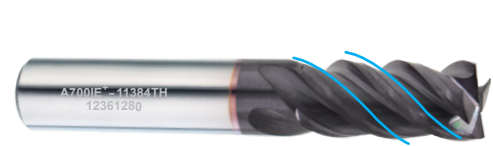
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



A700IE⁺-11384TH

- ◆ Square Type - 4F End Mills 38°/41°
- ◆ Uneven flute and Variable helix angle-3D

**High Speed High Feed
& Finishing**



Dia.(mm)		Tolerance (mm)
Above	Up to	
6	12	0~-0.020

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

A700IE ⁺ -11384TH	CED	CEL	SD	OAL
	6	18	6	50
	8	24	8	60
	10	30	10	75
	12	36	12	80

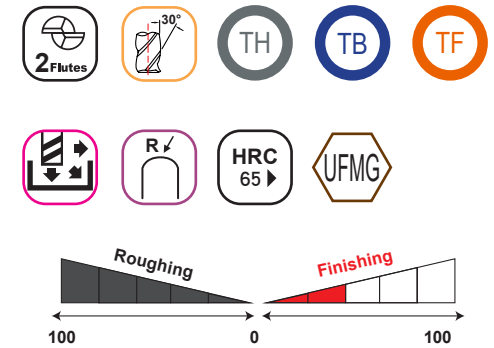
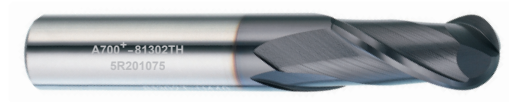
WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
6MM	8554	727	5345	455	4010	342	4811	406		
8MM	6413	679	4010	428	3007	321	3607	385		
10MM	5133	765	3209	476	2403	358	2886	395		
12MM	4277	727	2675	455	2005	342	2403	406	18	1.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

A700⁺-81302TH

- ◆ Ball Nose Type - 2F - 30°-2D

**High Speed High Feed
& Finishing**



Radius (mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

A700 ⁺ -81302TH	Radius	CEL	SD	OAL
	2R	8	4	50
	3R	12	6	
	4R	16	8	60
	5R	20	10	75
	6R	24	12	
	7R	28	16	100
	8R	32	16	100

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		40~55HRC		55~60HRC		60~65HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
2R	20736	1050	15804	816	8424	423	15804	816		
3R	13860	1312	10548	875	5616	525	10548	875		
4R	10368	1312	7956	875	4194	525	7956	875		
5R	8262	1312	6336	875	3330	525	6336	875		
6R	6894	1312	5256	904	2799	525	5256	904		
7R	6900	1400	4800	950	2450	550	4850	950		
8R	5184	1458	3996	991	2088	583	3996	991		

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



A700⁺-81304TH

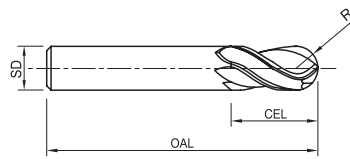
◆ Ball Nose Type - 4F - 30°-2D

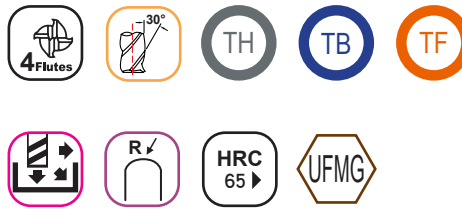
High Speed High Feed
& Finishing

A700⁺-83304TH

◆ Ball Nose Type - 4F - 30°-Long Shank-2D

High Speed High Feed
& Finishing





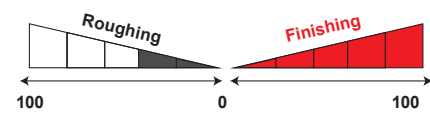
Radius (mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

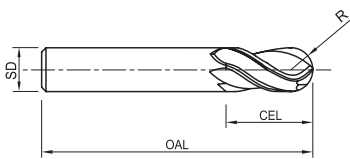
★ Customized size, Coating, Inches size service available.

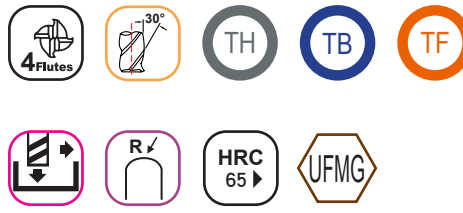


A700 ⁺ -81304TH	Radius	CEL	SD	OAL
	2R	8	4	50
	3R	12	6	50
	4R	16	8	60
	5R	20	10	75
	6R	24	12	75
	7R	28	16	100
	8R	32	16	100

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
2R	19642	1116	14970	868	7979	450	14970	868	0.12	0.12
3R	13129	1395	9991	930	5320	558	9991	930	0.15	0.15
4R	9821	1395	7536	930	3973	558	7536	930	0.17	0.17
5R	7826	1395	6002	930	3154	558	6002	930	0.20	0.2
6R	6530	1395	4979	961	2650	558	4979	961	0.25	0.25
7R	5500	1440	4750	980	2450	600	4100	965	0.30	0.30
8R	4910	1550	3785	1054	1978	620	3785	970	0.35	0.35

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.





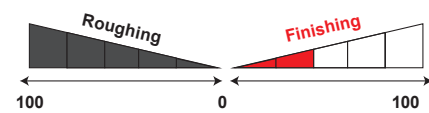
Radius (mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.



A700 ⁺ -83304TH	Radius	CEL	SD	OAL
	2R	8	4	75
	3R	12	6	75
	4R	16	8	100
	5R	20	10	100
	6R	24	12	100
	7R	28	16	150
	8R	32	16	150

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
2R	18660	1060	14221	825	7580	427	14221	825	0.12	0.12
3R	12472	1325	9492	884	5054	530	9492	884	0.15	0.15
4R	9330	1325	7159	884	3774	530	7159	884	0.17	0.17
5R	7435	1325	5702	884	2997	530	5702	884	0.20	0.2
6R	6204	1325	4730	913	2518	530	4730	913	0.25	0.25
7R	5890	1260	4490	950	2395	550	4490	940	0.30	0.30
8R	4665	1473	3596	1001	1879	589	3596	950	0.35	0.35

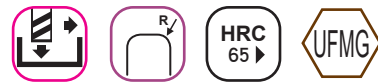
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



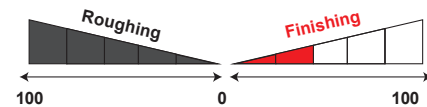
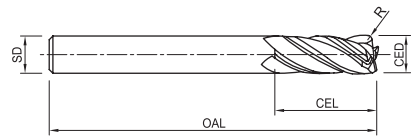
A700⁺-23354TH

◆ Corner Radius Type - 4F End Mills 35°-Long Shank-3D

**High Speed High Feed
& Finishing**



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	16	0~-0.030



※ 3 types of coating to choose from



★ Customized size, Coating, Inches size service available.

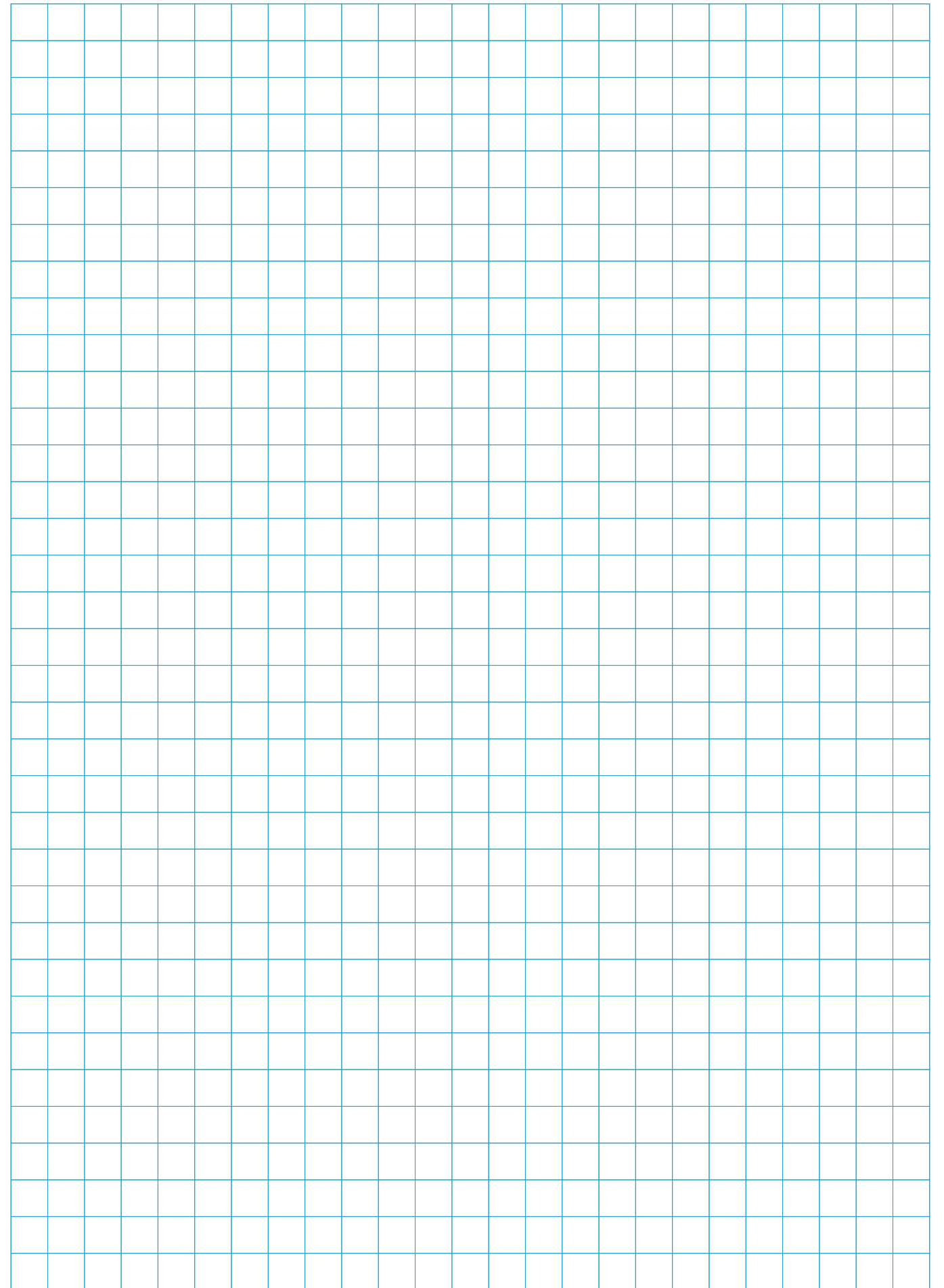
h6 (unit : mm)

A700 ⁺ -23354TH	CED	CEL	SD	OAL	Radius	
	4	12	4	75	0.2R	
					0.5R	
	6	18	6	75	0.2R	
					0.5R	
	8	24	8	100	0.5R	
					1R	
	10	30	10	100	0.5R	
					1R	
	12	36	12	100	0.5R	
					1R	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
			40~45HRC		45~55HRC		55~60HRC		60~65HRC	
HARDNESS										
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	12608	719	7880	451	5910	339	7088	404	0.17	0.17
6MM	8405	640	5252	400	3940	301	4727	357	0.20	0.2
8MM	6301	597	3940	376	2955	282	3544	321	0.25	0.25
10MM	5044	672	3153	419	2361	315	2836	289	0.30	0.3
12MM	4203	640	2628	400	1970	301	2361	274	0.35	0.35

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

Notes



X600⁺ Series

Mold Processing

Cutting edge protection



Flute



Coating



Coating can be applied variously according to client's requirement.



Submicron Grades

Din



Helix angle 1° / 15° / 25° / 30° / 35° / 40° / 42° / 45°

⚠ Please kindly visit our CityTools website to check available stock.

Customization available

Customized acceptable !

From **Coating**, **flute**, **Helix angle**, **cutting length**, to **total length**.

Flute Design

Variable helix angle
Uneven flute

Ideal for Mild steels,
Cast Irons, Hardened steels
with extended tool life.

Anti-Vibration
less noise

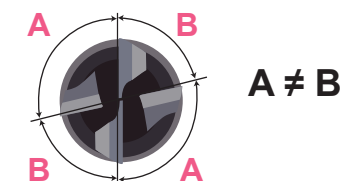
Unique coating
for wear reduction
and heat resistance.



End Mills - Variable helix angle

End Mills- Uneven flute

Anti-Vibration, Providing
smooth and steady chip
evaluation.

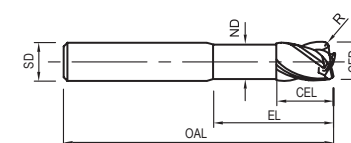


Adjustable helix angle.

Short Flute Provide

Designed for
rib processing

Heavy Duty Cutter design



Ideal for cutting different
hard metals.



Adopting high quality carbide.
Designed for rib processing and with
good cutting performance and tool life.



Ideal for heavy duty
cutting operation.



X600⁺-11354TE

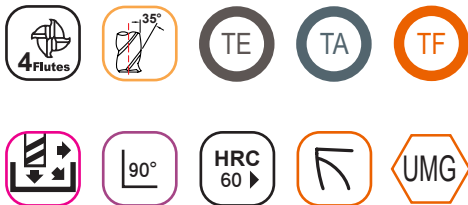
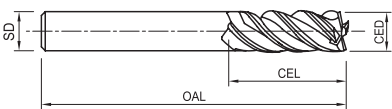
◆ Square Type - 4F End Mills 35°-3D

Mold Processing
& Parts Processing

X600⁺-11454TE

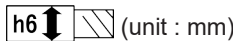
◆ Square Type - 4F End Mills 45°-3D

Mold Processing
& Parts Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

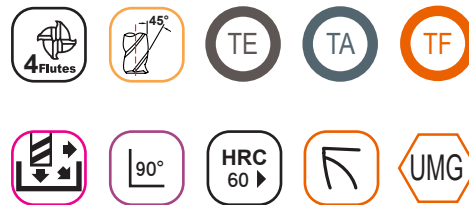
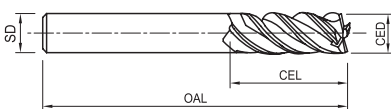


★ Customized size, Coating, Inches size service available.

X600 ⁺ -11354TE	CED	CEL	SD	OAL
	1	3	4	50
	2	6		
	3	9		
	4	12		
	6	18	6	70
	8	24	8	
	10	30	10	
	12	36	12	
	14	42	16	100
	16	48		100
	20	60	20	120

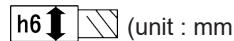
WORKING MATERIAL	HARDENED STEEL								REFERENCE	
	~40HRC		40~45HRC		45~55HRC		55~60HRC		a _p	a _e
HARDNESS	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	33600	800	30300	720	27000	800	24500	560	1	0.1
2MM	27000	1600	24300	1440	21800	1250	19000	670	2	0.2
3MM	21600	1800	19400	1440	17460	1250	15700	670	4.5	0.3
4MM	17300	1800	9950	1440	7950	1250	7100	670	6	0.4
6MM	13900	2650	6650	2160	5300	1900	4000	1000	9	0.6
8MM	11000	2650	4950	2160	4000	1900	3000	1000	12	0.8
10MM	8900	2650	4000	2160	3200	1900	2400	1000	15	1
12MM	7100	2650	3300	2160	2650	1900	2000	1000	18	1.2
14MM	5600	2500	2800	2050	2250	1800	1700	1000	20	1.4
16MM	4500	2400	2400	1890	1950	1700	1450	930	24	1.6
20MM	3400	2300	2000	1730	1650	1600	1200	860	28	1.8

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dai.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



★ Customized size, Coating, Inches size service available.

X600 ⁺ -11454TE	CED	CEL	SD	OAL
	1	3	4	50
	2	6		
	3	9		
	4	12		
	6	18	6	70
	8	24	8	
	10	30	10	
	12	36	12	
	14	42	16	100
	16	48		100
	20	60	20	120

WORKING MATERIAL	HARDENED STEEL								REFERENCE	
	~40HRC		40~45HRC		45~55HRC		55~60HRC		a _p	a _e
HARDNESS	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	33600	760	30300	684	27000	760	24500	532	1	0.1
2MM	27000	1520	24300	1368	21800	1188	19000	637	2	0.2
3MM	21600	1710	19400	1368	17460	1188	15700	637	4.5	0.3
4MM	17300	1710	9950	1368	7950	1188	7100	637	6	0.4
6MM	13900	2518	6650	2052	5300	1805	4000	950	9	0.6
8MM	11000	2518	4950	2052	4000	1805	3000	950	12	0.8
10MM	8900	2518	4000	2052	3200	1805	2400	950	15	1
12MM	7100	2518	3300	2052	2650	1805	2000	950	18	1.2
14MM	5600	2375	2800	1947	2250	1710	1700	950	20	1.4
16MM	4500	2280	2400	1795	1950	1615	1450	884	24	1.6
20MM	3400	2185	2000	1644	1650	1520	1200	817	28	1.8

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



X600⁺-13354TE

◆ Square Type - 4F End Mills 35°-Long Shank-3D

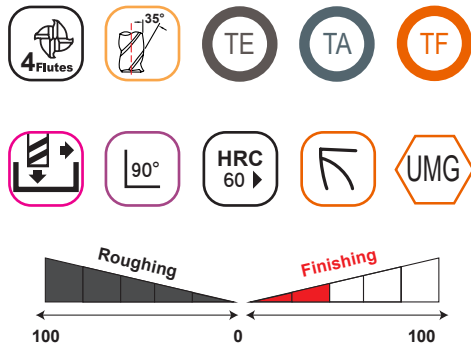
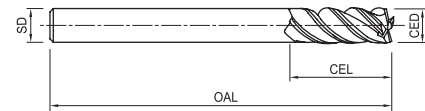
Mold Processing
& Parts Processing



X600IR⁺-11354TE

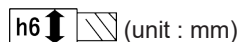
◆ 4F Heavy Duty Operation End mills 35°
◆ Uneven flute-2.5D

Mold Processing
& Parts Processing



Dai.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

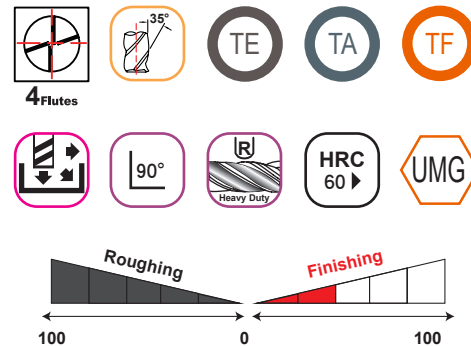
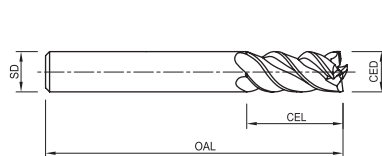


★ Customized size, Coating, Inches size service available.

