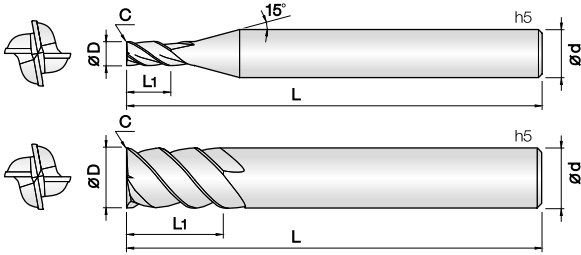


4SUV

4 Flutes Variable Helix End Mills for SUS



- Endmills for alloy steel, SUS, Ti/Ni base alloy, Inconel and hard to cut materials.
- JCRO coating provides wear resistance improvement as well as avoid edge stress in various applications.
- Minimize chattering during cutting application by unequal index of flute and helix angle to the endmill edge.
- Type A minimizes chipping, Type B maximizes chip emissins.
- Minimize fracturing at high feed by high TRS fine WC grade.



Ø1 ~ 5

Ø6 ~ 12

Ø16 ~ 20

Shield Edge Shield Edge

D Size	D Tolerance
Ø1 ~ 5	+0 ~ -0.01 mm
Ø6 ~ 12	-0.01 ~ -0.025 mm
Ø16 ~ 20	-0.015 ~ -0.03 mm

mm

Slotting												
Material	Alloy Steels / Tools Steel				Stainless Steels / Titanium Alloy Steels				Hardened Steels			
	SKD61 / NAK				SUS304 / SUS 316 / Ti6A				Inconel 718			
Outside Diameter	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth
ø2	10,000	400	2	2	9,600	310	1	2	3,200	80	0.4	2
ø3	6,900	410	3	3	7,400	380	1.5	3	2,700	110	0.6	3
ø4	5,600	490	4	4	5,600	400	2	4	2,000	120	0.8	4
ø5	4,500	630	5	5	4,500	410	2.5	5	1,600	130	1	5
ø6	3,700	740	6	6	3,700	440	3	6	1,300	160	1.2	6
ø7	3,200	700	7	7	3,200	410	3.5	7	1,100	140	1.4	7
ø8	2,800	670	8	8	2,800	390	4	8	1,000	130	1.6	8
ø9	2,500	600	9	9	2,500	350	4.5	9	900	130	1.8	9
ø10	2,200	530	10	10	2,200	350	5	10	800	130	2	10
ø11	2,000	530	11	11	2,000	320	5.5	11	720	120	2.2	11
ø12	1,900	530	12	12	1,900	300	6	12	660	110	2.4	12
ø16	1,400	390	16	16	1,400	280	8	16	500	80	3.2	16
ø20	1,100	350	20	20	1,100	260	10	20	400	60	4	20

Depth of Cut			
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Side Cutting												
Material	Alloy Steels / Tools Steel				Stainless Steels / Titanium Alloy Steels				Hardened Steels			
	SKD61 / NAK				SUS304 / SUS 316 / Ti6A				Inconel 718			
Outside Diameter	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth
ø2	21,000	1,100	3	0.4	14,000	560	3	0.2	4,800	130	3	0.1
ø3	15,000	1,250	4.5	0.6	10,600	850	4.5	0.3	4,200	200	4.5	0.15
ø4	11,000	1,400	6	0.8	8,000	960	6	0.4	3,200	220	6	0.2
ø5	9,600	1,900	7.5	1	6,400	1,000	7.5	0.5	2,500	250	7.5	0.25
ø6	8,000	2,200	9	1.2	5,300	1,000	9	0.6	2,100	250	9	0.3
ø7	6,800	1,900	10.5	1.4	4,500	1,000	10.5	0.7	1,800	260	10.5	0.35
ø8	6,000	1,600	12	1.6	4,000	960	12	0.8	1,600	260	12	0.4
ø9	5,300	1,480	13.5	1.8	3,500	840	13.5	0.9	1,400	220	13.5	0.45
ø10	4,800	1,440	15	2	3,200	770	15	1	1,300	210	15	0.5
ø11	4,400	1,350	16.5	2.2	2,900	760	16.5	1.1	1,200	190	16.5	0.55
ø12	4,000	1,250	18	2.4	2,700	760	18	1.2	1,100	180	18	0.6
ø16	3,000	1,140	24	3.2	2,000	560	24	1.6	800	130	24	0.8
ø20	2,400	860	30	4	1,600	510	30	2	600	100	30	1

Depth of Cut			
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- If the effective length is long, reduce the RPM and feed in the same proportion.
- When entering the tool to the workpiece, enter the tool from outside to the workpiece.
- If the diameter or effective length of your tool are not on the table, adjust it compared similarity value on the table.
- The edge of the flute precisely grinded. If you want to measure the tool, and to avoid damaging on the flutes, use non-contact measuring method.
- Use this table for your reference. Adjust the parameters depending on your machining geometry, machining purpose and CNC.
- If the table over the maximum RPM and feed of your machine, or found red heat on the material, adjust RPM and feed in the same proportion.
- Air blow or mist coolants are recommended and note for chip emission, heat, or ignition.