

ALU-POWER

for Aluminum and Non-Ferrous
Materials

适用于铝和非合金材料的加工。





ALU-POWER END MILLS

SELECTION GUIDE

EG930



CARBIDE, 2 FLUTE, 25° HELIX for ALUMINUM, TiCN COATED
2刃, 25度螺旋角, TiCN涂层, 铝加工用, 硬质合金铣刀

E 160

E5522
E5521



CARBIDE, 2 FLUTE, 45° HELIX for ALUMINUM
2刃, 45度螺旋角, 铝加工用, 硬质合金铣刀

E 162

EG909



CARBIDE, 2 FLUTE, CORNER RADIUS for ALUMINUM, TiCN COATED
2刃, TiCN涂层, 铝加工用, 硬质合金圆鼻铣刀

E 164

EG910



CARBIDE, 2 FLUTE, 50° HELIX, BALL NOSE for ALUMINUM, TiCN COATED
2刃, 球头, TiCN涂层, 50度螺旋角, 铝加工用硬质合金铣刀

E 165

EG908



CARBIDE, 3 FLUTE, 40° HELIX, BALL NOSE for ALUMINUM, TiCN COATED
3刃, 球头, TiCN涂层, 40度螺旋角, 铝加工用硬质合金铣刀

E 166

EP922
EP923



YPM, 3 FLUTE, 42° HELIX, SHORT, ROUGHING for ALUMINUM, TiAlN COATED
3刃, 短型, TiAlN涂层, 42度螺旋角, 铝加工用YPM螺纹铣刀

E 167

EP924
EP925

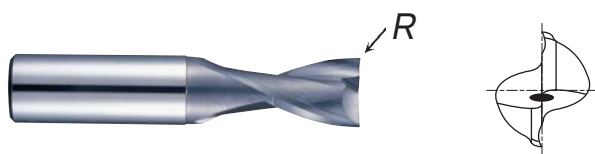


YPM, 3 FLUTE, 42° HELIX, LONG, ROUGHING for ALUMINUM, TiAlN COATED
3刃, 加长, TiAlN涂层, 42度螺旋角, 铝加工用YPM螺纹铣刀

E 168

ALU-POWER

2 FLUTE, 25° HELIX FOR ALUMINUM, TiCN COATED 2刃, 25度螺旋角, TiCN涂层, 铝加工用, 硬质合金铣刀



- Designed for the machining aluminum and its alloy, non-ferrous materials.
设计用于加工铝及铝合金非铁材料
- Increased tool life and higher cutting accuracy.
提高工具寿命和较高的切削精度.
- Maximum-stock removal, chip ejection, stability.
极大的材料切除, 排屑, 稳定性.
- Corner Radius for avoiding the chipping.
圆弧角可防止崩刃

● PLAIN SHANK

● EG930 Series

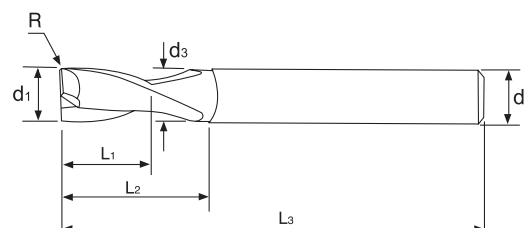
Unit : mm

EDP No. PLAIN	CORNER RADIUS R	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT L ₁	LENGTH BELOW SHANK L ₂	OVERALL LENGTH L ₃	NECK DIAMETER d ₃
EG930020	R0.2	2.0	3	3	6	40	1.9
EG930030	R0.2	3.0	3	4	8	40	2.9
EG930040	R0.2	4.0	4	5	12	50	3.8
EG930050	R0.2	5.0	5	8	14	50	4.8
EG930060	R0.2	6.0	6	8	18	65	5.7
EG930080	R0.2	8.0	8	10	22	70	7.7
EG930100	R0.2	10.0	10	14	28	80	9.7
EG930120	R0.2	12.0	12	16	35	90	11.5
EG930160	R0.2	16.0	16	20	40	90	15.5
EG930200	R0.2	20.0	20	25	50	100	19.5

ALU-POWER

Unit : mm

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 0.03	h6

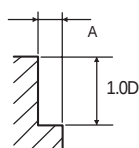
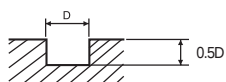