X600 ⁺ -13354TE	CED	CEL	SD	OAL
	1	3	4	75
	2	6		
	3	9		
	4	12	6	100
	6	18		
	8	24		
	10	30	10	150
	12	36		
	16	42		
	20	60	20	

WORKING MATERIAL	HARDENED STEEL								REFERENCE	
HARDNESS	~40HRC		40~45HRC		45~55HRC		55~60HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	33600	760	30300	684	27000	760	24500	532	1	0.1
2MM	27000	1520	24300	1368	21800	1188	19000	637	2	0.2
3MM	21600	1710	19400	1368	17460	1188	15700	637	4.5	0.3
4MM	17300	1710	9950	1368	7950	1188	7100	637	6	0.4
6MM	13900	2518	6650	2052	5300	1805	4000	950	9	0.6
8MM	11000	2518	4950	2052	4000	1805	3000	950	12	0.8
10MM	8900	2518	4000	2052	3200	1805	2400	950	15	1
12MM	7100	2518	3300	2052	2650	1805	2000	950	18	1.2
16MM	4500	2280	2400	1795	1950	1615	1450	884	24	1.6
20MM	3400	2185	2000	1644	1650	1520	1200	817	28	1.8

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dai.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025

※ 3 types of coating to choose from



★ Customized size, Coating, Inches size service available.

X600IR ⁺ -11354TE	CED	CEL	SD	OAL
	4	10	4	50
	6	15	6	50
	8	20	8	60
	10	25	10	75
	12	30	12	75
	16	40	16	100
	20	50	20	120

WORKING MATERIAL	HARDENED STEEL								REFERENCE	
HARDNESS	25~35HRC		25~45HRC		45~50HRC		50~60HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	10920	1250	10080	788	8400	546	6300	362	4	1.8
6MM	7245	1418	6720	1050	5670	735	4400	436	6	2.7
8MM	5460	1208	5040	1050	4410	725	3680	462	8	3.6
10MM	4305	1124	3990	935	3570	683	3050	457	10	4.5
12MM	3675	956	3360	872	3045	525	2570	431	12	5.4
16MM	2720	704	2500	651	2310	420	1890	347	14	7.2
20MM	2174	567	2000	525	1890	294	1575	315	16	9

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



X600ER⁺-11354TE

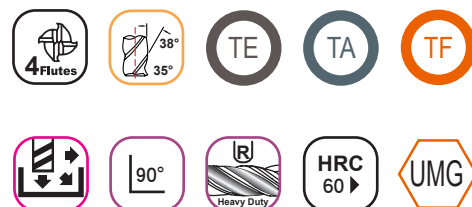
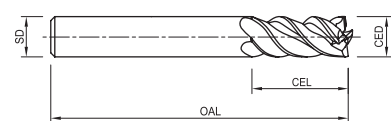
- ◆ 4F Heavy Duty Operation End Mills 35°/38°
- ◆ Variable helix angle-2.5D

Mold Processing & Parts Processing

X600⁺-81302TE

- ◆ Ball Nose Type- 2F- 30°-2D

Mold Processing & Parts Processing



Dai.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025

※ 3 types of coating to choose from



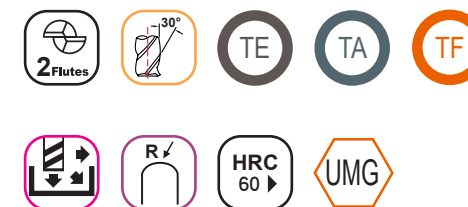
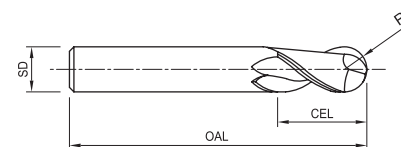
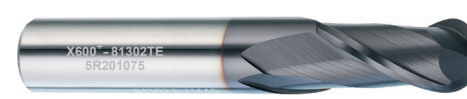
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

X600ER ⁺ -11354TE	CED	CEL	SD	OAL
	4	10	4	50
	6	15	6	50
	8	20	8	60
	10	25	10	75
	12	30	12	75
	16	40	16	100
	20	50	20	120

WORKING MATERIAL	HARDENED STEEL								REFERENCE	
HARDNESS	25~35HRC		25~45HRC		45~50HRC		50~60HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	10920	1250	10080	788	8400	546	6300	362	4	1.8
6MM	7245	1418	6720	1050	5670	735	4400	436	6	2.7
8MM	5460	1208	5040	1050	4410	725	3680	462	8	3.6
10MM	4305	1124	3990	935	3570	683	3050	457	10	4.5
12MM	3675	956	3360	872	3045	525	2570	431	12	5.4
16MM	2720	704	2500	651	2310	420	1890	347	14	7.2
20MM	2174	567	2000	525	1890	294	1575	315	16	9

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Radius(mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

X600 ⁺ -81302TE	Radius	CEL	SD	OAL
	1R	4	4	50
	2R	8		
	3R	12	6	60
	4R	16	8	
	5R	20	10	75
	6R	24	12	
	7R	32	16	100
	8R	32		

WORKING MATERIAL	HARDENED STEEL								REFERENCE	
HARDNESS	25~35HRC		25~45HRC		45~50HRC		50~60HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1R	23184	700	17741	443	9504	210	18000	443	0.07	0.07
2R	16589	840	12643	653	6739	338	12643	653	0.12	0.12
3R	11088	1050	8438	700	4493	420	8438	700	0.15	0.15
4R	8294	1050	6365	700	3355	420	6365	700	0.17	0.17
5R	6610	1050	5069	700	2664	420	5069	700	0.20	0.20
6R	5515	1050	4205	723	2239	420	4205	723	0.25	0.25
7R	4666	1050	3787	723	2016	420	3744	723	0.30	0.30
8R	4147	1166	3197	793	1670	467	3197	793	0.35	0.35

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



X600⁺-83302TE

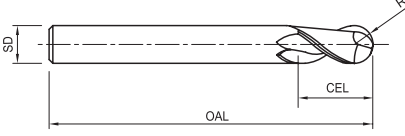
◆ Ball Nose Type - 2F End Mills 30°- Long Shank-2D

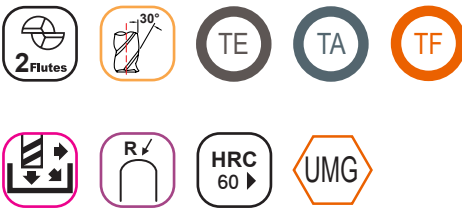
Mold Processing
& Parts Processing

X600⁺-21354TE

◆ 4F Corner Radius Type- End Mills 35°-3D

Mold Processing
& Parts Processing





Radius(mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H

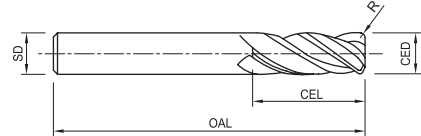
h6 (unit : mm)

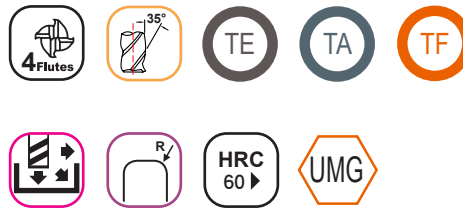
★ Customized size, Coating, Inches size service available.

X600 ⁺ -83302TE	Radius	CEL	SD	OAL
	2R	8	4	75
	3R	12	6	75
	4R	16	8	100
	5R	20	10	100
	6R	24	12	100
	7R	28	16	150
	8R	32		150
	10R	40	20	150

WORKING MATERIAL	HARDENED STEEL								REFERENCE	
HARDNESS	~40HRC		40~45HRC		45~55HRC		55~60HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
2R	12000	977	9000	665	5000	399	9000	665	0.13	0.13
3R	11088	997	8438	665	4493	399	8438	665	0.15	0.15
4R	8294	997	6365	665	3355	399	6365	665	0.17	0.17
5R	6610	997	5069	665	2664	399	5069	665	0.20	0.20
6R	5515	997	4205	687	2239	399	4205	687	0.25	0.25
7R	4666	997	3787	687	2016	399	3744	687	0.30	0.30
8R	4147	997	3197	753	1670	443	3197	753	0.35	0.35
10R	3880	1108	3050	700	1590	460	3050	780	0.40	0.40

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.





Dia.(mm)	Tolerance (mm)
Above 4	Up to 12
	0~-0.025

※ 3 types of coating to choose from

P	M	K	N	S	H

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

X600 ⁺ -21354TE	CED	CEL	SD	OAL	Radius
	4	12	4	50	0.2R
					0.5R
	6	18	6	50	0.2R
					0.5R
	8	24	8	70	0.2R
					0.5R
	10	30	10	75	0.2R
					0.5R
	12	36	12	80	0.2R
					0.5R

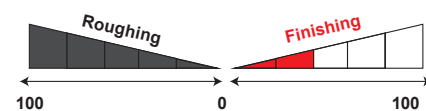
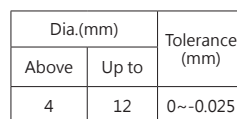
WORKING MATERIAL	HARDENED STEEL								REFERENCE	
HARDNESS	25~35HRC		25~45HRC		45~50HRC		50~60HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	10086	606	6304	380	4728	285	5671	341	0.17	0.17
6MM	6724	539	4202	337	3152	253	3782	301	0.20	0.2
8MM	5041	503	3152	317	2364	238	2835	285	0.25	0.25
10MM	4035	566	2523	352	1889	265	2269	257	0.30	0.3
12MM	3362	539	2103	337	1576	253	1889	301	0.35	0.35

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

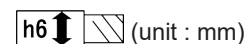


Mold Processing & Parts Processing

- ◆ Corner Radius Type - 4F End Mills 35°
- ◆ Long Shank-3D



★ Customized size, Coating, Inches size service available.



X600+ -23354TE	CED	CEL	SD	OAL	Radius
	4	12	4	75	0.2R
					0.5R
	6	16	6	75	0.2R
					0.5R
	8	20	8	100	0.2R
					0.5R
	10	30	10	100	0.2R
					0.5R
	12	32	12	100	0.2R
0.5R					

WORKING MATERIAL	HARDENED STEEL								REFERENCE	
HARDNESS	25~35HRC		25~45HRC		45~50HRC		50~60HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	10086	576	6304	361	4728	271	5671	324	0.17	0.17
6MM	6724	512	4202	320	3152	241	3782	286	0.20	0.2
8MM	5041	478	3152	301	2364	226	2835	271	0.25	0.25
10MM	4035	538	2523	335	1889	252	2269	244	0.30	0.3
12MM	3362	512	2103	320	1576	241	1889	286	0.35	0.35

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

X550⁺ Series

Mold Processing



! Please kindly visit our CityTools website to check available stock.

Customization available

Customized acceptable !
From **Coating**, **flute**, **Helix angle**, **cutting length**, to **total length**.

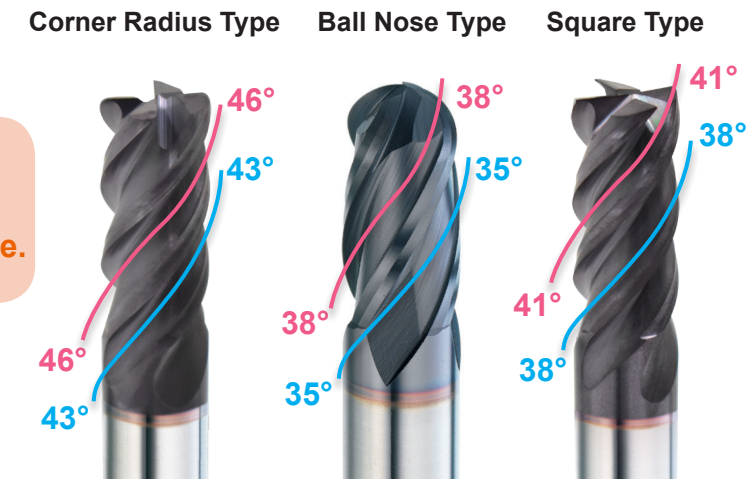
Flute Design

Variable helix angle
Uneven flute

Anti-Vibration
less noise

Ideal for Mild steels,
Cast Irons, Hardened steels
with extended tool life.

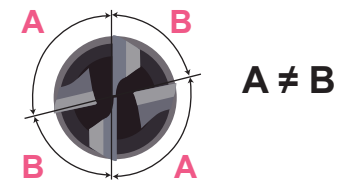
Unique coating
for wear reduction
and heat resistance.



End Mills - Variable helix angle

End Mills- Uneven flute

Anti-Vibration, Providing
smooth and steady chip
evaluation.

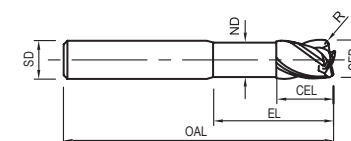


Adjustable helix angle.

Short Flute Provide

Miniature End Mills

Heavy Duty Cutter design



Ideal for cutting different
hard metals.



Adopting high quality carbide.
Applicable for general profiling
applications.



Ideal for heavy duty
cutting operation.



X550⁺-11354TA

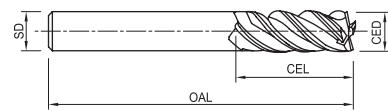
◆ Square Type - 4F End Mills 35°-3D

Mold Processing & Parts Processing

X550⁺-11454TA

◆ Square Type - 4F End Mills 45°-3D

Mold Processing & Parts Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



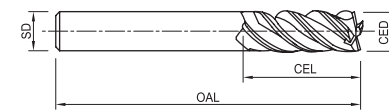
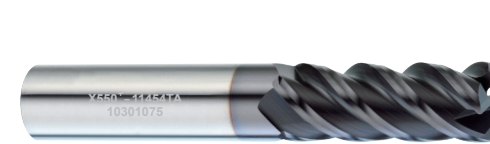
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

X550 ⁺ -11354TA	CED	CEL	SD	OAL
	1	3	4	50
	2	6		
	3	9		
	4	12		
	6	18	6	70
	8	24	8	
	10	30	10	
	12	36	12	
	14	42	16	100
	16	48		
	20	60	20	120

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		40~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	19474	364	12188	221	9129	169	10953	195	1	0.1
2MM	14625	403	9152	241	6864	189	8236	215	2	0.2
3MM	11034	442	6897	276	5174	208	6208	247	4.5	0.3
4MM	8278	497	5174	312	3881	234	4654	280	6	0.4
6MM	5519	442	3448	276	2587	208	3104	247	9	0.6
8MM	4137	413	2587	260	1940	195	2327	234	12	0.8
10MM	3312	465	2070	289	1550	218	1862	240	15	1
12MM	2759	442	1726	276	1294	208	1550	247	18	1.2
14MM	2070	455	1294	286	969	215	1164	257	20	1.4
16MM	1654	429	1034	270	777	202	930	241	24	1.6
20MM	1326	410	829	257	621	195	748	228	30	2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

X550 ⁺ -11454TA	CED	CEL	SD	OAL
	1	3	4	50
	2	6		
	3	9		
	4	12		
	6	18	6	70
	8	24	8	
	10	30	10	
	12	36	12	
	14	42	16	100
	16	48		
	20	60	20	120

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	17976	336	11250	204	8427	156	10110	180	1	0.1
2MM	13500	372	8448	222	6336	174	7602	198	2	0.2
3MM	10185	408	6366	255	4776	192	5730	228	4.5	0.3
4MM	7641	459	4776	288	3582	216	4296	258	6	0.4
6MM	5094	408	3183	255	2388	192	2865	228	9	0.6
8MM	3819	381	2388	240	1791	180	2148	216	12	0.8
10MM	3057	429	1911	267	1431	201	1719	220	15	1
12MM	2547	408	1593	255	1194	192	1431	228	18	1.2
14MM	1911	420	1194	264	894	198	1074	237	20	1.4
16MM	1527	396	954	249	717	186	858	222	24	1.6
20MM	1224	378	765	237	573	180	690	210	30	2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



X550⁺-11406TA

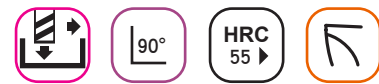
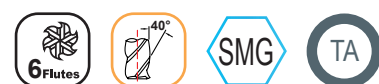
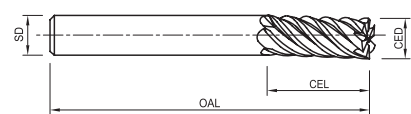
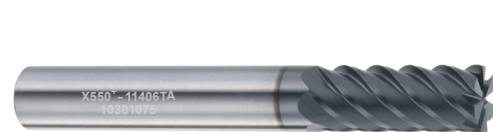
◆ Square Type - 6F End Mills 40°-3D

Mold Processing & Parts Processing

X550⁺-13354TA

◆ Square Type - 4F End Mills 35°- Long Shank-3D

Mold Processing & Parts Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



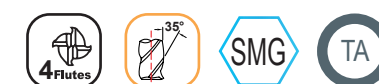
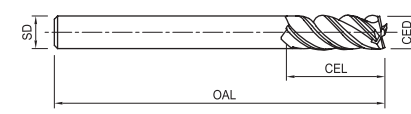
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

X550 ⁺ -11406TA	CED	CEL	SD	OAL
	6	18	6	50
	8	24	8	60
	10	30	10	75
	12	36	12	80
	16	48	16	100
	20	60	20	120

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		40~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
6MM	6685	640	5572	536	4458	430	5572	536	7.5	0.10
8MM	5015	604	4180	504	3345	400	4180	504	12	0.10
10MM	4012	625	3345	520	2673	415	3345	520	15	0.10
12MM	3345	604	2759	504	2226	415	2790	504	18	0.10
16MM	2505	598	2090	504	1670	410	1670	504	24	0.20
20MM	2000	600	1670	499	1350	400	1339	499	20	0.20

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

X550 ⁺ -13354TA	CED	CEL	SD	OAL
	1	3	4	75
	2	6		
	3	9		
	4	12		
	6	18	6	100
	8	24	8	
	10	30	10	
	12	36	12	
	16	48	16	
	20	60	20	150

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	19474	346	12188	210	9129	161	10953	185	1	0.1
2MM	14625	383	9152	228	6864	179	8236	204	2	0.2
3MM	11034	420	6897	262	5174	198	6208	235	4.5	0.3
4MM	8278	472	5174	296	3881	222	4654	266	6	0.4
6MM	5519	420	3448	262	2587	198	3104	235	9	0.6
8MM	4137	392	2587	247	1940	185	2327	222	12	0.8
10MM	3312	442	2070	275	1550	207	1862	290	15	1
12MM	2759	420	1726	262	1294	198	1550	235	18	1.2
16MM	1654	408	1034	256	777	191	930	228	24	1.6
20MM	1326	389	829	244	621	185	748	216	30	2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



X550R⁺-11404TA

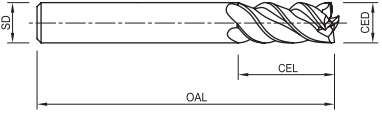
◆ Square Type - 4F Heavy Duty End Mills 40°-2.5D

Mold Processing
& Parts Processing

X550⁺-81302TA

◆ Ball Nose Type - 2F- 30°-2D

Mold Processing
& Parts Processing



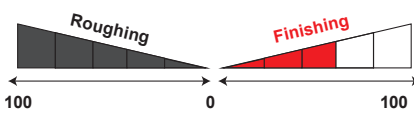


Dia.(mm)		Tolerance (mm)
Above	Up to	
6	12	0~-0.020

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

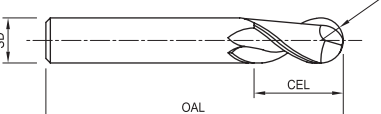


★ Customized size, Coating, Inches size service available.

