



- Endmills for various work materials (~HRC52), pre-hardened steel, carbon steel, mold steel.
- Good wear resistance by high quality Si-based PVD coating.
- Suitable shape is designed for tooling in wide areas.
- 45° degree helix design for high speed, feed condition.
- Minimize fracturing by high TRS fine(0.5 μm) WC grade.



D Size	D Tolerance
Ø1 ~ 5	+0 ~ -0.01 mm
Ø6 ~ 12	-0.01 ~ -0.025 mm
Ø14 ~ 16	-0.015 ~ -0.03 mm

단위 : mm

4HEME

Cutting Condition

• RPM : rev./min • Feed : mm/min

Side Cutting												
Material	Alloy Steels				Prehardened Steels				Hardened Steels			
Hardness	30 ~ 40HRC				40 ~ 50HRC				50 ~ 52HRC			
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
Ø1	40,000	960	1.5	0.050	40,000	880	1.5	0.050	40,000	615	0.50	0.03
Ø1.5	40,000	1,200	2.3	0.075	40,000	1000	2.3	0.075	38,500	700	0.75	0.05
Ø2	40,000	1,600	3.0	0.100	38,000	1440	3.0	0.100	36,500	1000	1.00	0.06
Ø3	38,400	3,650	4.5	0.150	34,560	3280	4.5	0.150	27,650	2300	1.50	0.09
Ø4	28,800	4,220	6.0	0.200	25,920	3800	6.0	0.200	20,730	2660	2.00	0.12
Ø5	24,000	4,800	7.5	0.250	21,600	4320	7.5	0.250	17,280	3020	2.50	0.15
Ø6	19,200	5,570	9.0	0.300	17,280	5010	9.0	0.300	13,820	3500	2.50	0.18
Ø8	14,400	5,570	12.0	0.400	12,960	5010	12.0	0.400	10,370	3500	3.00	0.24
Ø10	11,520	5,570	15.0	0.500	10,360	5010	15.0	0.500	8,290	3500	4.00	0.30
Ø12	9,600	4,600	18.0	0.600	8,640	4140	18.0	0.600	6,900	2900	6.00	0.36
Ø14	8,950	4,130	21.0	0.700	8,140	3740	21.0	0.700	6,120	2460	7.00	0.42
Ø16	7,200	3,460	24.0	0.800	6,480	3110	24.0	0.800	5,190	2180	8.00	0.48

Depth of Cut

50HRC ~

- 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.
- When milling workpiece HRC over 52 hardened steel, reduce 20% of the RPM and feed compared to the same diameter.
- If you clamp the endmill with long overhang of effective length, reduce the RPM and feed in the same proportion.
- 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.