2 FLUTE, FINISH FOR ALUMINUM, TiCN COATED 2刃, 25度螺旋角, TiCN涂层, 铝加工用, 硬质合金铣刀

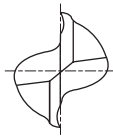
● EG930

MATERIAL	ALUMINUM LOW SILICON ALUMINUM			
DIAMETER	RPM	FEED	RPM	FEED
R0.2×3	13000	900	13000	1200
R0.2×4	13000	1200	13000	1400
R0.2×5	13000	1300	13000	1700
R0.2×6	13000	1500	13000	2000
R0.2×8	10000	1800	10000	2300
R0.2×10	10000	2200	10000	2700
R0.2×12	10000	2700	10000	3400
R0.2×16	8000	2500	8000	3100
R0.2×20	5000	2000	5000	2500



A: $\phi 3 \sim \phi 10 = 0.25 \times D$
 $\phi 12 \sim \phi 20 = 0.5 \times D$

RPM=REVOLUTION PER MIN.
 FEED=mm/min.



► Suitable for high speed machining in aluminum and other non-ferrous materials, excellent surface finishes, superior chip ejection
适于铝及其他非铁材料的高速切削, 卓越的表面粗糙度, 出色的排屑。

● PLAIN SHANK

● E5522 Series

● FLAT SHANK

● E5521 Series

Unit : mm

EDP No.		MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
PLAIN	FLAT				
E5522030	E5521030	3.0	6	8	57
E5522040	E5521040	4.0	6	11	57
E5522050	E5521050	5.0	6	13	57
E5522060	E5521060	6.0	6	13	57
E5522080	E5521080	8.0	8	19	63
E5522100	E5521100	10.0	10	22	72
E5522120	E5521120	12.0	12	26	83
E5522140	E5521140	14.0	14	26	83
E5522160	E5521160	16.0	16	32	92
E5522180	E5521180	18.0	18	32	92
E5522200	E5521200	20.0	20	38	104

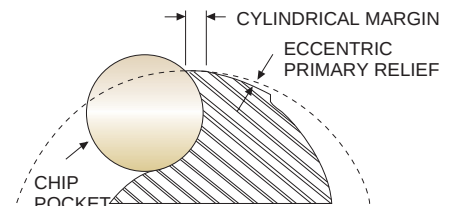
► TiN, TiCN - coating & TiAlN - coating is available on your request.



- High performance in machining aluminum and non-ferrous materials
适于铝及其他非铁材料的高速切削, 卓越的表面粗糙度, 出色的排屑
- Special designed geometry with high rigidity cutting edge
专门设计的几何尺寸切刃具有高的刚性。
- Improved surface roughness - cylindrical margin which is controlled tightly.
改良的表面粗糙度 - 严格控制的圆柱度。
- Excellent chip removal - bigger chip pocket, higher rake angle and helix angle(45°)
卓越的排屑 - 较高的 rake angle, 较大的螺旋角(45°),

- Corner radius, Corner chamfer, Neck design is available on your request.
- TiN, TiCN & TiAlN coating is available on your request.

	UNCOATED	TiN	TiCN	TiAlN
PLAIN SHANK	E5522	E6522	EG522	EH522
FLAT SHANK	E5521	E6521	EG521	EH521



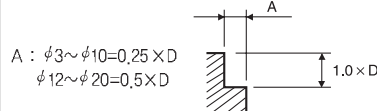
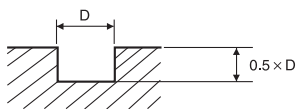
Unit : mm

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 0.03	h6

2 FLUTE, 45° HELIX FOR ALUMINUM 2刃, 45度螺旋角, 铝加工用, 硬质合金铣刀

● E5522, E5521

MATERIAL	ALUMINUM LOW SILICON ALUMINUM			
DIAMETER	RPM	FEED	RPM	FEED
3	10000	700	10000	900
4	10000	900	10000	1100
5	10000	1000	10000	1300
6	10000	1200	10000	1500
8	8000	1400	8000	1800
10	8000	1700	8000	2100
12	8000	2100	8000	2600
14	6000	1800	6000	2200
16	6000	1900	6000	2400
18	4000	1400	4000	1800
20	4000	1600	4000	1900

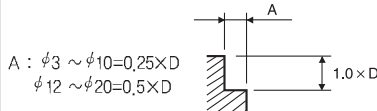
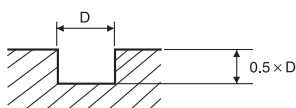


RPM=REVOLUTION PER MIN.
FEED=mm/min.