X550R ⁺ -11404TA	CED	CEL	SD	OAL
	4	10	6	50
	6	15		
	8	20	8	60
	10	25	10	75
	12	30	12	80

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	40~45HRC		45~55HRC		55~60HRC		60~65HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	7284	438	4553	275	3415	206	4096	246	6	0.4
6MM	4856	389	3034	243	2277	183	2731	217	9	0.6
8MM	3641	363	2277	229	1707	172	2048	206	12	0.8
10MM	2914	409	1822	255	1364	192	1639	225	15	1
12MM	2428	389	1519	243	1138	183	1364	217	18	1.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



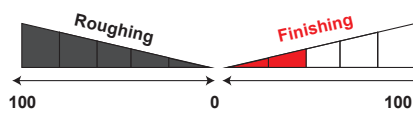


Radius(mm)		Tolerance (mm)
R		
R		±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)



★ Customized size, Coating, Inches size service available.

X550 ⁺ -81302TA	Radius	CEL	SD	OAL
	1R	4	4	50
	2R	8		
	3R	12	6	60
	4R	16	8	
	5R	20	10	75
	6R	24	12	
	7R	32	16	100
	8R	32		

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1R	19320	583	14784	369	7920	175	15000	369	0.07	0.07
2R	13824	700	10536	544	5616	282	10536	544	0.12	0.12
3R	9240	875	7032	583	3744	350	7032	583	0.15	0.15
4R	6912	875	5304	583	2796	350	5304	583	0.17	0.17
5R	5508	875	4224	583	2220	350	4224	583	0.20	0.20
6R	4596	875	3504	603	1866	350	3504	603	0.25	0.25
7R	3888	875	3156	603	1680	350	3120	603	0.30	0.30
8R	3456	972	2664	661	1392	389	2664	661	0.35	0.35

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



X550⁺-83302TA

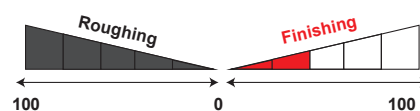
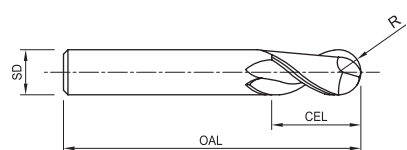
◆ Ball Nose Type - 2F- 30°- Long Shank-2D

Mold Processing & Parts Processing

X550⁺-21354TA

◆ Corner Radius Type - 4F End Mills 35°-3D

Mold Processing & Parts Processing



Radius(mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

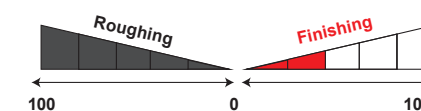
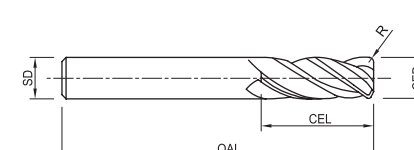
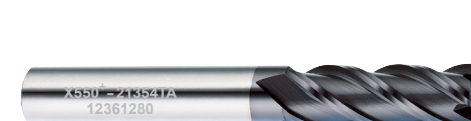
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

X550 ⁺ -83302TA	Radius	CEL	SD	OAL
	3R	12	6	75
	4R	16	8	100
	5R	20	10	100
	6R	24	12	100
	7R	28	16	150
	8R	32	16	150
	10R	40	20	150

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
3R	13824	665	10536	517	5616	268	10536	517	0.12	0.12
4R	9240	831	7032	554	3744	332	7032	554	0.15	0.15
5R	6912	831	5304	554	2796	332	5304	554	0.17	0.17
6R	5508	831	4224	554	2220	332	4224	554	0.20	0.20
7R	4596	831	3504	573	1866	332	3504	573	0.25	0.25
8R	3888	831	3156	573	1680	332	3120	573	0.30	0.30
10R	3456	923	2664	628	1392	369	2664	628	0.35	0.35

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.02

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

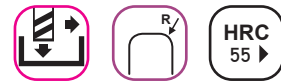
★ Customized size, Coating, Inches size service available.

X550 ⁺ -21354TA	CED	CEL	SD	OAL	Radius
	4	12	4	50	0.2R
					0.5R
	6	18	6	50	0.2R
					0.5R
	8	24	8	60	0.2R
					0.5R
	10	30	10	75	0.2R
					0.5R
	12	36	12	80	0.2R
					0.5R

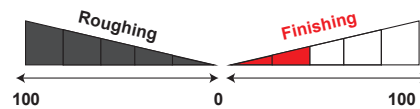
WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	8405	505	5254	317	3940	238	4726	284	0.17	0.17
6MM	5603	449	3501	281	2627	211	3152	251	0.20	0.2
8MM	4201	419	2627	264	1970	198	2363	238	0.25	0.25
10MM	3363	472	2102	294	1574	221	1891	240	0.30	0.3
12MM	2802	449	1752	281	1313	211	1574	251	0.35	0.35

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

- ◆ Corner Radius Type - 4F End Mills 35°
- ◆ Long Shank-3D



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025



P	M	K	N	S	H
●					●

h6  (unit : mm)

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	8405	459	5254	288	3940	216	4726	258	0.6	1.6
6MM	5603	408	3501	255	2627	192	3152	228	0.6	2.4
8MM	4201	381	2627	240	1970	180	2363	216	0.6	3.2
10MM	3363	429	2102	267	1574	201	1891	215	0.6	4.0
12MM	2802	408	1752	255	1313	192	1574	228	0.6	4.8



S500⁺ Series

Parts Processing & General Processing

Cutting edge protection

 with protection

 without protection

 Corner Edge 45°

Flute

 2 Flutes

 3 Flutes

 4 Flutes

 6 Flutes

 4 Flutes

Coating

 TA

 TN

Coating can be applied variously according to client's requirement.

Din

 DIN 6535 HA

 DIN 6535 HB

 DIN 6535 HE

Helix angle 1° / 15° / 25° / 30° / 35° / 40° / 42° / 45°

SMG Fine Grades

⚠ Please kindly visit our CityTools website to check available stock.

Customization available

Customized acceptable !
From **Coating, flute, Helix angle, cutting length, to total length.**

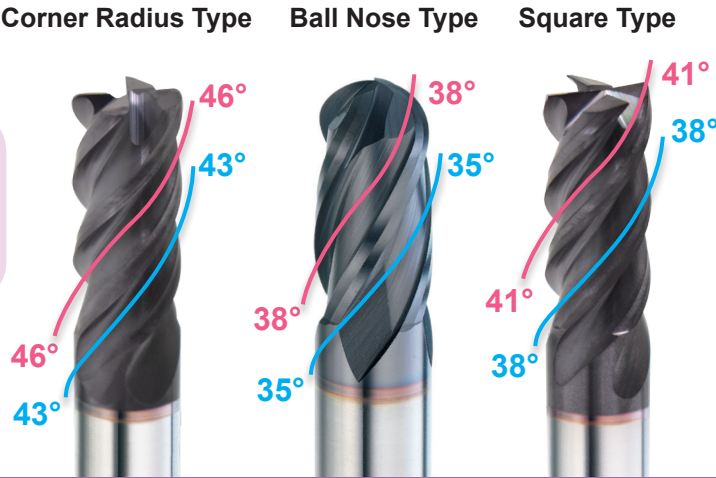
Flute Design

Variable helix angle
Uneven flute

Ideal for Mild steels,
Cast Irons, Hardened steels
with extended tool life.

Anti-Vibration
less noise

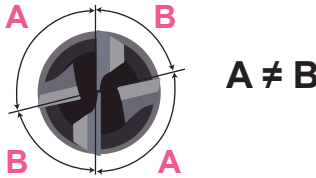
Unique coating
for wear reduction
and heat resistance.



End Mills - Variable helix angle

End Mills- Uneven flute

Anti-Vibration, Providing
smooth and steady chip
evaluation.

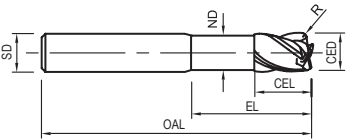


Adjustable helix angle.

Short Flute Provide

Multiple flute design provide

Heavy Duty Cutter design



Ideal for cutting different
hard metals.



Ideal for high hardness metals and
finishing applications.



Ideal for heavy duty
cutting operation.



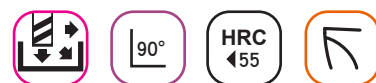
S500M⁺-11352TN

◆ Square Type - 2F Miniature End Mills 35°-2D

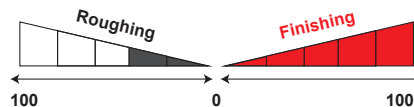
*Parts Processing
& General Processing*



Dia.(mm)		Tolerance (mm)
Above	Up to	
0.2	0.5	0~-0.005
0.5	0.9	0~-0.010



※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500M ⁺ -11352TN	CED	CEL	SD	OAL
	0.2	0.4	4	50
	0.3	0.6		
	0.4	0.8		
	0.5	1		
	0.6	1.2		
	0.7	1.4		
	0.8	1.6		
	0.9	1.8		

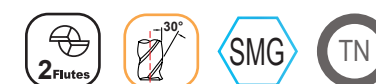
WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL				CAST IRON		REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		--			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.2MM	37200	125	37200	115	37200	100	37200	60	0.01	0.04
0.3MM	37200	190	37200	170	37200	150	37200	90	0.01	0.04
0.4MM	37200	250	37200	230	37200	200	37200	120	0.02	0.04
0.5MM	37200	320	37200	290	37200	250	37200	130	0.03	0.10
0.6MM	37200	380	37200	345	37200	310	37200	130	0.04	0.10
0.7MM	37200	512	37200	460	37200	370	37200	130	0.05	0.10
0.8MM	37200	690	37200	610	37200	440	37200	130	0.06	0.10
0.9MM	37200	715	37200	645	37200	510	37200	135	0.06	0.20

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

S500M⁺-81302TN

◆ Ball Nose Type - 2F Miniature 30°

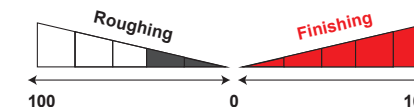
*Parts Processing
& General Processing*



Radius(mm)	Tolerance (mm)
R	±0.005



※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500M ⁺ -81302TN	Radius	CEL	SD	OAL
	0.15R	0.6	4	50
	0.2R	0.85		
	0.25R	1		
	0.3R	1.2		
	0.35R	1.4		
	0.4R	1.6		
	0.45R	1.8		
	0.45R	1.8		

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.15R	42000	672	42000	672	42000	672	42000	504	0.02	0.06
0.2R	42000	1512	42000	1344	42000	1344	42000	1008	0.02	0.08
0.25R	42000	2352	42000	2184	42000	2184	42000	1274	0.03	0.1
0.3R	42000	3024	42000	2688	42000	2114	42000	1288	0.04	0.12
0.35R	42000	3528	42000	3192	42000	2051	42000	1215	0.04	0.14
0.4R	42000	4536	42000	4032	42000	2114	42000	1253	0.05	0.16
0.45R	42000	5299	42000	4186	42000	2170	42000	1225	0.06	0.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



RP500⁺-14352TN

◆ Square Type - 2F End Mills 35°-Long Neck

Parts Processing & General Processing

Dia.(mm)		Tolerance (mm)
Above	Up to	
0.5	1	0~-0.015
1	3	0~-0.020
3	6	0~-0.025

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

RP500 ⁺ -14352TN	CED	CEL	EL	SD	OAL
	0.5	0.7	4	4	50
			6		
			8		
	1	1.5	6	4	50
			8		
			10		
	1.5	2.3	6	4	50
			8		
			10		
	2	3	6	4	50
			8		
			10		

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL				CAST IRON		REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		--			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.5MM	22000	400	22000	350	22000	220	20000	180	0.4	0.1
1MM	20000	700	19000	600	18000	500	15000	300	0.06	0.2
1.5MM	20000	700	19000	600	18000	500	15000	300	0.06	0.2
2MM	19000	900	16000	800	15000	700	12000	400	0.08	0.3

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

RP500⁺-84302TN

◆ Ball Nose Type - 2F End Mills 30°- Long-Neck

Parts Processing & General Processing

Radius(mm)		Tolerance (mm)
R		

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

RP500 ⁺ -84302TN	Radius	CEL	EL	SD	OAL
	0.25R	0.35	4	4	50
			6		
			8		
	0.5R	0.75	6	4	50
			8		
			10		
	0.75R	1.1	6	4	50
			8		
			10		
	1R	1.5	6	4	50
			8		
			10		

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL				CAST IRON		REFERENCE	
HARDNESS	25~35 HRC		25~35 HRC		35~50 HRC		--		--	
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.25R	9100	74	9100	70	6650	42	5565	21	0.04	0.16
0.5R	6230	88	6230	81	4445	49	3710	21	0.06	0.24
0.75R	4655	95	4655	81	3325	56	2765	28	0.08	0.32
1R	3570	97	3535	84	2520	60	2100	28	0.10	0.40

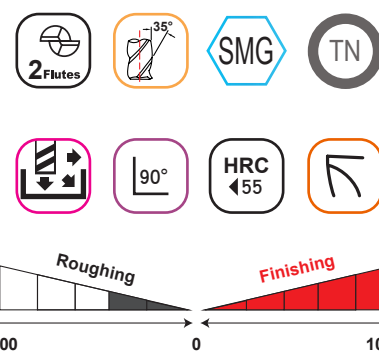
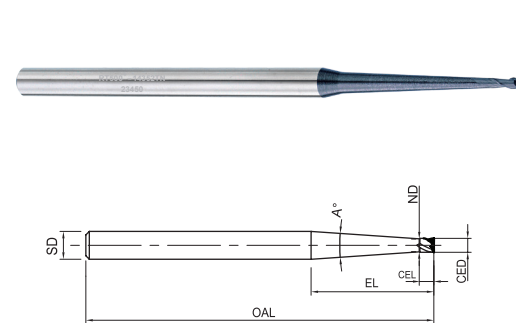
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



RT500⁺-14352TN

◆ Square Type - 2F End Mills 35°-Taper Neck

*Parts Processing
& General Processing*



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	8	0~-0.025

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

RT500 ⁺ -14352TN	CED	CEL	EL	SD	OAL	Angle Taper
	0.5	0.7	8	4	50	1.5°
	1	1.5	10	4	50	1.5°
	1.5	2.3	12	4	50	1°
	2	3	14	4	50	1°

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL				CAST IRON		REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		--			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.5MM	20000	700	19000	600	18000	500	15000	300	0.06	0.2
1MM	20000	700	19000	600	18000	500	15000	300	0.06	0.2
1.5MM	19000	900	16000	800	15000	700	12000	400	0.08	0.3
2MM	14000	900	13000	800	12000	700	9000	500	0.11	0.4

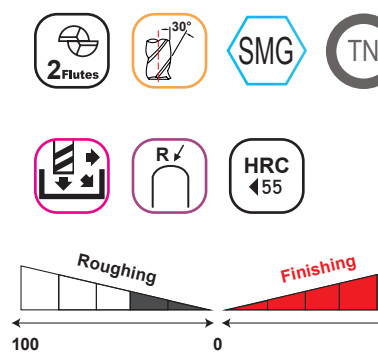
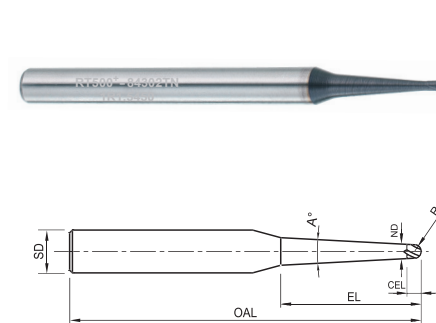
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



RT500⁺-84302TN

◆ Ball Nose Type - 2F End Mills 30°-Taper Neck

*Parts Processing
& General Processing*



Radius(mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

RT500 ⁺ -84302TN	Radius	CEL	EL	SD	OAL	Angle Taper
	0.25R	0.35	8	4	50	1°
	0.5R	0.75	10	4	50	2°
	0.75R	1.1	12	4	50	0.5°
	1R	1.5	14	4	50	1°
						1°

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL				CAST IRON		REFERENCE	
HARDNESS	25~35 HRC		25~35 HRC		35~50 HRC		--		--	
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
0.25R	4500	90	4400	75	3000	50	2500	25	0.04	0.15
0.5R	4655	95	4655	81	3325	56	2765	28	0.08	0.32
0.75R	3185	102	3185	91	2205	63	1855	28	0.12	0.48
1R	2310	130	2310	95	1645	63	1365	28	0.14	0.52

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

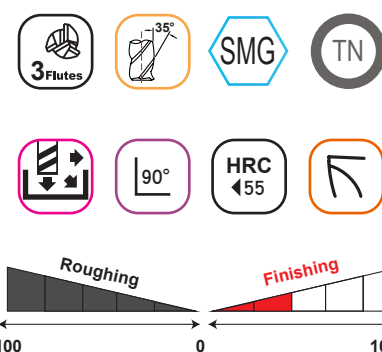
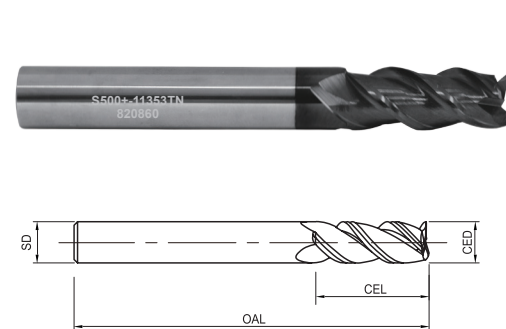




S500⁺-11353TN

◆ Square Type - 3F End Mills 35°

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -11353TN	CED	CEL	SD	OAL
	1	3	4	50
	2	6		
	3	8		
	4	12		
	6	16	6	60
	8	20	8	
	10	30	10	75
	12	32	12	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	14980	280	9375	170	7023	130	8425	150	1	0.8
2MM	11250	310	7040	185	5280	145	6335	165	2	1.1
3MM	8488	340	5305	213	3980	160	4775	190	4.5	1.4
4MM	6368	383	3980	240	2985	180	3580	215	6	1.8
6MM	4245	340	2653	213	1990	160	2388	190	9	1.8
8MM	3183	318	1990	200	1493	150	1790	180	12	3.6
10MM	2548	358	1593	223	1193	168	1433	190	15	4.5
12MM	2123	340	1328	213	995	160	1193	190	18	5.4

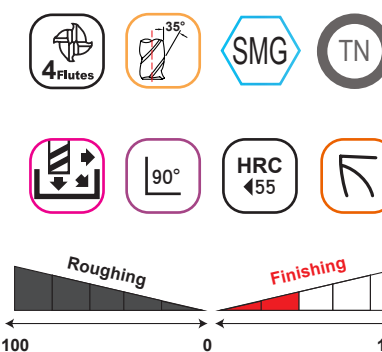
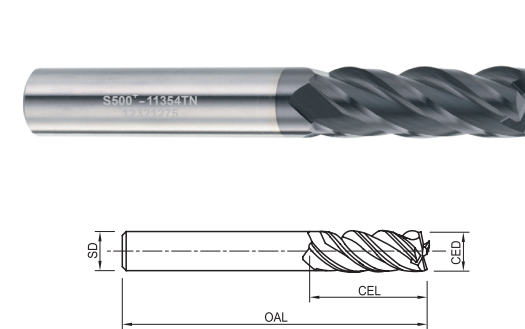
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-11354TN

