



- 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.
- Excellent work surface finish by 4 flute and deep chip pocket.
- Minimize fracturing at high feed by high TRS fine WC grade.



D Size	D Tolerance
ø3 ~ 5	+0 ~ -0.01 mm
ø6 ~ 12	-0.005 ~ -0.015 mm
ø16	-0.01 ~ -0.02 mm

### 4SUB

### Cutting Condition

• RPM : rev./min • Feed : mm/min

Material	Alloy Steels/ Cast iron				Stainless steels				Hardened Steels			
	Hardness 30 ~ 40HRC								45 ~ 55HRC			
Corner Radius	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth
R1.5	21,000	3,200	0.3	0.75	16,000	1,900	0.25	0.75	4200	340	0.12	0.3
R2	16,000	2,800	0.4	1	12,000	1,700	0.33	1	3200	260	0.16	0.4
R2.5	12,700	2,600	0.5	1.25	9,600	1,500	0.42	1.25	2500	250	0.2	0.5
R3	10,600	2,100	0.6	1.5	8,000	1,400	0.5	1.5	2100	210	0.24	0.6
R4	8,000	1,900	0.8	2	6,000	1,400	0.8	2	1600	190	0.32	0.8
R5	6,400	1,800	1	2.5	4,800	1,300	1	2.5	1300	180	0.4	1
R6	5,300	1,800	1.2	3	4,000	1,300	1.2	3	1100	150	0.48	1.2

  

Depth of Cut	Alloy Steels/ Cast iron		Stainless steels		Hardened Steels	
	Ap	Ae	Ap	Ae	Ap	Ae
	0.2D	0.5D	0.08D	0.2D	0.08D	0.2D

- If the effective length is long, reduce the RPM and feed in the same proportion.
- If the diameter or effective length of your tool are not on the table, adjust it compared similarity value on the table.
- When milling workpiece, HRC over 55 hardened steel, reduce 20% of the RPM and feed compared to the same diameter.
- 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, reduce the RPM and feed in the same proportion.
- Air blow or oil mist is recommended for smooth chip emission.