2 FLUTE, 45° HELIX FOR ALUMINUM, TiCN COATED 2刃, TiCN涂层, 45度螺旋角, 铝加工用, 硬质合金铣刀

● EG522, EG521

MATERIAL	ALUMINUM LOW SILICON ALUMINUM			
DIAMETER	RPM	FEED	RPM	FEED
3	13000	900	13000	1200
4	13000	1200	13000	1400
5	13000	1300	13000	1700
6	13000	1500	13000	2000
8	10000	1800	10000	2300
10	10000	2200	10000	2700
12	10000	2700	10000	3400
14	8000	2300	8000	2800
16	8000	2500	8000	3100
18	5000	1800	5000	2300
20	5000	2000	5000	2500



RPM=REVOLUTION PER MIN.
FEED=mm/min.

ALU-POWER

2 FLUTE, CORNER RADIUS FOR ALUMINUM, TiCN COATED 2刃, TiCN涂层, 铝加工用, 硬质合金圆鼻铣刀



- Excellent cutting qualities on stainless steel, Aluminum, copper.
对不锈钢, 铝, 铜切削质量卓越.
- Increased tool life and higher cutting accuracy.
提高工具寿命和较高的切削精度.

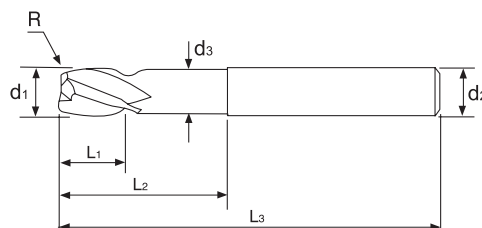
● PLAIN SHANK

● EG909 Series

Unit : mm

EDP No. PLAIN	CORNER RADIUS R	MILL DIAMETER d ₁	SHANK DIAMETER d ₂ (h6)	LENGTH OF CUT L ₁	LENGTH BELOW SHANK L ₂	OVERALL LENGTH L ₃	NECK DIAMETER d ₃
EG909040	R0.3	4.0	6	5	10	50	3.6
EG909060	R0.5	6.0	6	8	20	60	5.4
EG909080	R0.6	8.0	8	10	30	70	7.2
EG909100	R0.8	10.0	10	12	36	80	9.0
EG909120	R1.0	12.0	12	14	40	90	11.0
EG909160	R1.3	16.0	16	18	45	100	14.5
EG909200	R1.6	20.0	20	24	45	100	18.0

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 0.03	h6

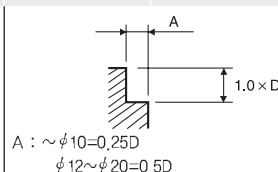
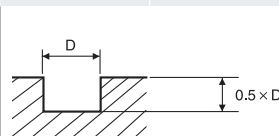
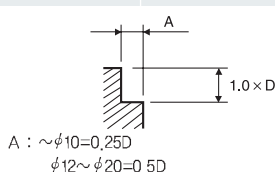
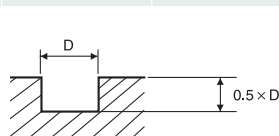


ALU-POWER

2 FLUTE, CORNER RADIUS FOR ALUMINUM, TiCN COATED 2刃, TiCN涂层, 铝加工用, 硬质合金圆鼻铣刀

● EG909

MATERIAL	ALUMINUM ALUMINUM ALLOY				COPPER ALLOY			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R0.3×4	13000	1200	13000	1400	3900	300	3900	350
R0.5×6	13000	1500	13000	2000	3900	380	3900	500
R0.6×8	10000	1800	10000	2300	3000	450	3000	580
R0.8×10	10000	2200	10000	2700	3000	550	3000	680
R1.0×12	10000	2700	10000	3400	3000	680	3000	850
R1.3×16	8000	2500	8000	3100	2400	630	2400	780
R1.6×20	5000	2000	5000	2500	1500	500	1500	630



RPM=REVOLUTION PER MIN.
FEED=mm/min.



2 FLUTE, BALL NOSE FOR ALUMINUM, TiCN COATED 2刃, 球头, 铝, TiCN 涂层



- Excellent cutting qualities on stainless steel, Aluminum, copper.
对不锈钢, 铝, 铜切削质量卓越.
- Increased tool life and higher cutting accuracy.
提高工具寿命和较高的切削精度.