◆ Square Type - 4F End Mills 35°

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -11354TN	CED	CEL	SD	OAL
	1	3	4	50
	1.5	4.5		
	2	6		
	2.5	8		
	3	8		
	3.5	11		
	4	12	6	60
	4.5	14		
	5	15		
	6	16		
	7	16	8	75
	8	20	8	
	9	27	10	
	10	30	10	
	11	30	12	100
	12	32	12	
	16	45	16	
	20		20	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	17976	336	11250	204	8427	156	10110	180	1	0.1
2MM	13500	372	8448	222	6336	174	7602	198	2	0.2
3MM	10185	408	6366	255	4776	192	5730	228	4.5	0.3
4MM	7641	459	4776	288	3582	216	4296	258	6	0.4
6MM	5094	408	3183	255	2388	192	2865	228	9	0.6
8MM	3819	381	2388	240	1791	180	2148	216	12	0.8
10MM	3057	429	1911	267	1431	201	1719	228	15	1
12MM	2547	408	1593	255	1194	192	1431	228	18	1.2
16MM	1527	396	954	249	717	186	858	222	24	1.6
20MM	1224	378	765	237	573	180	690	210	30	2

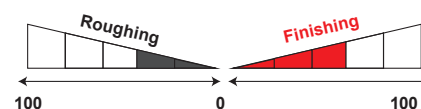
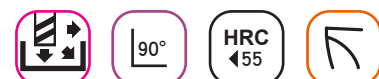
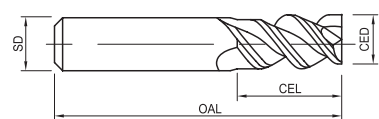
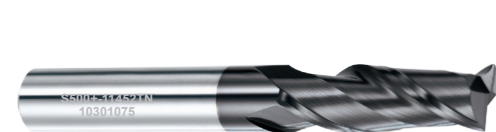
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-11452TN

◆ Square Type - 2F End Mills 45°

*Parts Processing
& General Processing*



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -11452TN	CED	CEL	SD	OAL
	1	3	4	50
	2	6		
	3	8		
	4	12		
	6	16	6	60
	8	20	8	
	10	30	10	75
	12	32	12	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
1MM	15050	143	8400	86	6740	67	16800	266	1	1
2MM	11320	152	6350	86	5065	67	12650	266	2	1
3MM	8540	162	4770	91	3820	71	9550	271	3	1
4MM	6400	181	3580	103	2865	83	7160	271	4	2
6MM	4270	204	2390	91	1900	71	4770	228	6	3
8MM	3200	181	1790	103	1430	83	3590	238	8	4
10MM	2560	195	1430	95	1150	77	2870	247	10	5
12MM	2135	204	1190	103	955	83	2390	252	12	5

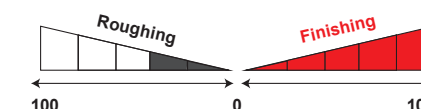
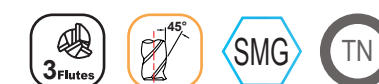
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-11453TN

◆ Square Type - 3F End Mills 45°

*Parts Processing
& General Processing*



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -11453TN	CED	CEL	SD	OAL
	1	3	4	50
	2	6		
	3	8		
	4	12		
	6	16	6	60
	8	20	8	
	10	30	10	75
	12	32	12	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
1MM	14980	280	9375	170	7023	130	8425	150	1	1
2MM	11250	310	7040	185	5280	145	6335	165	2	1
3MM	8488	340	5305	213	3980	160	4775	190	5	1
4MM	6368	383	3980	240	2985	180	3580	215	6	2
6MM	4245	340	2653	213	1990	160	2388	190	9	2
8MM	3183	318	1990	200	1493	150	1790	180	12	4
10MM	2548	358	1593	223	1193	168	1433	185	15	5
12MM	2123	340	1328	213	995	160	1193	190	18	5

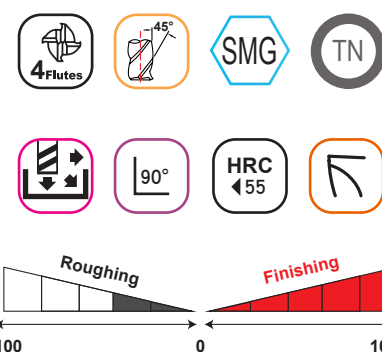
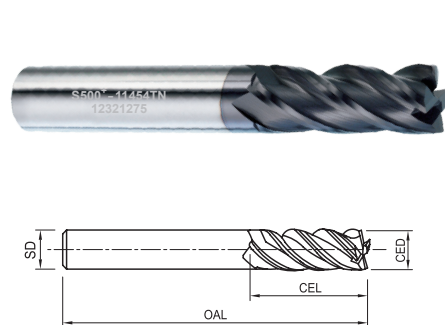
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-11454TN

◆ Square Type - 4F End Mills 45°

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
1	3	0~-0.020
3	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500+ -11454TN	CED	CEL	SD	OAL
	1	3	4	50
	1.5	4.5		
	2	6		
	2.5	8		
	3	8		
	3.5	11		
	4	12		
	4.5	14	6	60
	5	15	6	
	6	16	6	
	7	16	8	
	8	20	8	
	9	27	10	
	10	30	10	
	11	30	12	
	12	32	12	
	16	45	16	100
	20		20	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	19474	364	12188	221	9129	169	10953	195	1	0.1
2MM	14625	403	9152	241	6864	189	8236	215	2	0.2
3MM	11034	442	6897	276	5174	208	6208	247	4.5	0.3
4MM	8278	497	5174	312	3881	234	4654	280	6	0.4
6MM	5519	442	3448	276	2587	208	3104	247	9	0.6
8MM	4137	413	2587	260	1940	195	2327	234	12	0.8
10MM	3312	465	2070	289	1550	218	1862	235	15	1
12MM	2759	442	1726	276	1294	208	1550	247	18	1.2
16MM	1654	429	1034	270	777	202	930	241	24	1.6
20MM	1326	410	829	257	621	195	748	228	30	2

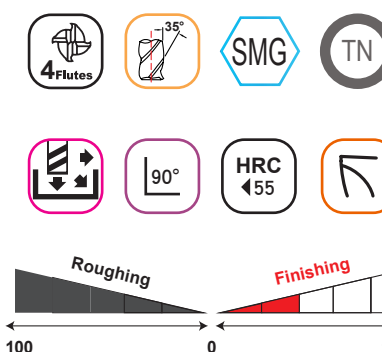
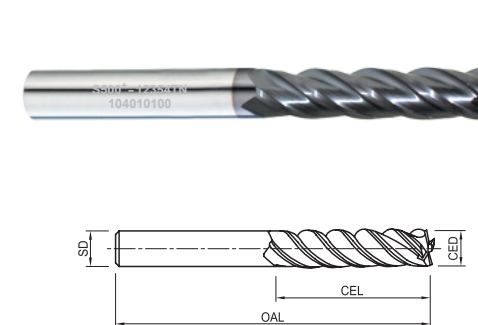
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-12354TN

◆ Square Type - 4F Long Flute 35°-4D

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -12354TN	CED	CEL	SD	OAL
	6	24	6	75
	8	32	8	100
	10	40	10	100
	12	48	12	100
	16	64	16	150
	20	80	20	150

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
6MM	3420	135	2880	100	1800	75	3420	325	6	2.7
8MM	2800	135	2340	100	1440	75	2880	360	8	3.6
10MM	2160	155	1800	110	1080	75	2160	360	10	4.5
12MM	1710	155	1440	120	870	75	1710	380	12	5.4
16MM	1440	155	1200	120	720	75	1440	400	14	7.2
20MM	1400	160	1200	120	720	75	1440	400	16	9

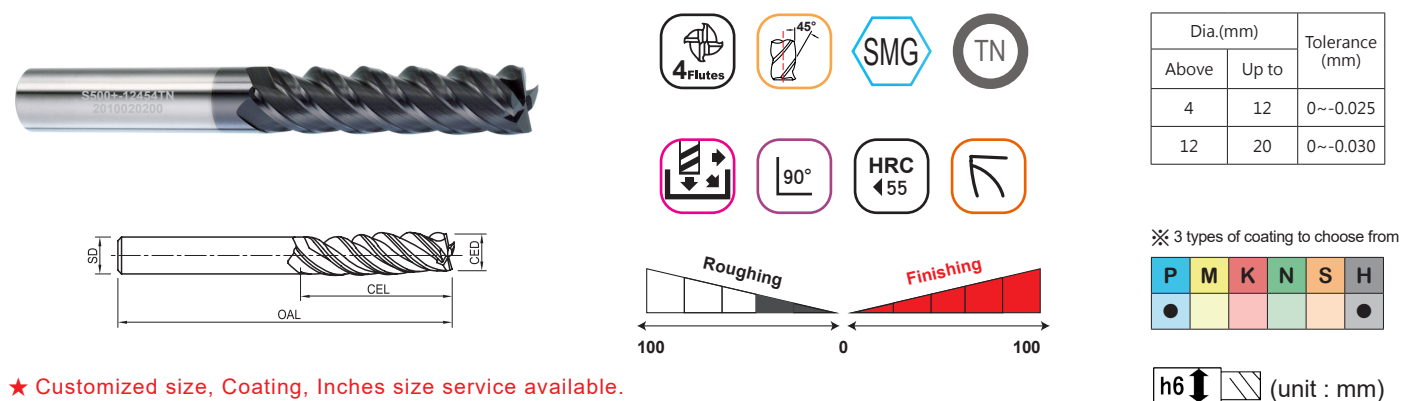
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-12454TN

◆ Square Type - 4F Long Flute 45°-5D

Parts Processing & General Processing



★ Customized size, Coating, Inches size service available.

S500 ⁺ -12454TN	CED	CEL	SD	OAL
	6	30	6	75
	8	40	8	100
	10	50	10	
	12	60	12	120
	16	80	16	150
	20	100	20	200

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
6MM	3420	128	2880	95	1800	71	3420	309	6	2.7
8MM	2800	128	2340	95	1440	71	2880	342	8	3.6
10MM	2160	147	1800	105	1080	71	2160	342	10	4.5
12MM	1710	147	1440	114	870	71	1710	361	12	5.4
16MM	1440	147	1200	114	720	71	1440	380	14	7.2
20MM	1400	152	1200	114	720	71	1440	380	16	9

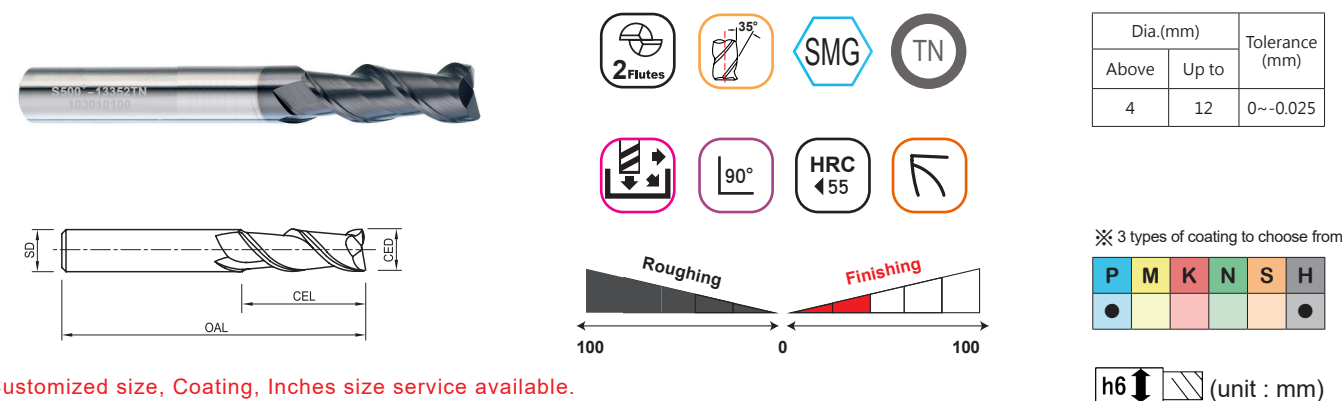
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-13352TN

◆ Square Type - 2F End Mills 35° - Long Shank-3D

Parts Processing & General Processing



★ Customized size, Coating, Inches size service available.

S500+ -13352TN	CED	CEL	SD	OAL
	4	12	4	75
	5	15	6	
	6	18		
	8	24	8	100
	10	30	10	
	12	36	12	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	4320	135	3600	100	2160	65	4320	290	4	1.8
6MM	2800	135	2340	100	1440	75	2880	360	8	3.6
8MM	2160	155	1800	110	1080	75	2160	360	10	4.5
10MM	1710	155	1440	120	870	75	1710	380	12	5.4
12MM	1440	155	1200	120	720	75	1440	400	14	7.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-13354TN

◆ Square Type - 4F End Mills 35° -Long Shank-3D

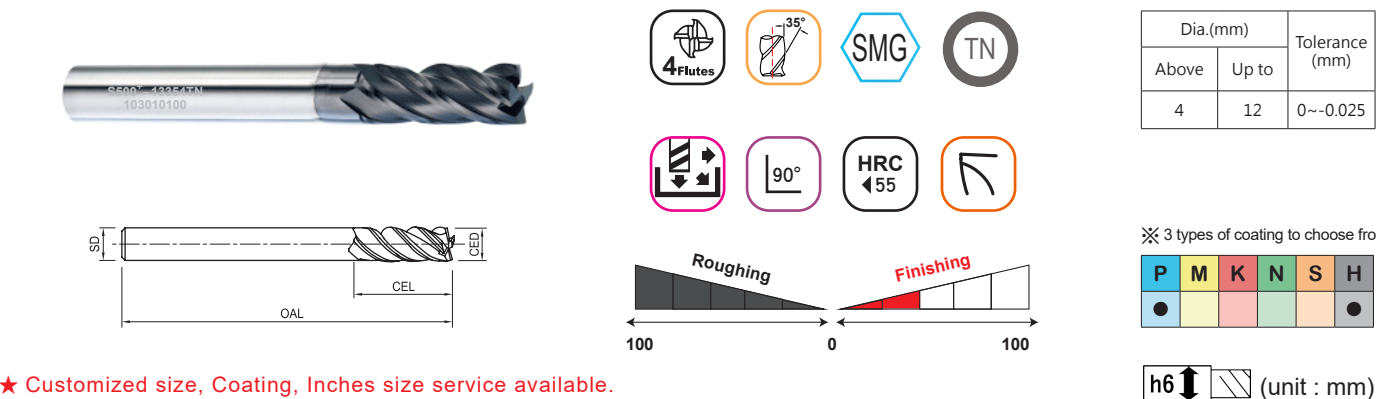
Parts Processing
& General Processing



S500⁺-11456TN

◆ Square Type - 6F End Mills 45°-3D

Parts Processing
& General Processing

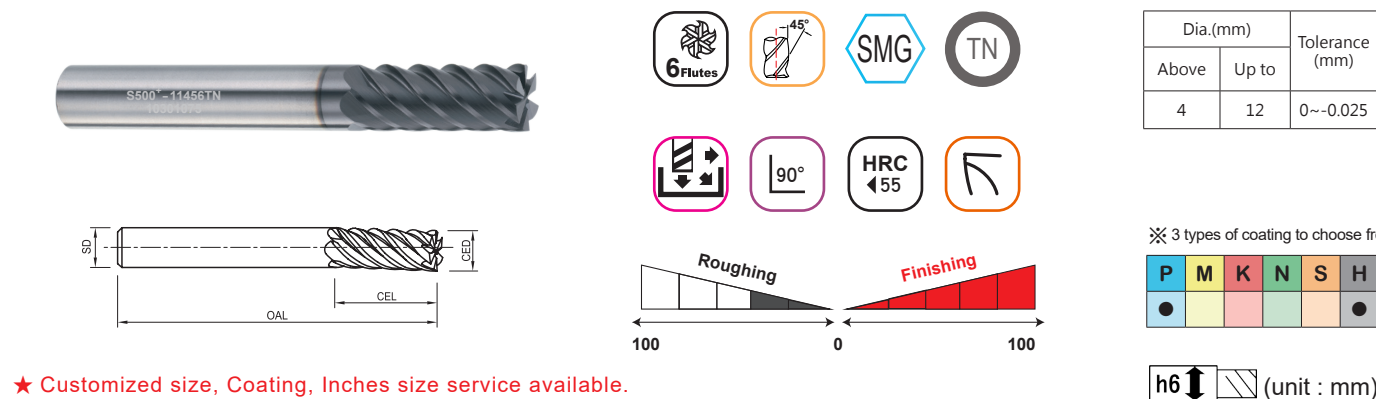


★ Customized size, Coating, Inches size service available.

S500+ -13354TN	CED	CEL	SD	OAL
	4	12	4	75
	5	15	6	
	6	18		
	8	24	8	100
	10	30	10	
	12	36	12	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
4MM	7800	1350	7800	1150	5800	490	7000	800	8	0.4
6MM	7450	1350	7450	1150	5300	510	6350	840	9	0.6
8MM	5550	1250	5550	1050	4000	540	4800	765	12	0.8
10MM	4450	1250	4450	1050	3200	510	3800	765	15	1
12MM	3700	1250	3700	1050	2650	510	3200	765	18	1.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



★ Customized size, Coating, Inches size service available.

