

NEW
PRODUCT!

Solid carbide chamfering end mill

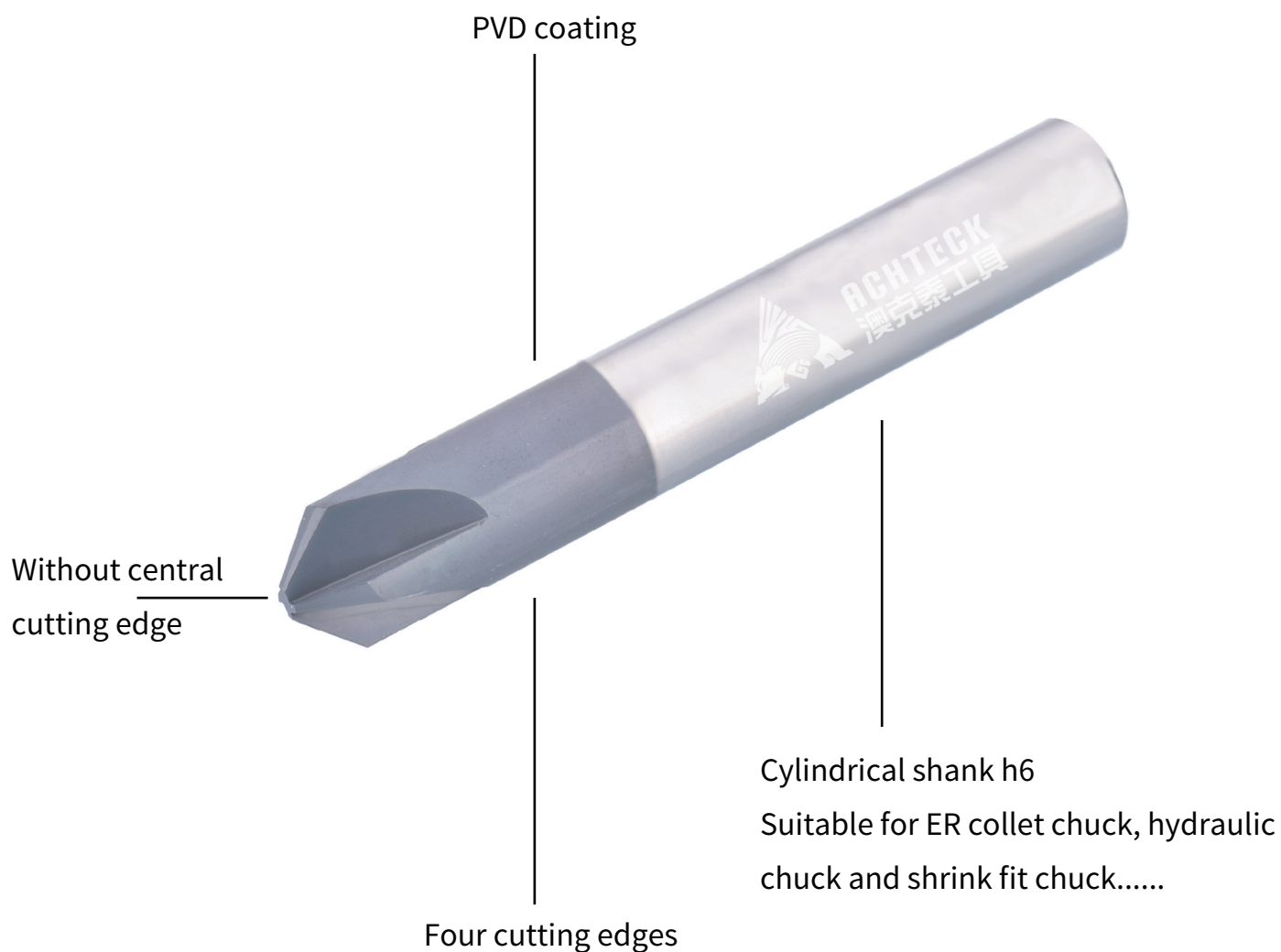


Tool

- Solid carbide chamfering end mill
- Metric
- 5 dimensions
- 4 cutting edges
- Ø 6mm to 16mm