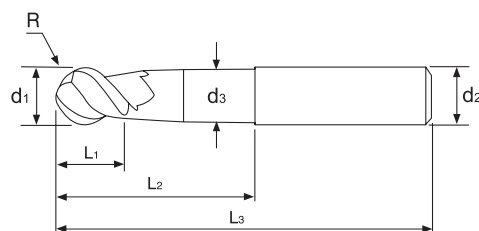
● PLAIN SHANK

● EG910 Series

Unit : mm

EDP No. PLAIN	R ±0.01	MILL DIAMETER d ₁	SHANK DIAMETER d ₂ (h6)	LENGTH OF CUT L ₁	LENGTH BELOW SHANK L ₂	OVERALL LENGTH L ₃	NECK DIAMETER d ₃
EG910060	R3.0	6.0	6	5.5	25	55	5.4
EG910080	R4.0	8.0	8	7	30	65	7.2
EG910100	R5.0	10.0	10	8.5	35	75	9.0
EG910120	R6.0	12.0	12	10.5	40	75	11.0
EG910160	R8.0	16.0	16	14	50	90	14.5
EG910200	R10.0	20.0	20	17	50	100	18.0

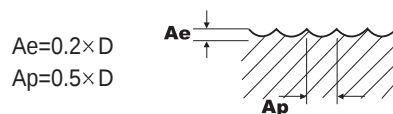
TOLERANCE	
MILL DIA.(mm)	± 0.02
SHANK DIA.	h6



2 FLUTE, BALL NOSE FOR ALUMINUM, TiCN COATED 2刃, 球头, 铝, TiCN 涂层

● EG910

MATERIAL	ALUMINUM ALUMINUM ALLOY		COPPER ALLOY	
	RPM	FEED	RPM	FEED
R3.0× 6	18000	1750	5500	440
R4.0× 8	14000	2000	4200	500
R5.0×10	14000	2350	4200	580
R6.0×12	14000	3000	4200	750
R8.0×16	11000	2700	3300	670
R10.0×20	7000	2200	2100	550



RPM=REVOLUTION PER MIN.
FEED=mm/min.

ALU-POWER

3 FLUTE, BALL NOSE FOR ALUMINUM, TiCN COATED 3刃, TiCN涂层, 40度螺旋角, 铝加工用硬质合金铣刀



- Excellent cutting qualities on stainless steel, Aluminum, copper.
对不锈钢, 铝, 铜切削质量卓越.
- Increased tool life and higher cutting accuracy.
提高工具寿命和较高的切削精度.

● PLAIN SHANK

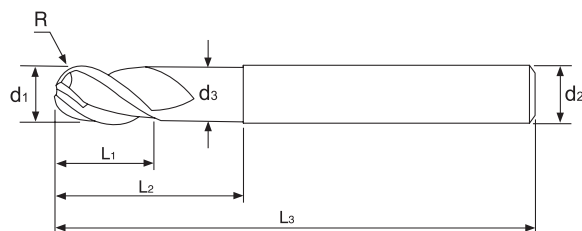
● EG908 Series

Unit : mm

EDP No. PLAIN	R ±0.01	MILL DIAMETER d ₁	SHANK DIAMETER d ₂ (h6)	LENGTH OF CUT L ₁	LENGTH BELOW SHANK L ₂	OVERALL LENGTH L ₃	NECK DIAMETER d ₃
EG908020	R1.0	2.0	6	3	5	60	1.9
EG908025	R1.25	2.5	6	4	6	60	2.4
EG908030	R1.5	3.0	6	4.5	6.5	60	2.8
EG908035	R1.75	3.5	6	5	7	65	3.2
EG908040	R2.0	4.0	6	6	8	65	3.7
EG908050	R2.5	5.0	6	7.5	10	65	4.6
EG908060	R3.0	6.0	6	9	12	75	5.6
EG908080	R4.0	8.0	8	12	25	75	7.4
EG908100	R5.0	10.0	10	15	30	80	9.4
EG908120	R6.0	12.0	12	18	36	90	11.4
EG908160	R8.0	16.0	16	24	40	100	15.4

Unit : mm

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 0.03	h6



ALU-POWER

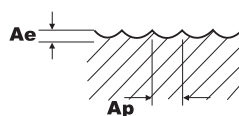
3 FLUTE, BALL NOSE FOR ALUMINUM, TiCN COATED 3刃, TiCN涂层, 40度螺旋角, 铝加工用硬质合金铣刀