S500 ⁺ -11456TN	CED	CEL /	SD	OAL
	6	18	6	50
	8	24	8	70
	10	30	10	75
	12	36	12	80
	16	48	16	100
	20	60	20	120

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
6MM	6077	582	5065	487	4053	391	5065	487	7.5	0.10
8MM	4559	549	3800	458	3041	363	3800	458	12	0.10
10MM	3647	568	3041	473	2430	377	3041	473	15	0.10
12MM	3041	549	2535	458	2024	363	2535	458	18	0.10
16MM	2277	544	1900	458	1518	363	1518	458	24	0.20
20MM	1824	549	1518	454	1217	368	1217	454	30	0.20

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500R⁺-11404TN

◆ Square Type - 4F Heavy Duty End Mills 40° -2.5D

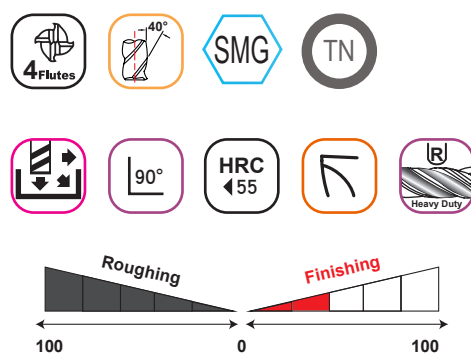
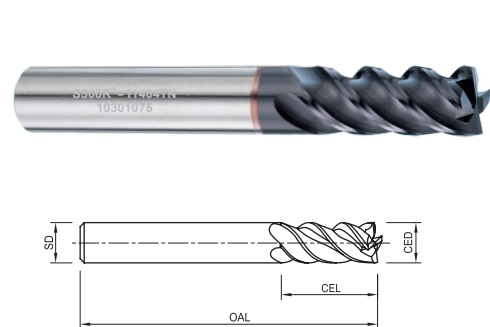
Parts Processing & General Processing



S500I⁺-11354TA

◆ Square Type - 4F End Mills 35°
◆ Uneven flute-2.5D

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

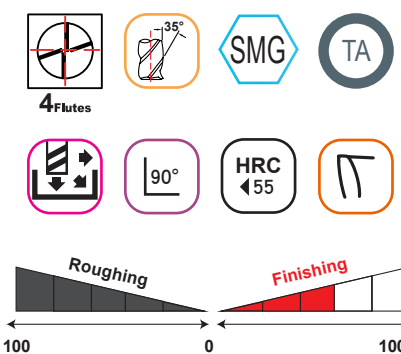
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500R ⁺ -11404TN	CED	CEL	SD	OAL
	4	10	6	50
	6	15		
	8	20	8	60
	10	25	10	75
	12	30	12	80

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	6410	385	4007	242	3005	181	3604	216	6	0.4
6MM	4274	342	2670	214	2003	161	2404	191	9	0.6
8MM	3204	320	2003	201	1503	151	1802	181	12	0.8
10MM	2565	360	1603	224	1201	169	1442	198	15	1
12MM	2137	342	1336	214	1002	161	1201	191	18	1.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
6	12	0~-0.020

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500I ⁺ -11354TA	CED	CEL	SD	OAL
	1	2.5	4	50
	2	5	4	50
	3	7.5	4	50
	4	10	6	50
	6	15		
	8	20	8	60
	10	25	10	75
	12	25	12	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	13000	820	12500	550	10500	400	8400	240	1	1.2
2MM	12500	980	11000	590	9700	440	7200	290	2	1.4
3MM	11000	1050	10000	620	9100	490	6500	320	3	1.6
4MM	10400	1190	9600	750	8000	520	6000	354	4	1.8
6MM	6900	1350	6400	1000	5400	700	4200	415	6	2.7
8MM	5200	1150	4800	1000	4200	690	3500	440	8	3.6
10MM	4100	1070	3800	890	3400	650	2900	435	10	4.5
12MM	3500	910	3200	830	2900	500	2450	410	12	5.4

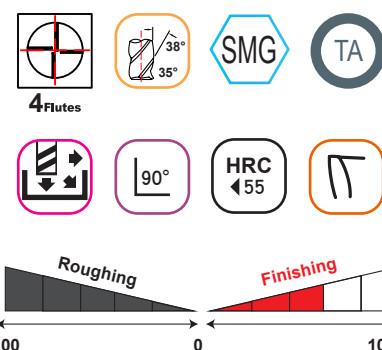
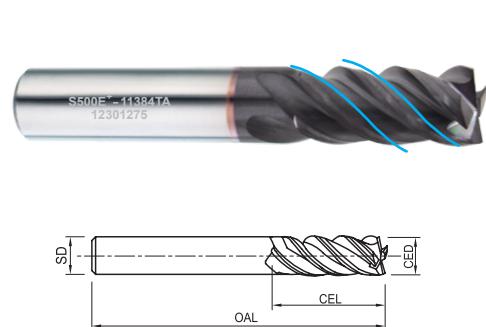
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500E⁺-11384TA

- ◆ Square Type - 4F End Mills 35°/38°
- ◆ Variable helix angle-2.5D

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
6	12	0~-0.020

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

	CED	CEL	SD	OAL
S500E ⁺ -11384TA	1	2.5	4	50
	2	5	4	50
	3	7.5	4	50
	4	10	6	50
	6	15		
	8	20	8	60
	10	25	10	75
	12	30	12	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~65HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	13000	820	12500	550	10500	400	8400	240	1	1.2
2MM	12500	980	11000	590	9700	440	7200	290	2	1.4
3MM	11000	1050	10000	620	9100	490	6500	320	3	1.6
4MM	10400	1190	9600	750	8000	520	6000	345	4	1.8
6MM	6900	1350	6400	1000	5400	700	4200	415	6	2.7
8MM	5200	1150	4800	1000	4200	690	3500	440	8	3.6
10MM	4100	1070	3800	890	3400	650	2900	435	10	4.5
12MM	3500	910	3200	930	2900	500	2450	410	12	5.4

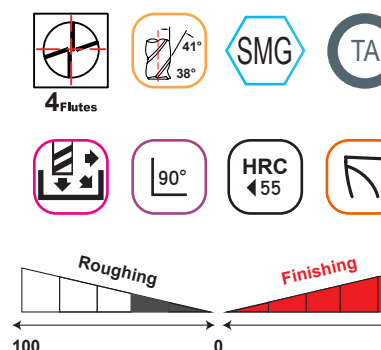
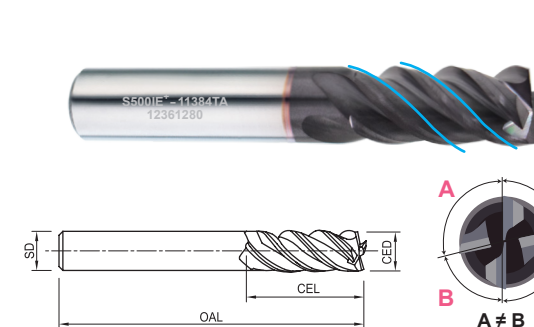
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500IE⁺-11384TA

- ◆ Square Type - 4F End Mills 38°/41°
- ◆ Uneven flute and Variable helix angle

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	20	0~-0.020

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

	CED	CEL	SD	OAL
S500IE ⁺ -11384TA	1	3	4	50
	2	6	4	50
	3	9	6	50
	4	12	6	50
	6	18		
	8	24	8	65
	10	30	10	75
	12	36	12	80
	16	48	16	100
	20	60	20	120

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	15500	850	14000	560	12000	400	8100	250	1	1.2
2MM	14000	950	13500	630	11500	450	8400	280	2	1.4
3MM	13800	1080	12700	700	10800	500	8000	310	3	1.6
4MM	10400	1190	9600	750	8000	520	6000	345	4	1.8
6MM	6900	1350	6400	1000	5400	700	4200	415	6	2.7
8MM	5200	1150	4800	1000	4200	690	3500	440	8	3.6
10MM	4100	1070	3800	890	3400	650	2900	435	10	4.5
12MM	3500	910	3200	830	2900	500	2450	410	12	5.4
16MM	2590	670	2380	620	2200	400	1800	330	14	7.2
20MM	2070	540	1910	500	1800	280	1500	300	16	9

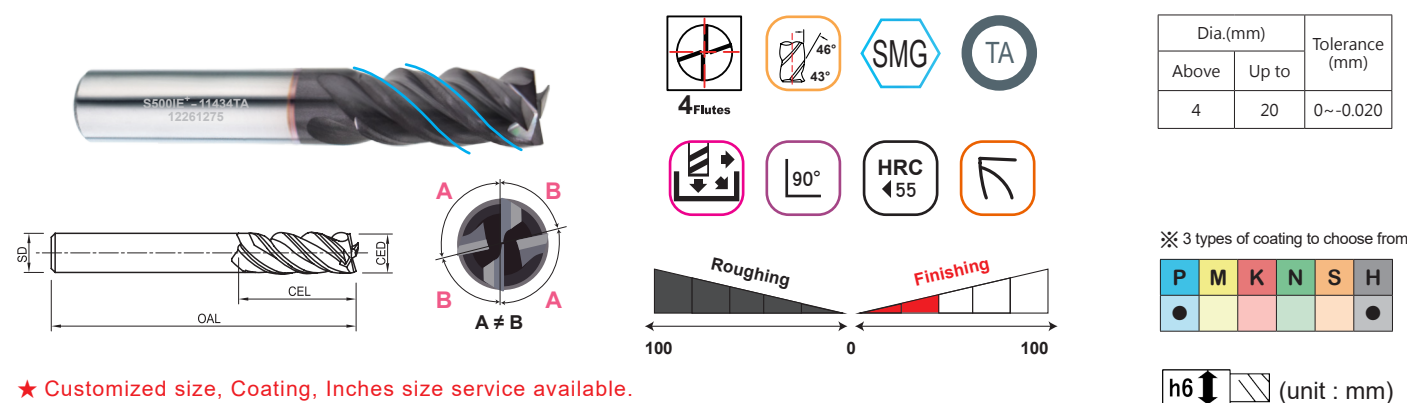
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500IE⁺-11434TA

- ◆ Square Type - 4F End Mills 43°/46°
- ◆ Uneven flute and Variable helix angle

Parts Processing & General Processing



S500IE ⁺ -11434TA	CED	CEL	SD	OAL
	1	2	4	50
	2	4	4	50
	3	7	6	50
	4	9	6	50
	6	13		
	8	18	8	60
	10	22	10	75
	12	26	12	75
	16	34	16	100
	20	42	20	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		--	
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
1MM	15500	850	14000	560	12000	400	8900	250	1	1.2
2MM	14000	950	13500	630	11500	450	8400	280	2	1.4
3MM	13800	1080	12700	700	10800	500	8000	310	3	1.6
4MM	10400	1190	9600	750	8000	520	6000	345	4	1.8
6MM	6900	1350	6400	1000	5400	700	4200	415	6	2.7
8MM	5200	1150	4800	1000	4200	690	3500	440	8	3.6
10MM	4100	1070	3800	890	3400	650	3900	435	10	4.5
12MM	3500	910	3200	830	2900	500	2450	410	12	5.4
16MM	2590	670	2380	620	2200	400	1800	330	14	7.2
20MM	2070	540	1910	500	1800	280	1500	300	16	9

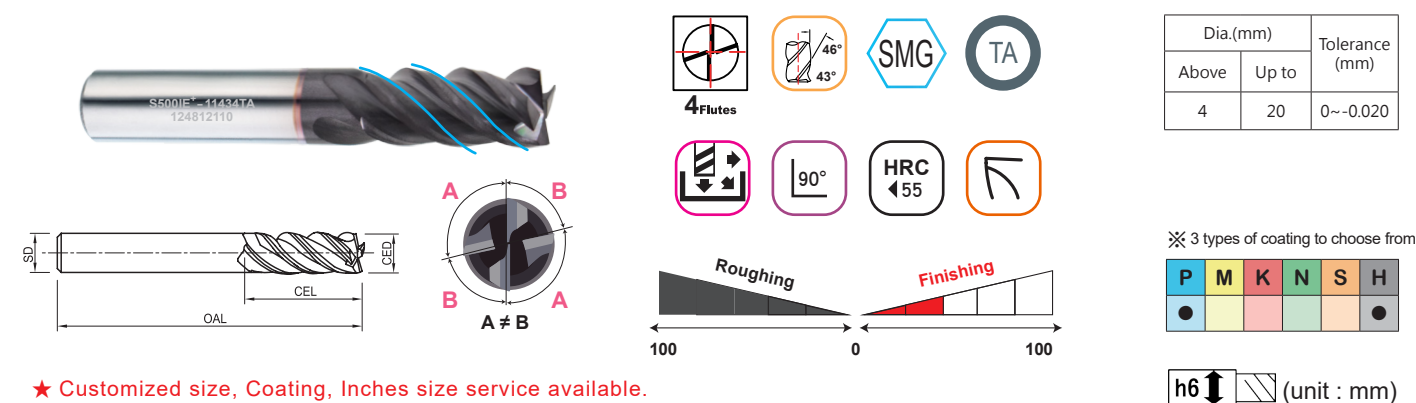
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500IE⁺-11434TA

- ◆ Square Type - 4F End Mills 43°/46°
- ◆ Uneven flute and Variable helix angle-4D

Parts Processing & General Processing



S500IE ⁺ -11434TA	CED	CEL	SD	OAL
	2	8	4	50
	3	12	6	
	4	16	6	55
	5	20	6	60
	6	24	6	65
	8	32	8	90
	10	40	10	100
	12	48	12	110
	16	64	16	140
	20	80	20	160

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		--	
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
2MM	16250	1000	15000	660	11400	400	9370	305	2	1
3MM	13000	1090	11900	700	9500	460	7500	325	3	1.3
4MM	10400	1190	9600	750	8000	520	6000	345	4	1.8
5MM	8300	1290	7600	800	6600	590	4800	360	5	2.0
6MM	6900	1350	6400	1000	5400	700	4200	415	6	2.7
8MM	5200	1150	4800	1000	4200	690	3500	440	8	3.6
10MM	4100	1070	3800	890	3400	650	3900	435	10	4.5
12MM	3500	910	3200	830	2900	500	2450	410	12	5.4
16MM	2590	670	2380	620	2200	400	1800	330	14	7.2
20MM	2070	540	1910	500	1800	280	1500	300	16	9

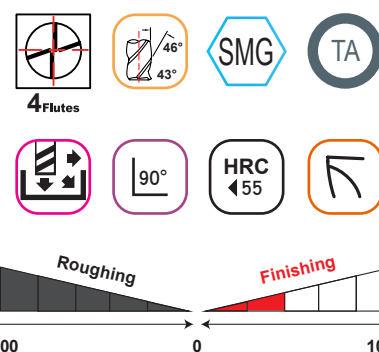
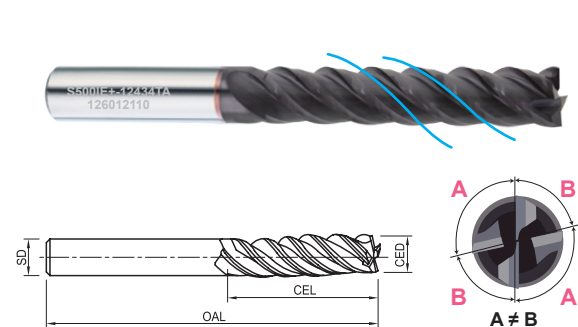
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500IE⁺ - 12434TA

- ◆ Square Type - 4F End Mills 43°/46°-Long flute
- ◆ Uneven flute and Variable helix angle

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	20	0~-0.020

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

	CED	CEL	SD	OAL
S500IE ⁺ -12434TA	4	20	6	60
	6	30		75
	8	40	8	90
	10	50	10	100
	12	60	12	110
	16	80	16	160
	20	100	20	200

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		--	
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	7200	144	6400	130	5600	110	4780	100	4	1.8
6MM	4800	192	4200	170	3700	150	3200	130	6	2.7
8MM	3600	290	3200	260	2800	220	2400	190	8	3.6
10MM	2900	290	2500	250	2200	220	1900	190	10	4.5
12MM	2400	300	2100	250	1900	230	1600	190	12	5.4
16MM	1800	250	1600	220	1400	200	1200	170	14	7.2
20MM	1430	230	1270	200	1100	180	960	150	16	9

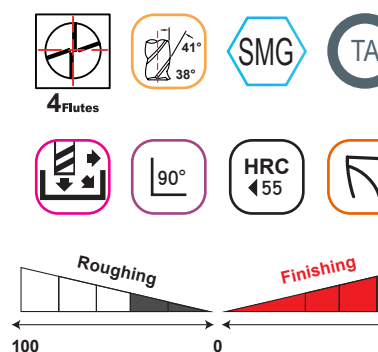
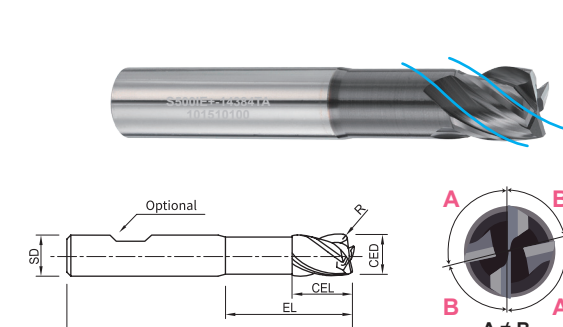
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500IE⁺ - 14384TA

- ◆ Square Type - 4F End Mills 38°/41°
- ◆ Uneven flute and Variable helix angle-1.5D

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
6	12	0~-0.020

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

	CED	CEL	EL	SD	OAL
S500IE ⁺ -14384TA	6	9	30	6	70
	8	12	40	8	80
	10	15	50	10	100
	12	18	60	12	110

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		--	
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
6MM	4700	860	3180	400	2120	370	4770	860	8	3.6
8MM	3580	860	2380	410	1590	370	3580	860	10	4.5
10MM	2860	880	1910	410	1270	360	2860	880	12	5.4
12MM	2380	810	1590	380	1050	340	2380	810	14	7.2

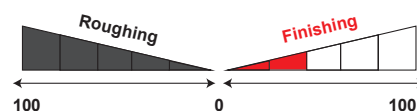
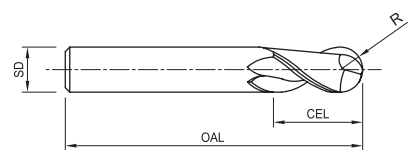
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-81302TN

◆ Ball Nose Type - 2F- 30° -2D

Parts Processing & General Processing



Radius(mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -81302TN	Radius	CEL	SD	OAL
	1R	4	4	50
	2R	8	4	50
	3R	12	6	60
	4R	16	8	60
	5R	20	10	75
	6R	24	12	75
	7R	28	16	100
	8R	32	16	100
	10R	40	20	100

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
1R	16100	486	12320	308	6600	146	12500	308	0.07	0.07
2R	11520	583	8780	454	4680	235	8780	454	0.12	0.12
3R	7700	729	5860	486	3120	292	5860	486	0.15	0.15
4R	5760	729	4420	486	2330	292	4420	486	0.17	0.17
5R	4590	729	3520	486	1850	292	3520	486	0.20	0.20
6R	3830	729	2920	502	1555	292	2920	502	0.25	0.25
7R	3810	740	2910	505	1500	295	2900	505	0.28	0.28
8R	3800	750	2900	510	1450	300	2850	510	0.30	0.30
10R	3750	760	2850	525	1350	310	2800	520	0.35	0.35

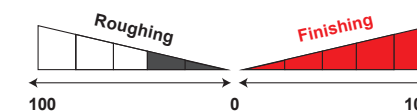
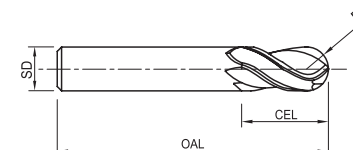
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-81304TN

◆ Ball Nose Type - 4F- 30° -2D

Parts Processing & General Processing



Radius(mm)	Tolerance (mm)
R	±0.01

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -81304TN	Radius	CEL	SD	OAL
	1R	4	4	50
	2R	8	4	50
	3R	12	6	60
	4R	16	8	60
	5R	20	10	75
	6R	24	12	75
	7R	28	16	100
	8R	32	16	100
	10R	40	20	100

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
1R	17710	600	13552	380	7260	180	13750	380	0.07	0.07
2R	12672	720	9658	560	5148	290	9658	560	0.12	0.12
3R	8470	900	6446	600	3432	360	6446	600	0.15	0.15
4R	6336	900	4862	600	2563	360	4862	600	0.17	0.17
5R	5049	900	3872	600	2035	360	3872	600	0.20	0.2
6R	4870	900	3212	620	2000	360	3600	620	0.25	0.25
7R	4750	900	3200	620	1980	360	3590	620	0.27	0.27
8R	4610	900	3150	620	1950	360	3550	620	0.30	0.30
10R	4500	910	3000	630	1900	370	3500	630	0.35	0.35

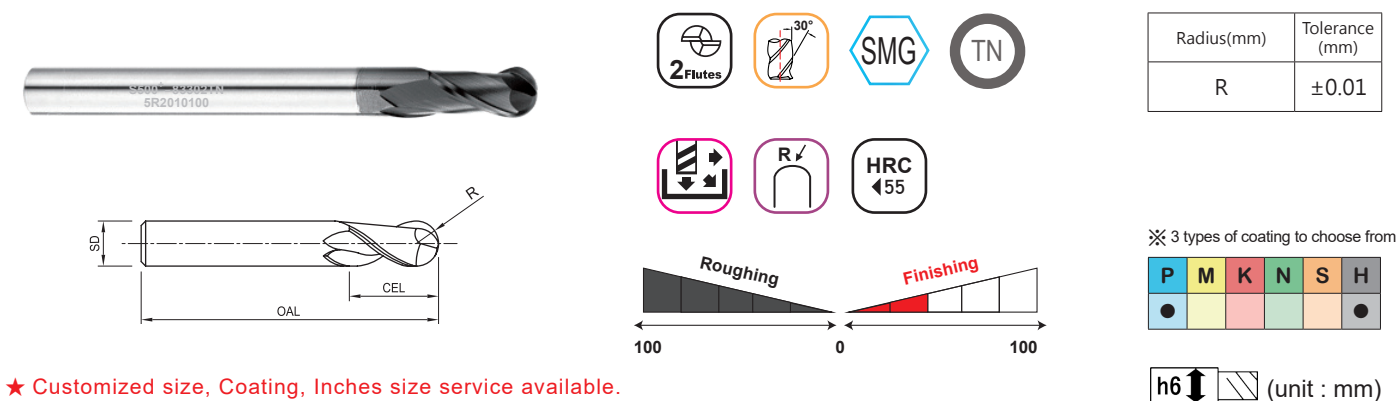
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-83302TN

◆ Ball Nose Type - 2F End Mills 30° -Long Shank

Parts Processing & General Processing



★ Customized size, Coating, Inches size service available.