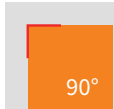
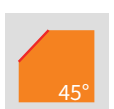
Application

- ISO workpiece material groups
P、M、K、N、S
- Suitable for chamfering
and deburring



Icon description

Icons	Description
	Slot milling and shoulder milling applications
	Shoulder milling Rough machining
	Shoulder milling Finish machining
	High feed milling
	Dynamic milling cycloid milling
	Profile milling
	Chamfering and deburring
	AlTiN coating
	AlCrN coating
	Uncoated

Icons	Description
	30° Helix angles
	35° Helix angles
	35°/38° Helix angles
	45° Helix angles
	Cylinder shank
	Square
	Corner radius
	Ball-nose End Mill
	Corner chamfer
	Chamfer

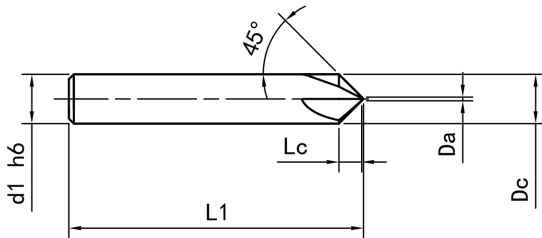
• Solid carbide end mill denomination

M	1	00				2	E	S				060	002	N	
1	2	3				4	5	6				7	8	9	
1			2			3						4		5	
Tool category			Generations			Series						Number of teeth		Tool type	
M milling			1			00 General purpose end mills, HRC45						2, 3, 4, 5, 6.....		E Square	
						10 General purpose end mills, HRC55								B Ball nose	
						16 Rough machining end mills								R Round corner	
						20 High performance end mills, HRC40								C Chamfer	
						30 Designed for steel milling								P With waved edges	
						40 Designed for aluminium alloy milling								W Forming	
						50 Designed for stainless steel milling								T Taper milling	
						60 Designed for difficult machining material milling								H High feed milling	
						70 Designed for hardened material milling									
						80&90 Others									
6			7			8			9						
Length standard			Tool diameter			Chamfer / nose radius size			Shank type						
S Standard total length			060=6.0mm			002=0.2mm			N Straight shank						
L Long version			200=20.0mm						C Conical necking						
XL Super long version									P Special shank						
XXL Extra long version									Default: No necking						
SN Short cutting edge															
SP Long cutting edge															

Solid carbide chamfering end mill M180

4 cutting edges

Solid carbide end mill



P	M	K	N	S	H	O
● ●	●	● ●	●	●		

Product code	Dc mm +0.00/-0.03	d1 mm	Lc mm	L1 mm	Da mm	Z	Stock
M180-4WS-060	6	6	2.5	50	1	4	●
M180-4WS-080	8	8	3	60	2	4	●
M180-4WS-100	10	10	4.25	75	1.5	4	●
M180-4WS-120	12	12	4.5	75	3	4	●
M180-4WS-160	16	16	6	100	4	4	●

Marked: ● Stocked ○ Non-stocked
 Special product can be ordered

Solid carbide chamfering end mill cutting parameter

The recommended cutting parameters are theoretical values, it can be adjusted according to the application conditions.