● EG908

MATERIAL	ALUMINUM LOW SILICON ALUMINUM		COPEER ALLOY	
DIAMETER	RPM	FEED	RPM	FEED
R1.0×2	27000	950	8000	240
R1.25×2.5	22000	950	6500	240
R1.5×3	18000	950	5500	240
R2.0×4	18000	1250	5500	310
R2.5×5	18000	1350	5500	340
R3.0×6	18000	1750	5500	440
R4.0×8	14000	2000	4200	500
R5.0×10	14000	2350	4200	580
R6.0×12	14000	3000	4200	750
R8.0×16	11000	2700	3300	670

$$Ae=0.2 \times D$$

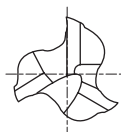
$$Ap=0.5 \times D$$



RPM=REVOLUTION PER MIN.
FEED=mm/min.



YPM, 3 FLUTE, 42° HELIX, LONG, ROUGHING FOR ALUMINUM, TIALN COATED 3刃, 短型, TiALN涂层, 42度螺旋角, 铝加工用YPM螺纹铣刀



- Maximum stock removal rates at High Speed Condition.
高速情况下极大的材料切除率。
- Reduces vibrations and improves surface roughness.
减少振动提高表面粗糙度。

● PLAIN SHANK

● EP922 Series

● FLAT SHANK

● EP923 Series

Unit : mm

EDP No.		MILL DIAMETER js12	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
PLAIN	FLAT				
EP922120	EP923120	12.0	12	26	83
EP922140	EP923140	14.0	12	26	83
EP922160	EP923160	16.0	16	32	92
EP922180	EP923180	18.0	16	32	92
EP922200	EP923200	20.0	20	38	104
EP922220	EP923220	22.0	20	38	104
EP922250	EP923250	25.0	25	45	121
EP922280	EP923280	28.0	25	45	121
EP922320	EP923320	32.0	32	53	133

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	$\begin{smallmatrix} 0 \\ 6 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ 8 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ 9 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ 11 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ 13 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ 16 \end{smallmatrix}$

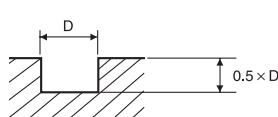
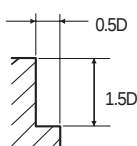
$\mu\text{m}=1/1000\text{mm}$



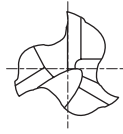
3 FLUTE, ROUGHING FOR ALUMINUM, TIALN COATED 3刃, 短型, TiALN涂层, 42度螺旋角, 铝加工用YPM螺纹铣刀

● EP922, EP923

MATERIAL	ALUMINUM ALUMINUM ALLOY			
	DIAMETER	RPM	FEED	FEED
	12	2800	550	410
	16	2200	625	465
	20	1700	700	525
	25	1400	625	465
	32	1100	700	525



RPM=REVOLUTION PER MIN.
FEED=mm/min.



- ▶ Maximum stock removal rates at High Speed Condition.
高速情况下极大的材料切除率。
- ▶ Reduces vibrations and improves surface roughness.
减少振动提高表面粗糙度。

● PLAIN SHANK

● EP924 Series

● FLAT SHANK

● EP925 Series

Unit : mm

EDP No.		MILL DIAMETER js12	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH
PLAIN	FLAT				
EP924120	EP925120	12.0	12	53	110
EP924140	EP925140	14.0	12	53	110
EP924160	EP925160	16.0	16	63	123
EP924180	EP925180	18.0	16	63	123
EP924200	EP925200	20.0	20	75	141
EP924220	EP925220	22.0	20	75	141
EP924250	EP925250	25.0	25	90	166
EP924280	EP925280	28.0	25	90	166
EP924320	EP925320	32.0	32	106	186

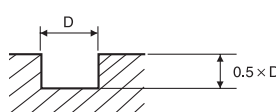
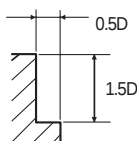
Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	$\frac{0}{6}$	$\frac{0}{8}$	$\frac{0}{9}$	$\frac{0}{11}$	$\frac{0}{13}$	$\frac{0}{16}$

$\mu\text{m}=1/1000\text{mm}$

● EP924, EP925

MATERIAL	ALUMINUM ALUMINUM ALLOY			
DIAMETER	RPM	FEED	RPM	FEED
12	2800	550	2800	410
16	2200	625	2200	465
20	1700	700	1700	525
25	1400	625	1400	465
32	1100	700	1100	525



RPM=REVOLUTION PER MIN.
FEED=mm/min.