S500 ⁺ -83302TN	Radius	CEL	SD	OAL
	3R	12	6	75
	4R	16	8	100
	5R	20	10	100
	6R	24	12	100
	7R	28	16	150
	8R	32	16	150
	10R	40	20	150

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
3R	5860	600	3750	450	3120	360	5860	600	0.15	0.15
4R	4420	600	2800	450	2330	360	4420	600	0.17	0.17
5R	3520	600	2260	450	1850	360	3521	600	0.20	0.20
6R	2920	750	1888	470	1550	360	2920	600	0.25	0.25
7R	2900	790	1750	480	1510	365	2850	605	0.28	0.28
8R	2800	800	1500	490	1500	370	2800	610	0.30	0.30
10R	2700	810	1450	500	1450	380	2750	620	0.35	0.35

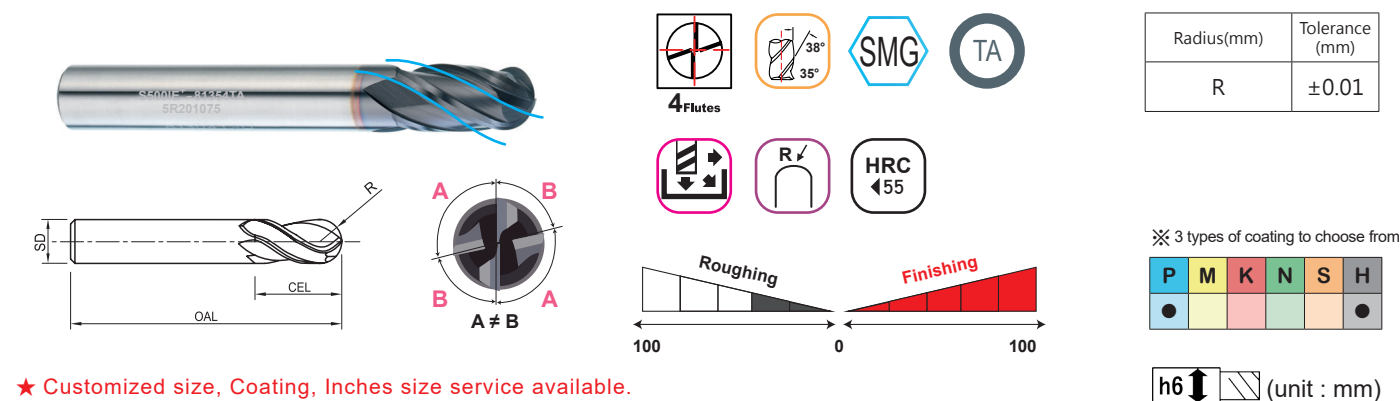
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500IE⁺-81354TA

◆ Ball NoseType - 4F -35°/38°
◆ Uneven flute and Variable helix angle

Parts Processing & General Processing



★ Customized size, Coating, Inches size service available.

S500IE ⁺ -81354TA	Radius	CEL	SD	OAL
	2R	8	4	50
	3R	12	6	50
	4R	16	8	60
	5R	20	10	75
	6R	24	12	75

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
2R	13300	750	10200	580	5400	300	10150	590	0.12	0.12
3R	8890	940	6800	630	3600	370	6800	630	0.15	0.15
4R	6650	940	5100	630	2700	370	5100	630	0.17	0.17
5R	5300	940	4100	630	2150	370	4100	630	0.20	0.20
6R	4450	940	3400	650	1790	370	3400	650	0.25	0.25

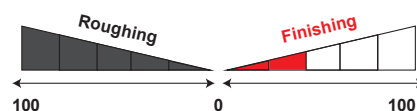
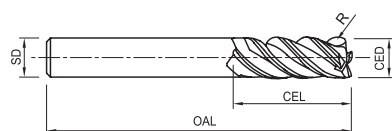
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-21354TN

◆ Corner Radius Type - 4F End Mills 35°

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -21354TN	CED	CEL	SD	OAL	Radius
	4	12	4	50	0.2R
					0.5R
	6	16	6	50	0.2R
					0.5R
	8	20	8	60	0.2R
					0.5R
	10	30	10	75	0.2R
					0.5R
	12	32	12	75	0.2R
					0.5R

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
4MM	7004	421	4378	264	3284	198	3938	237	0.17	0.17
6MM	4670	374	2918	234	2189	176	2626	209	0.20	0.2
8MM	3501	349	2189	220	1642	165	1969	198	0.25	0.25
10MM	2802	393	1752	245	1312	184	1576	180	0.30	0.3
12MM	2335	374	1460	234	1095	176	1312	209	0.35	0.35

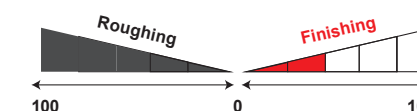
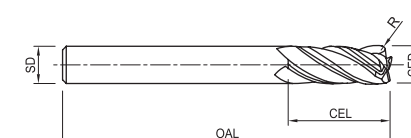
※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



S500⁺-23354TN

◆ Corner Radius Type - 4F End Mills 35°
◆ Long Shank-3D

Parts Processing & General Processing



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025

※ 3 types of coating to choose from

P	M	K	N	S	H
●	●	●	●	●	●

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

S500 ⁺ -23354TN	CED	CEL	SD	OAL	Radius
	4	12	4	75	0.2R
					0.5R
	6	18	6	75	0.2R
					0.5R
	8	24	8	100	0.2R
					0.5R
	10	30	10	100	0.2R
					0.5R
	12	36	12	100	0.2R
					0.5R

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC		a _p	a _e
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED		
4MM	7004	383	4378	240	3284	180	3938	215	0.6	1.6
6MM	4670	340	2918	213	2189	160	2626	190	0.6	2.4
8MM	3501	318	2189	200	1642	150	1969	180	0.6	3.2
10MM	2802	358	1752	223	1312	168	1576	185	0.6	4.0
12MM	2335	340	1460	213	1095	160	1312	190	0.6	4.8

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



h6   (unit : mm)

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

Specialized Series

Series	Page
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Aluminum



Designed for Aluminum & copper alloys,with good cutting performance and tool life.

P.86~91

Stainless Steels



Designed specifically for stainless steels,with high quality carbide and coating. °

P.92~94

Titanium Alloys



Designed specifically for titanium, with high quality carbide and coating.

P.95~97

Series	Page
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Roughing End Mills



Designed specifically for Roughing End Mills,with high quality carbide and cutting.

P.98~99

Spot Drills



Spot drill design with high quality carbide performance and tool life.

P.100

Center Drills



Designed specifically for center drilling with high quality carbide and coating.

P.101

Chamfering End Mills



Designed specifically for chamfering with high quality carbide and coating.

P.101~102

Series	Page
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Corner Radius Cutters



Designed specifically for corner radius operations with high quality carbide and coating.

P.103

Groove Cutters



Designed specifically for grooving, with high quality carbide and coating.

P.103

Carbide Drills



Adopting high quality carbide and coating.Ideal for machining most steels.

P.104~105

Carbide Hard Cut Drills



Designed specifically for removing grind the remaining tap in the hole.

P.106

Series	Page
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High Speed Steel Series



Tools designed for special purpose. We provide customers various option for different cutting needs.

P.107~109

High Speed Steel Spot Drills



Spot drill design with high quality carbide performance and tool life.

P.110

Carbide Spiral Cutter



Designed specifically for chamfering with high quality carbide and coating.

P.111

Carbide Spiral Cutter



Designed for Chamfering,achieves perfect surface with excellent durability.

P.106



AC100⁺-11452

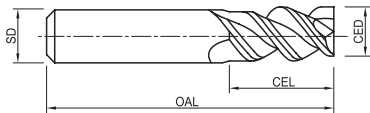
◆ Square Type - 2F End Mills 45°

Aluminum

AC100⁺-11453

◆ Square Type - 3F End Mills 45°

Aluminum



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

P	M	K	N	S	H

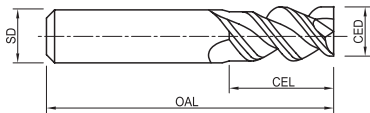
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

AC100 ⁺ -11452	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	60
	10	30	10	75
	12	32	12	
	16	45	16	100

WORKING MATERIAL	Aluminum Alloy A7075		Aluminum Alloy Si13#		Copper Alloy		REFERENCE	
	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
DIAMETER								
4MM	13175	616	14493	678	13328	680	4	1.8
6MM	8925	706	9818	776	10625	850	6	2.7
8MM	6758	757	7433	832	8925	850	8	3.6
10MM	5398	846	5937	930	6715	935	10	4.5
12MM	4505	893	4956	982	5398	935	12	5.4
16MM	3358	893	3693	982	3965	935	14	7.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

P	M	K	N	S	H

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

AC100 ⁺ -11453	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	60
	10	30	10	75
	12	32	12	
	16	45	16	100

WORKING MATERIAL	Aluminum Alloy A7075		Aluminum Alloy Si13#		Copper Alloy		REFERENCE	
	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
DIAMETER								
4MM	15500	725	17050	798	15680	800	6	1.8
6MM	10500	830	11550	913	12500	1000	9	1.8
8MM	7950	890	8745	979	10500	1000	12	3.6
10MM	6350	995	6985	1095	7900	1100	15	4.5
12MM	5300	1050	5830	1155	6350	1100	18	5.4
16MM	3950	1050	4345	1155	4665	1100	20	6.5

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



AC100⁺-11552

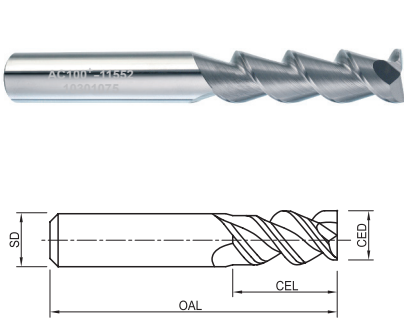
◆ Square Type - 2F End Mills 55°

Aluminum

AC100⁺-11553

◆ Square Type - 3F End Mills 55°

Aluminum



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



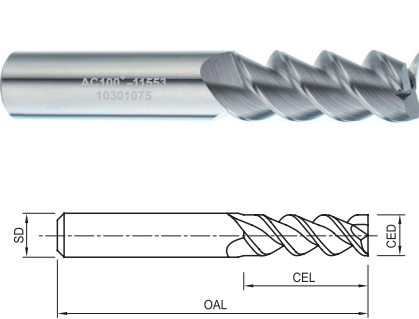
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

AC100 ⁺ -11552	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	60
	10	30	10	75
	12	32	12	
	16	45	16	100

WORKING MATERIAL	Aluminum Alloy A7075		Aluminum Alloy Si13#		Copper Alloy		REFERENCE	
	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
DIAMETER								
4MM	14493	555	15942	610	14661	612	4	1.8
6MM	9818	635	10799	698	11688	765	6	2.7
8MM	7433	681	8177	749	9818	765	8	3.6
10MM	5937	761	6531	837	7387	842	10	4.5
12MM	4956	803	5451	884	5937	842	12	5.4
16MM	3693	803	4063	884	4362	842	14	7.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

AC100 ⁺ -11553	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	60
	10	30	10	75
	12	32	12	
	16	45	16	100

WORKING MATERIAL	Aluminum Alloy A7075		Aluminum Alloy Si13#		Copper Alloy		REFERENCE	
	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
DIAMETER								
4MM	15942	610	17536	671	16127	673	6	1.8
6MM	10799	698	11879	768	12856	842	9	1.8
8MM	8177	749	8994	824	10799	842	12	3.6
10MM	6531	837	7184	921	8125	926	15	4.5
12MM	5451	884	5996	972	6531	926	18	5.4
16MM	4063	884	4469	972	4798	926	20	6.5

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



AC100RN⁺-11403

◆ Square Type-3F Aluminum Heavy Duty Operation End Mills 40°

Aluminum



AC100IEN⁺-11433

◆ Square Type - 3F End Mills 43°/44°/45°
◆ Uneven flute and Variable helix angle

Aluminum



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

P	M	K	N	S	H
			●		

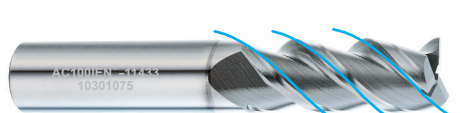
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

AC100RN ⁺ -11403	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	
	10	30	10	75
	12	32	12	
	16	45	16	100

WORKING MATERIAL	Aluminum Alloy A7075		Aluminum Alloy Si13#		Copper Alloy		REFERENCE	
	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	19080	1860	20034	1953	14280	2100	9	2.4
6MM	12720	1920	13356	2016	9540	2160	12	3.2
8MM	9540	2340	10017	2457	7140	2700	15	4
10MM	7620	2100	8001	2205	5700	2400	18	4.8
12MM	6360	1920	6678	2016	4740	2280	18	4.8
16MM	5500	1850	6350	1900	4500	2150	21	5.6

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

P	M	K	N	S	H
			●		

h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

AC100IEN ⁺ -11433	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	
	10	30	10	75
	12	32	12	
	16	45	16	100

WORKING MATERIAL	Aluminum Alloy A7075		Aluminum Alloy Si13#		Copper Alloy		REFERENCE	
	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	11100	730	15900	1050	11655	767	6	1.8
6MM	7400	560	10500	800	7770	585	9	1.8
8MM	5600	490	8000	700	5880	515	12	3.6
10MM	4500	525	6500	750	4725	551	15	4.5
12MM	3700	560	5500	800	3885	588	18	5.4
16MM	2800	560	4000	800	2940	588	20	6.5

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



CS100⁺-11404TE

◆ Square Type - 4F End Mills 40°

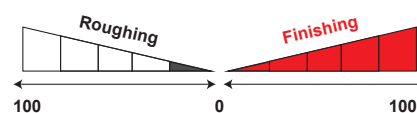
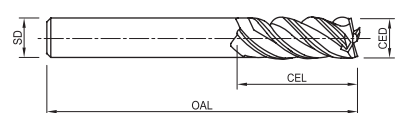
Stainless Steels



CS100IE⁺-11434TE

◆ Square Type - 4F End Mills 43°/46°
◆ Uneven flute and Variable helix angle-2.5D

Stainless Steels



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



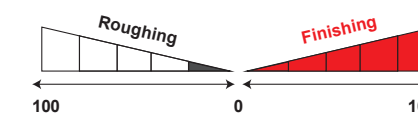
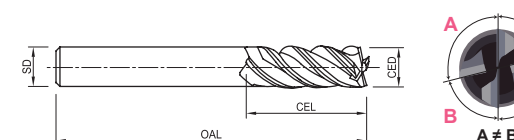
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

CS100 ⁺ -11404TE	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	60
	10	30	10	75
	12	32	12	

WORKING MATERIAL	Stainless Steel		Stainless Steel		REFERENCE	
HARDNESS	Regular		High Speed			
DIAMETER	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	3295	126	3987	139	6	0.4
6MM	2185	109	2644	120	9	0.6
8MM	1645	126	1990	139	12	0.8
10MM	1323	117	1600	129	15	1
12MM	1098	126	1329	139	18	1.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

CS100IE ⁺ -11434TE	CED	CEL	SD	OAL
	4	10	4	50
	6	15	6	
	8	20	8	60
	10	25	10	75
	12	30	12	

WORKING MATERIAL	Stainless Steel		Stainless Steel		REFERENCE	
HARDNESS	Regular		High Speed			
DIAMETER	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	3789	145	4585	160	6	0.4
6MM	2513	125	3040	138	9	0.6
8MM	1891	145	2288	160	12	0.8
10MM	1521	135	1840	149	15	1
12MM	1263	145	1528	160	18	1.2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



CS300IE⁺-21434TE

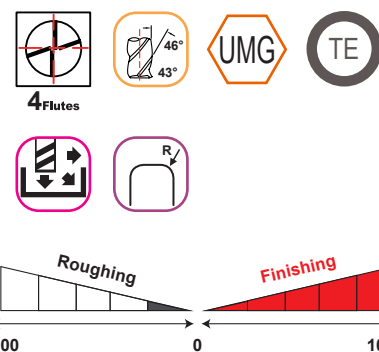
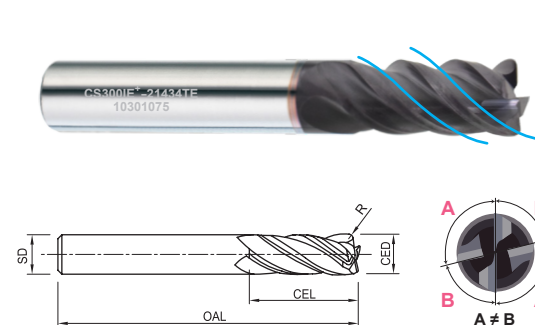
- ◆ Corner Radius Type - 4F End Mills 43°/46°
- ◆ Uneven flute and Variable helix angle-2.5D

Stainless Steels

TI100⁺-11404TE

- ◆ Square Type -4F End Mills 40°

Titanium Alloys



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025

※ 3 types of coating to choose from



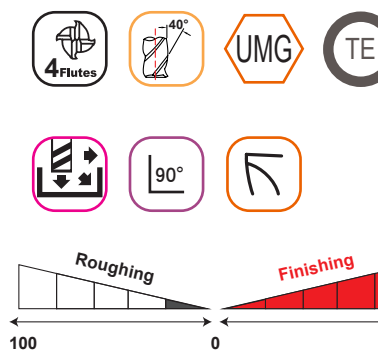
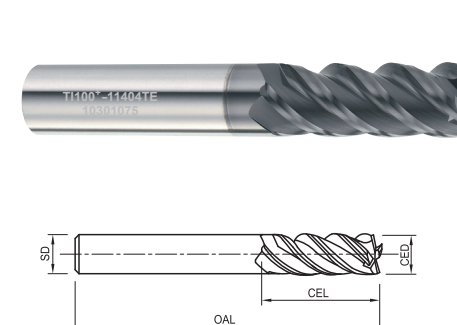
h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

CS300IE ⁺ -21434TE	CED	CEL	SD	OAL	Radius	
	4	10	4	50	0.2R	0.5R
					0.2R	0.5R
	6	15	6	50	0.5R	1R
					0.5R	1R
	8	20	8	60	0.5R	1R
					0.5R	1R
	10	25	10	75	0.5R	1R
					0.5R	1R
	12	30	12	75	0.5R	1R

WORKING MATERIAL	Stainless Steel		Stainless Steel		REFERENCE	
	DIAMETER	R.P.M	FEED	R.P.M	FEED	
	4MM	3789	145	4585	160	6
	6MM	2513	125	3040	138	9
	8MM	1891	145	2288	160	12
	10MM	1521	135	1840	149	15
	12MM	1263	145	1528	160	18

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025

※ 3 types of coating to choose from



h6 (unit : mm)

★ Customized size, Coating, Inches size service available.