Machining Materials					
ISO	Material classification			Brinell hardness (HB/HRC)	Tensile strength (N/mm ²)
P	Unalloyed steel	C≤0.25%	Annealed	125	428
		0.25<C≤0.55%	Annealed	190	639
		0.25<C≤0.55%	Heat-treated	210	708
		C>0.55%	Annealed	190	639
		C>0.55%	Heat-treated	300	1013
		Free-Cutting Steel (short chip)	Annealed	220	745
	Low-alloy steel	Annealing		175	591
		Heat-treated		300	1013
		Heat-treated		380	1282
		Heat-treated		430	1477
	High-alloy steel and high-alloy tool steel	Annealed		200	675
		Hardened and tempered		300	1013
		Hardened and tempered		400	1361
	Stainless steel	Ferritic/martensitic, annealed		200	675
		Martensitic, heat-treated		330	1114
M	Stainless steel	Austenitic, quench hardened		200	675
		Austenitic, precipitation hardened (PH)		300	1013
		Austenitic/ferritic, duplex		230	778
K	Malleable cast iron	Ferrite		200	400
		Pearlite		260	700
	Gray cast iron	Low tensile strength		180	200
		High tensile strength / austenite		245	350
	Nodular Cast iron	Ferrite		155	400
		Pearlite		265	700
N	GGV(CGI)			230	400
	Wrought aluminium alloys	Non-aging		30	-
		Aged		100	340
	Cast aluminium alloys	≤1 2 % Si, Non-aging		75	260
		≤1 2 % Si, aging		90	310
		>1 2 % Si, Non-aging		130	450
	Magnesium alloys			70	250
	Copper and copper alloys (bronze / brass)	Unalloyed, electrolytic copper		100	340
		Brass, bronze, red brass		90	310
		Cu alloys, short-chipping		110	380
		High-tensile, Ampco alloy		300	1010
S	Fe base alloys	Fe based	Annealed	200	680
			Hardened	280	940
		Ni or Co based	Annealed	250	840
			Hardened	350	1180
			Cast	320	1080
	Titanium alloys	Pure titanium		200	680
		α and β alloys, hardened		375	1260
		β alloys		410	1400
	Tungsten alloys			300	1010
H	Molybdenum alloys			300	1010
	Hardened steel	Hardened and tempered		50HRC	
		Hardened and tempered		55HRC	
		Hardened and tempered		60HRC	
	Hardened cast steel	Hardened and tempered		50HRC	

M180-4WS					
Cutting speed Vc(m/min)	fz[mm/tooth]				
	End mill diameter (mm)				
	6	8	10	12	16
130	0.060	0.080	0.100	0.120	0.160
130	0.060	0.080	0.100	0.120	0.160
105	0.060	0.080	0.100	0.120	0.160
105	0.060	0.080	0.100	0.120	0.160
73	0.050	0.070	0.080	0.100	0.140
105	0.050	0.070	0.080	0.100	0.140
105	0.060	0.080	0.100	0.120	0.160
73	0.050	0.070	0.080	0.100	0.140
60	0.050	0.070	0.080	0.100	0.140
52	0.040	0.060	0.070	0.080	0.120
105	0.060	0.080	0.100	0.120	0.160
73	0.050	0.070	0.080	0.100	0.140
32	0.040	0.060	0.070	0.080	0.120
38	0.050	0.070	0.080	0.100	0.140
33	0.050	0.070	0.080	0.100	0.140
32	0.040	0.050	0.060	0.070	0.090
30	0.030	0.040	0.050	0.060	0.070
32	0.040	0.050	0.060	0.070	0.090
150	0.060	0.080	0.100	0.120	0.160
118	0.060	0.080	0.100	0.120	0.160
150	0.060	0.080	0.100	0.120	0.160
150	0.060	0.080	0.100	0.120	0.160
150	0.050	0.070	0.080	0.010	0.140
118	0.040	0.060	0.070	0.080	0.120
120	0.050	0.070	0.080	0.010	0.140
260	0.120	0.140	0.200	0.240	0.320
260	0.120	0.140	0.200	0.240	0.320
153	0.120	0.140	0.200	0.240	0.320
153	0.120	0.140	0.200	0.240	0.320
100	0.120	0.140	0.200	0.240	0.320
240	0.120	0.140	0.200	0.240	0.320
195	0.120	0.140	0.200	0.240	0.320
195	0.120	0.140	0.200	0.240	0.320
195	0.120	0.140	0.200	0.240	0.320
41	0.040	0.060	0.070	0.080	0.120
37	0.040	0.050	0.060	0.070	0.090
23	0.030	0.040	0.050	0.060	0.070
35	0.030	0.040	0.050	0.060	0.070
23	0.030	0.040	0.050	0.060	0.070
23	0.030	0.040	0.050	0.060	0.070
118	0.040	0.050	0.060	0.070	0.090
35	0.030	0.040	0.050	0.060	0.070
35	0.030	0.040	0.050	0.060	0.070
30	0.030	0.040	0.050	0.060	0.070
30	0.030	0.040	0.050	0.060	0.070