TI100 ⁺ -11404TE	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	60
	10	30	10	75
	12	32	12	

WORKING MATERIAL	Titanium Alloy		Inconel		REFERENCE	
	DIAMETER	R.P.M	FEED	R.P.M	FEED	
	4MM	3850	266	4590	160	6
	6MM	3342	249	2507	187	9
	8MM	2507	234	1881	176	12
	10MM	2007	260	1503	196	15
	12MM	1673	249	1254	187	18

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



CUTTING
TOOLS⁺ Metal



TI100IE⁺-11434TE

- ◆ Square Type -4F End Mills 43°/46°
- ◆ Uneven flute and Variable helix angle-2.5D

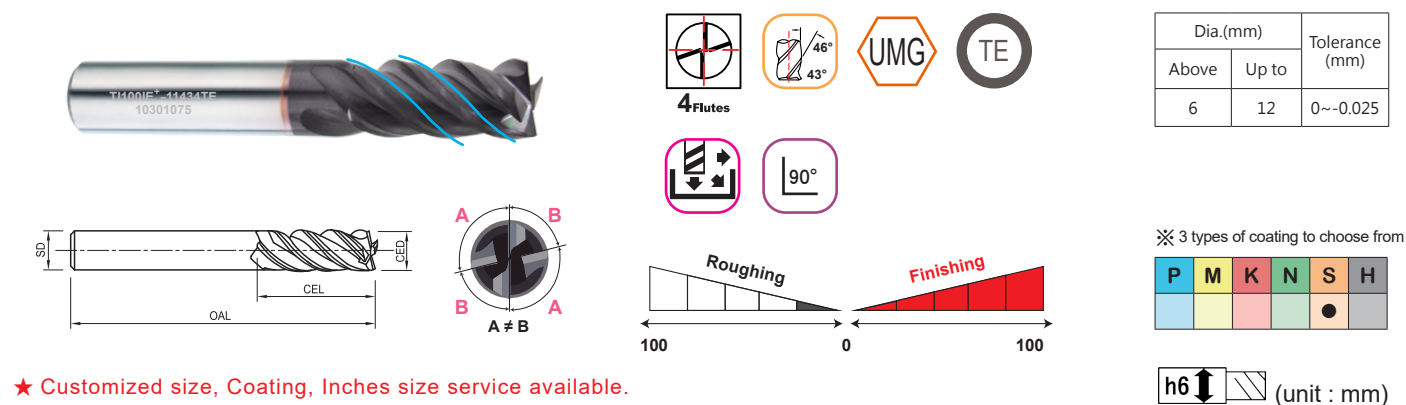
Titanium Alloys



TI100IE⁺-21434TE

- ◆ Corner Radius Type - 4F End Mills 43°/46°
- ◆ Uneven flute and Variable helix angle-2.5D

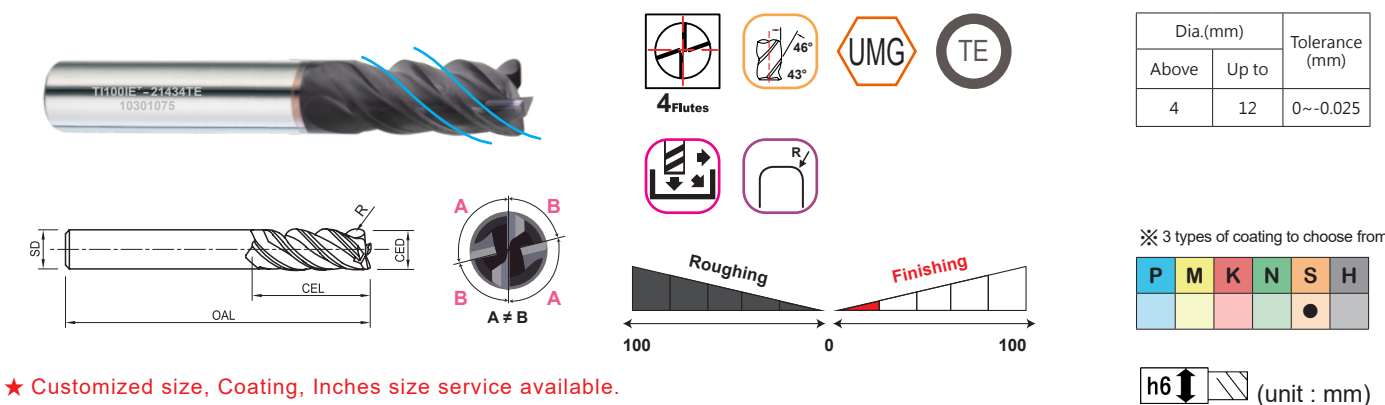
Titanium Alloys



TI100IE ⁺ -11434TE	CED	CEL	SD	OAL
	4	10	4	50
	6	15	6	50
	8	20	8	60
	10	25	10	75
	12	30	12	75

WORKING MATERIAL	Titanium Alloy		Inconel		REFERENCE	
DIAMETER	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	4000	250	3100	180	7	2.1
6MM	3714	276	2786	208	9	2.4
8MM	2786	260	2090	195	12	3.2
10MM	2230	289	1670	218	15	4
12MM	1859	276	1393	208	18	4.8

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



TI100IE ⁺ -21434TE	CED	CEL	SD	OAL	Radius
	4	10	4	50	0.2R
					0.5R
	6	15	6	50	0.2R
					0.5R
	8	20	8	60	0.5R
					1R
	10	25	10	75	0.5R
					1R
	12	30	12	75	0.5R
					1R

WORKING MATERIAL	Titanium Alloy		Inconel		REFERENCE	
DIAMETER	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	4290	250	3500	210	6	1.6
6MM	4085	304	3065	229	9	2.4
8MM	3065	286	2298	215	12	3.2
10MM	2452	318	1836	240	15	4
12MM	2044	304	1532	229	18	4.8

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.

A700*Series

X600*Series

X550*Series

S500*Series

Specialized*Series

HSS*Series



RF100⁺-11304TN

◆ Square Type -4F Roughing End Mills 30°

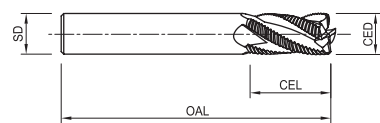
Roughing End Mills



RF100IE⁺-11394TN

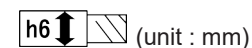
◆ 4F Roughing End Mills 39°/41°
◆ Uneven flute and Variable helix angle

Roughing End Mills



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from

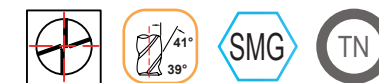
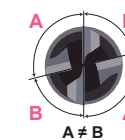
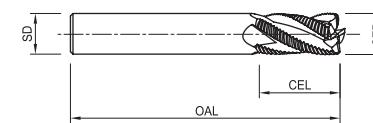


★ Customized size, Coating, Inches size service available.

RF100 ⁺ -11304TN	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	
	10	25	10	75
	12	30	12	80
	14	35	16	100
	16	40		
	20	45	20	

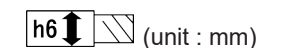
WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	9106	581	5691	364	4269	273	5119	326	6	0.4
6MM	6070	516	3793	323	2846	243	3414	288	9	0.6
8MM	4551	482	2846	304	2134	228	2560	273	12	0.8
10MM	3643	543	2277	338	1705	254	2048	280	15	1
12MM	3035	516	1898	323	1423	243	1705	288	18	1.2
14MM	2500	505	1500	300	1100	239	1450	240	21	1.4
16MM	1820	501	1137	315	854	235	1022	281	24	1.6
20MM	1459	478	912	300	683	228	822	266	30	2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



Dia.(mm)		Tolerance (mm)
Above	Up to	
4	12	0~-0.025
12	20	0~-0.030

※ 3 types of coating to choose from



★ Customized size, Coating, Inches size service available.

RF100IE ⁺ -11394TN	CED	CEL	SD	OAL
	4	12	4	50
	6	16	6	
	8	20	8	
	10	25	10	75
	12	30	12	80
	14	35	16	100
	16	40		
	20	45	20	

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL						REFERENCE	
HARDNESS	25~35HRC		25~35HRC		35~45HRC		45~55HRC			
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	a _p	a _e
4MM	9519	607	5950	381	4463	286	5352	341	6	0.4
6MM	6346	540	3965	337	2975	254	3569	302	9	0.6
8MM	4758	504	2975	317	2231	238	2676	286	12	0.8
10MM	3809	567	2381	353	1783	266	2142	280	15	1
12MM	3173	540	1985	337	1488	254	1783	302	18	1.2
14MM	2500	505	1500	300	1100	239	1450	240	21	1.4
16MM	1902	524	1189	329	893	246	1069	294	24	1.6
20MM	1525	500	953	313	714	238	860	278	30	2

※The cutting parameters is for reference value only. Please adjust it according to your working conditions.



DR100⁺-40902TN

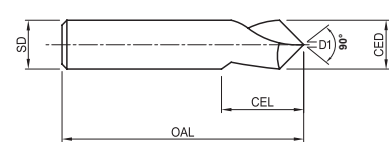
◆ Spot Drills 90°

Spot Drills

DR200⁺-40602TN

◆ Center Drills 60°

Center Drills

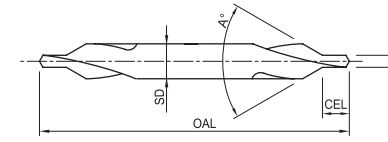


(unit : mm)

	CED	D1	CEL	SD	OAL	Angle
DR100 ⁺ -40902TN	4	0.4	8	4	50	90°
	6	0.6	12	6	70	
	8	0.8	16	8	80	
	10	1.0	20	10	90	
	12	1.2	24	12	110	



★ Customized size, Coating, Inches size service available.



(unit : mm)

DR200+ -40602TN	CED	CEL	SD	OAL	Angle
	1	1.5	3	50	60°
	2	3	5		
	2.5	3.8	6		
	3	4.8	8	60	
	4	6	10		
	5	7.5	12		



★ Customized size, Coating, Inches size service available.

DR100⁺-90120TN

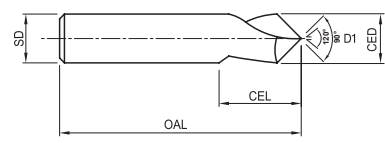
◆ Spot Drills 90°/120°

Spot Drills

CF100⁺-40903TN

◆ 3F Chamfering End Mills 90°

Chamfering End Mills

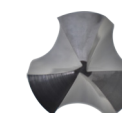
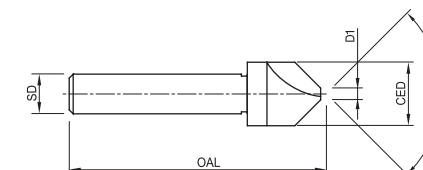


(unit : mm)

	CED	D1	CEL	SD	OAL	Angle
DR100 ⁺ -90120TN	4	1.5	8	4	50	120°/90°
	6	2.0	12	6	70	
	8	2.5	16	8	80	
	10	3.0	20	10	90	
	12	4.0	24	12	110	



★ Customized size, Coating, Inches size service available.



(unit : mm)

	D1	CED	SD	OAL
CF100 ⁺ -40903TN	2.8	12.4	8	56
	3.2	16.5	10	60
	3.5	20.5	10	63
	3.8	25	10	67



★ Customized size, Coating, Inches size service available.



CF300⁺-40903TN

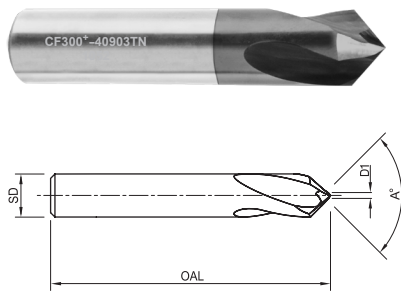
◆ 3F Chamfering End Mills 90°

Chamfering End Mills

IR100⁺-81003TN

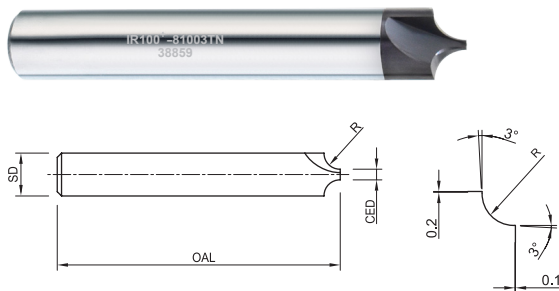
◆ Corner Radius Cutters

Corner Radius Cutters



(unit : mm)

CF300 ⁺ -40903TN	D1	A	SD	OAL
	0.2	90°	4	45
			6	45
			8	52
			10	52



(unit : mm)

IR100 ⁺ -81003TN	D1	CED	SD	OAL	Radius
	1	2.1	4	49	0.5R
	3.9	6	6	59	1R
	2.9	6	6	59	1.5R
	1.9	6	6	59	2R
	3	8	8	59	2.5R
	2.2	8	8	59	3R
	2.9	10	10	59	3.5R
	2.2	10	10	59	4R
	2.9	12	12	75	4.5R
	1.8	12	12	75	5R



★ Customized size, Coating, Inches size service available.



★ Customized size, Coating, Inches size service available.

CF300⁺-40906TN

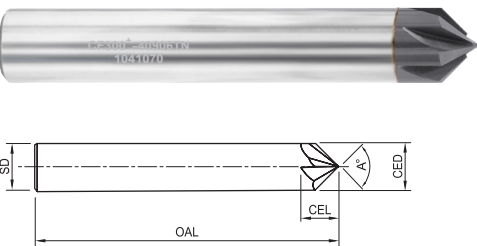
◆ 6F Chamfering End Mills 90°

Chamfering End Mills

VF100⁺-11903TN

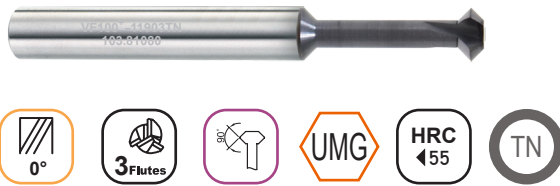
◆ V-Groove Cutters 90°

Groove Cutters



(unit : mm)

CF300 ⁺ -40906TN	CED	CEL	SD	OAL	Angle
	6	2.5	6	50	90°
	8	3.5	8	60	
	10	4	10	70	
	12	5	12	75	
	16	7	16	100	



★ Customized size, Coating, Inches size service available.

(unit : mm)

VF100 ⁺ -11903TN	CED	CEL	EL	ND	SD	OAL	Blades Number
	3	1.23	12	1.8	3	45	3
	3.5	1.5	14	2.1	4	53	3
	4	1.7	16	2.4	4	53	3
	4.5	2.1	18	2.5	5	53	3
	5	2.3	20	2.8	5	53	3
	5.5	2.5	22	3.1	6	65	3
	6	2.9	24	3.2	6	65	3
	8	3.4	28	4.8	8	65	4
	10	3.8	35	6.4	10	80	5
	12	4.4	42	7.8	12	80	6



★ Customized size, Coating, Inches size service available.



DR300⁺-41302TN

◆ 2F Carbide Drills 140°

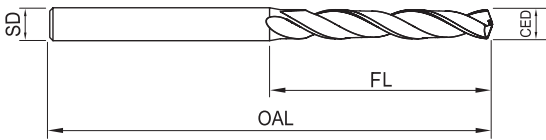
Carbide Drills

DR300⁺-41302TN

◆ 2F Carbide Drills 140°

Carbide Drills

(unit : mm)



★ Customized size, Coating, Inches size service available.

(unit : mm)

	CED	FL	SD	OAL
DR300 ⁺ -41302TN	3.0	25	4	55
	3.1	25	4	55
	3.2	25	4	55
	3.3	25	4	55
	3.4	25	4	55
	3.5	25	4	55
	3.6	25	4	55
	3.7	25	4	55
	3.8	25	4	55
	3.9	25	4	55
	4.0	25	4	55
	4.1	25	4	55
	4.2	32	5	62
	4.3	32	5	62
	4.4	32	5	62
	4.5	32	5	62
	4.6	32	5	62
	4.7	32	5	62
	4.8	32	5	62
	4.9	32	5	62
	5.0	32	5	62
	5.1	32	5	62
	5.2	36	6	66
	5.3	36	6	66
	5.4	36	6	66
	5.5	36	6	66
	5.6	36	6	66
	5.7	36	6	66
	5.8	36	6	66
	5.9	36	6	66
	6.0	36	6	66

	CED	FL	SD	OAL
DR300 ⁺ -41302TN	5.7	36	6	66
	5.8	36	6	66
	5.9	36	6	66
	6.0	36	6	66
	6.1	36	6	66
	6.2	42	7	74
	6.3	42	7	74
	6.4	42	7	74
	6.5	42	7	74
	6.6	42	7	74
	6.7	42	7	74
	6.8	42	7	74
	6.9	42	7	74
	7.0	42	7	74
	7.1	42	7	74
	7.2	46	8	79
	7.3	46	8	79
	7.4	46	8	79
	7.5	46	8	79
	7.6	46	8	79
	7.7	46	8	79
	7.8	46	8	79
	7.9	46	8	79
	8.0	46	8	79
	8.1	46	8	79
	8.2	50	9	84
	8.3	50	9	84
	8.4	50	9	84
	8.5	50	9	84
	8.6	50	9	84
	8.7	50	9	84

	CED	FL	SD	OAL
DR300 ⁺ -41302TN	8.8	50	9	84
	8.9	50	9	84
	9.1	50	9	84
	9.2	50	9	84
	9.3	53	10	89
	9.4	53	10	89
	9.5	53	10	89
	9.6	53	10	89
	9.7	53	10	89
	9.8	53	10	89
	9.9	53	10	89
	10.0	53	10	89
	10.1	53	10	89
	10.2	55	11	95
	10.3	55	11	95
	10.4	55	11	95
	10.5	55	11	95
	10.6	55	11	95
	10.7	55	11	95
	10.8	55	11	95
	10.9	55	11	95
	11.0	55	11	95
	11.1	55	11	95
	11.2	62	12	102
	11.3	62	12	102
	11.4	62	12	102
	11.5	62	12	102
	11.6	62	12	102

	CED	FL	SD	OAL
DR300 ⁺ -41302TN	11.7	62	12	102
	11.8	62	12	102
	11.9	62	12	102
	12.0	62	12	102
	12.1	62	12	102
	12.2	62	13	102
	12.3	62	13	102
	12.4	62	13	102
	12.5	62	13	102
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	12.7	62	13	102
	12.8	62	13	102
	12.9	62	13	102
	13.0	62	13	102
	13.5	64	14	107
	14.0	64	14	107
	14.5	67	15	111
	15.0	67	15	111
	15.5	69	16	115
	16.0	69	16	115
	16.5	71	17	119
	17.0	71	17	119
	17.5	74	18	123
	18.0	74	18	123
	18.5	76	19	127
	19.0	76	19	127
	19.5	80	20	131
	20.0	80	20	131

WORKING MATERIAL	ALLOY STEELS/ TOOLS STEELS		HARDENED STEEL					
			25~35HRC		35~45HRC		45~55HRC	
HARDNESS								
DIAMETER	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED	R.P.M	FEED
3MM	3060	551	2095	179	1995	171	1900	162
4MM	2430	535	1654	170	1575	162	1500	154
5MM	1980	554	1323	181	1260	173	1200	164
6MM	1980	713	1323	203	1260	194	1200	184
8MM	1530	643	992	186	945	178	900	169
10MM	1260	580	772	158	735	151	700	143
12MM	1260	655	662	147	630	140	600	133
16MM	990	574	551	132	525	126	500	119
20MM	810	486	441	113	420	108	400	102



Hard Cut Drill⁺

- ◆ Spindle speed recommended 1500~3000 rpm for NC,MC machine,milling machine,etc

Carbide Hard Cut Drills



HS100E⁺-11302TN

- ◆ Square Type - 2F End Mills 30°/33°
- ◆ Variable helix angle

High Speed Steel Series

A700⁺Series

X600⁺Series

X550⁺Series

S500⁺Series

Specialized⁺Series

HSS⁺Series

A700⁺Series

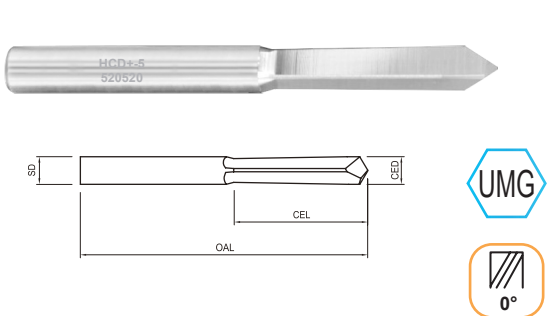
X600⁺Series

X550⁺Series

S500⁺Series

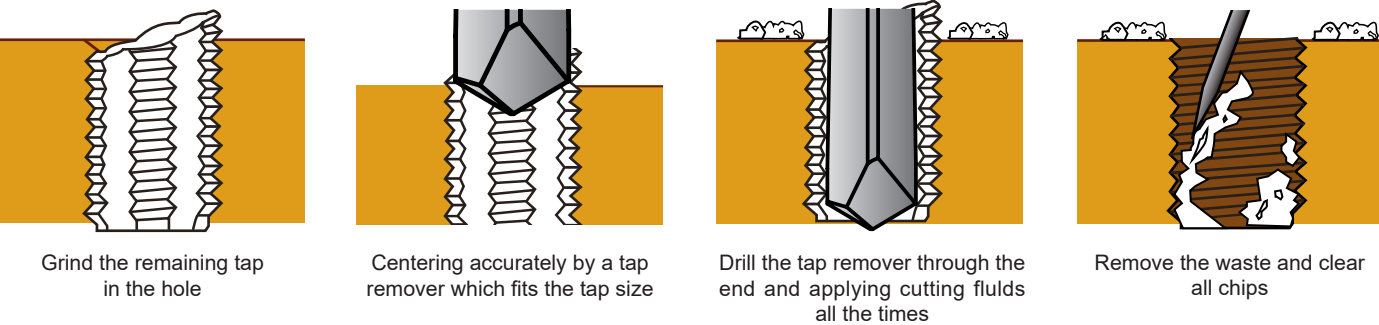
Specialized⁺Series

HSS⁺Series



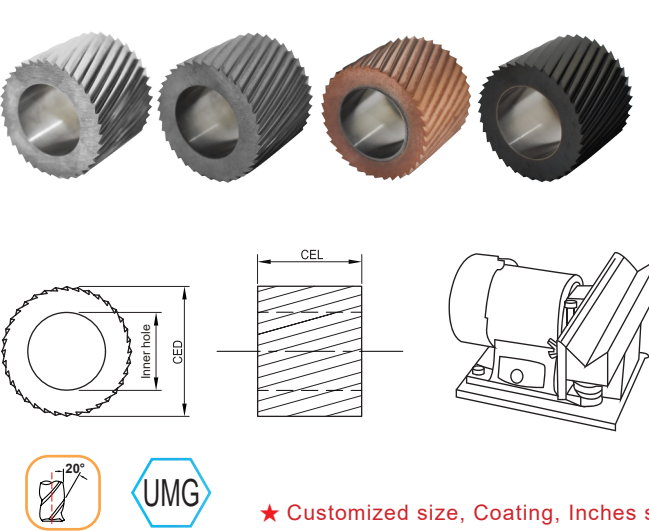
★ Customized size, Coating, Inches size service available.

	CED	CEL	SD	OAL	Broken Thread
HCD ⁺ -2	2	10	2	30.8	M3
HCD ⁺ -3	3	14	3	40	M4,M5
HCD ⁺ -4	4	18	4	45	M6
HCD ⁺ -5	5	20	5	50	M8,M10
HCD ⁺ -6	6	28	6	60	M10,M12
HCD ⁺ -S	2~6mm(Set)				M3~M12



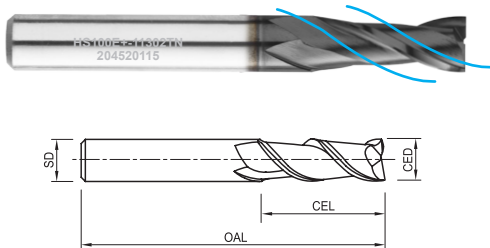
CC100⁺

- ◆ Carbide Spiral Cutter
- ◆ Excellent Sharpness with no secondary burrs spiral cutter chamfering,achieves perfect surface with excellent durability
- ◆ Applicable material:General Steel, Special Steel,Non-ferrous



★ Customized size, Coating, Inches size service available.

	Coating	CED	CEL	Inner hole
CC100 ⁺	Non	25	20	15
CC100 ⁺ -TA	TA	25	20	15
CC100 ⁺ -TQ	TQ	25	20	15
CC100 ⁺ -TD	TD	25	20	15



★ Customized size, Coating, Inches size service available.

	CED	CEL	SD	OAL
HS100E ⁺ -11302TN	6	15	8	65
	7	20	10	75
	8	20	10	75
	9	25	10	80
	10	25	10	80
	12	30	12	90
	14	35	12	95
	16	40	16	105
	18	40	16	105
	20	45	20	115



HS100IE⁺-11304TN

- ◆ Square Type - 4F End Mills 30°/33°
- ◆ Uneven flute and Variable helix angle

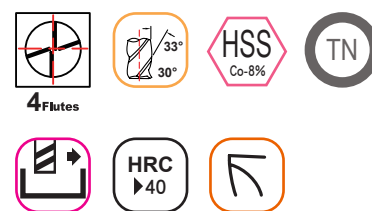
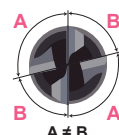
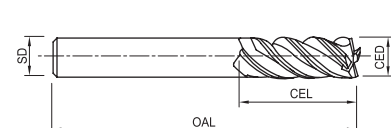
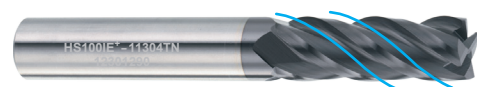
High Speed Steel Series



HS400IE⁺-11304TN

- ◆ 4F Roughing End Mills 30°/33°
- ◆ Uneven flute and Variable helix angle

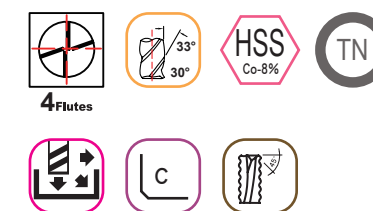
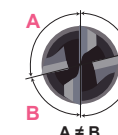
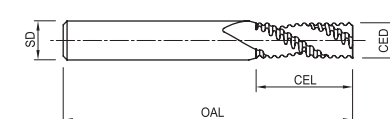
High Speed Steel Series



★ Customized size, Coating, Inches size service available.

(unit : mm)

HS100IE ⁺ -11304TN	CED	CEL	SD	OAL
	6	15	8	65
	7	20	10	75
	8	20	10	75
	9	25	10	80
	10	25	10	80
	12	30	12	90
	14	35	12	95
	16	40	16	105
	18	40	16	105
	20	45	20	115



★ Customized size, Coating, Inches size service available.

(unit : mm)

HS400IE ⁺ -11304TN	CED	CEL	SD	OAL
	6	20	6	60
	7	20	10	70
	8	25	10	75
	9	30	10	75
	10	35	10	85
	12	40	12	100
	14	40	12	100
	16	50	16	110
	18	50	16	110
	20	60	20	125
	22	45	20	110
	25	50	25	120
	30	55	25	125
	35	60	32	145
	40	65	32	150
	45	70	42	160
	50	70	42	160

A700+系列

X600+系列

X550+系列

S500+系列

專用刀系列

HSS+系列

A700+Series

X600+Series

X550+Series

S500+Series

Specialized+Series

HSS+Series



CUTTING
TOOLS⁺ Metal

HRD100⁺-40902TN

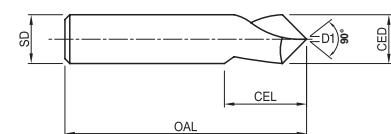
◆ Spot Drills 90°

High Speed Steel Series

HCF100⁺-40903TN

◆ 3F Chamfering End mills 90°

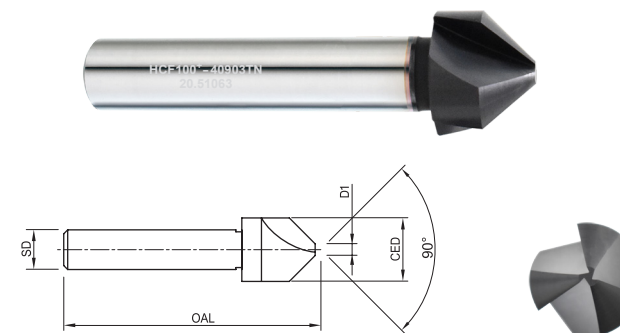
High Speed Steel Series



(unit : mm)

HRD100 ⁺ -40902TN	D1	CED	CEL	SD	OAL
	0.4	4	8	4	50
	0.6	6	12	6	70
	0.8	8	16	8	80
	1	10	20	10	90
	1.2	12	24	12	110
	1.6	16	32	16	120
	2	20	40	20	120

★ Customized size, Coating, Inches size service available.



(unit : mm)

HCF100 ⁺ -40903TN	D1	CED	SD	OAL
	1.5	6.3	5	45
	2	8.3	6	50
	2.5	10.4	6	50
	2.8	12.4	8	56
	3.2	16.5	10	60
	3.5	20.5	10	63
	3.8	25	10	67

★ Customized size, Coating, Inches size service available.

HPRD100⁺-90120TN

◆ HSS Spot Drills 90°&120°

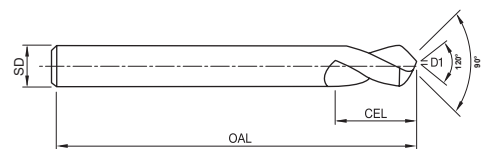
High Speed Steel Series



HCF100I⁺-40903TN

◆ HSS 3F Chamfering End mills 90°
◆ Uneven flute

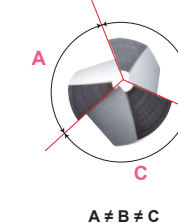
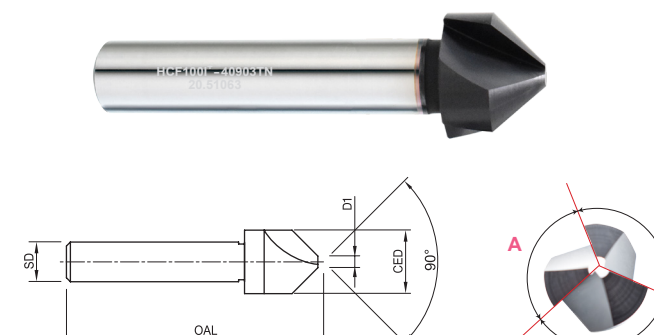
High Speed Steel Series



(unit : mm)

HPRD100 ⁺ -90120TN	D1	CED	CEL	SD	OAL
	1.5	4	8	4	50
	2	6	12	6	70
	2.5	8	16	8	80
	3	10	20	10	90
	4	12	24	12	110
	5	16	32	16	120
	6	20	40	20	120

★ Customized size, Coating, Inches size service available.



(unit : mm)

HCF100I ⁺ -40903TN	D1	CED	SD	OAL
	1.5	6.3	5	45
	2	8.3	6	50
	2.5	10.4	6	50
	2.8	12.4	8	56
	3.2	16.5	10	60
	3.5	20.5	10	63
	3.8	25	10	67

★ Customized size, Coating, Inches size service available.

A700+ Series

X600+ Series

X550+ Series

S500+ Series

專用刀系列

HSS+ Series

A700+ Series

X600+ Series

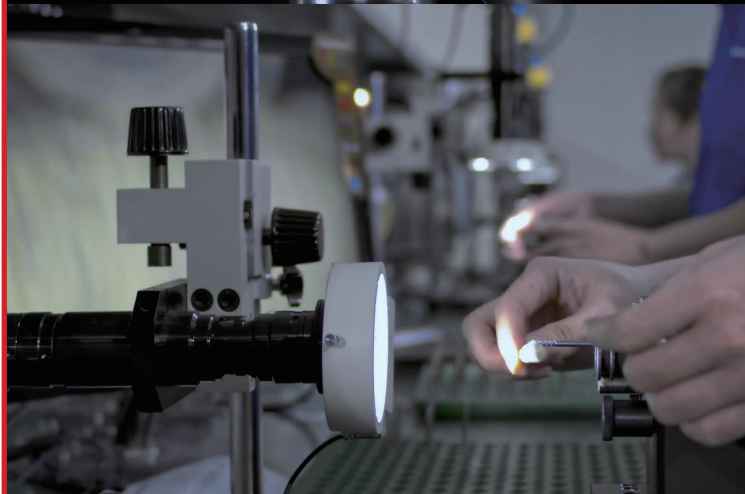
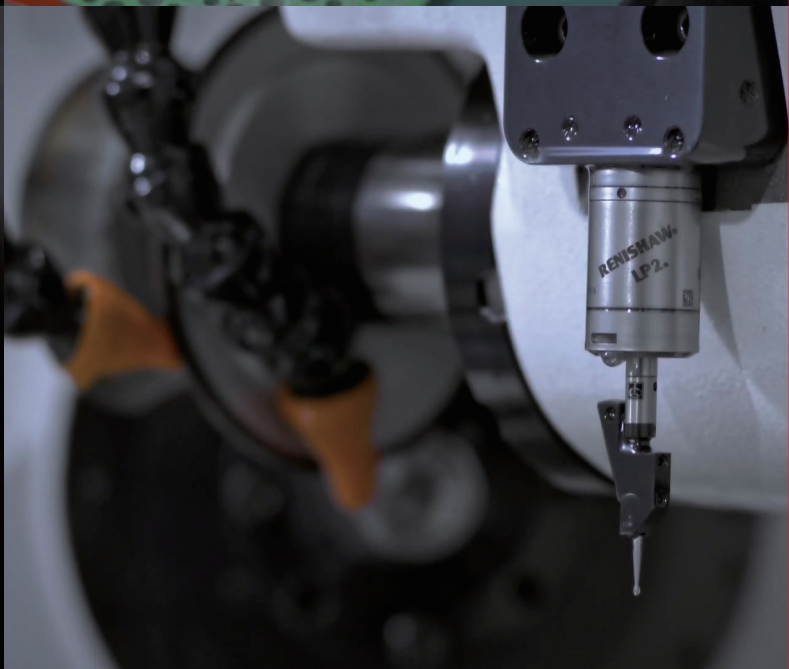
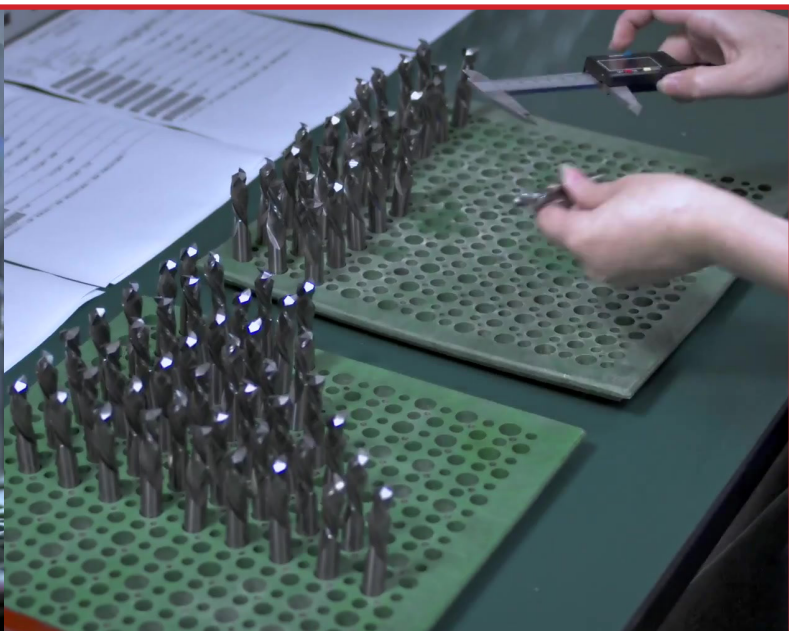
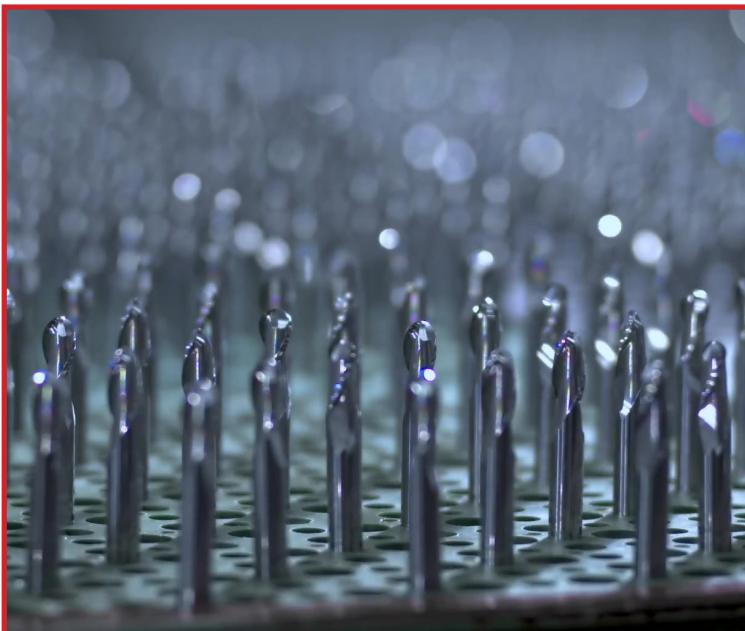
X550+ Series

S500+ Series

Specialized Series

HSS+ Series

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