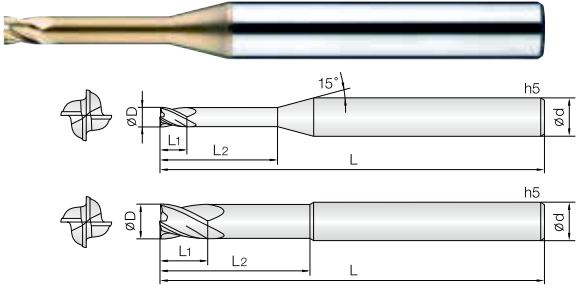


4HRE 4 Flutes High Speed Rib End Mills

4날 고속가공용 리브 엔드밀

HARD series



- 고경도강(HRC50~60), 프리하든강 계열의 고정밀 가공 엔드밀
- 실리콘계 코팅(Si) 처리하여 내마모성이 우수합니다.
- 고정밀 공차 적용으로 초정밀 가공에 적합합니다.
- 인선부 강성을 보강하여 날부치핑을 최소화 하였습니다.
- 초미립자 초경합금 (0.2 μ m)을 채택, 고속절삭시 뛰어난 성능을 발휘합니다.
- Endmills for pre-hardened and hardened steel(HRC50~60)
- Good wear resistance by Si-based PVD coating.
- High precise edge tolerance.
- Reinforced edge design for preventing edge chipping.
- Outstanding performance at high speed machining by ultra fine (0.2 μ m) WC grade.



D Size	D Tolerance
$\varnothing 0.5 \sim 5$	+0 - -0.01mm
$\varnothing 6 \sim 12$	-0.01 - -0.025mm

단위 : mm

Order Number	날경 Diameter D	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d	비고	Order Number	날경 Diameter D	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d	비고
4HRE 005 010 S04	0.5	0.5	1	45	4		4HRE 015 060 S04	1.5	1.5	6	45	4	
4HRE 005 020 S04	0.5	0.5	2	45	4		4HRE 015 080 S04	1.5	1.5	8	45	4	
4HRE 005 030 S04	0.5	0.5	3	45	4		4HRE 015 100 S04	1.5	1.5	10	45	4	
4HRE 005 040 S04	0.5	0.5	4	45	4		4HRE 015 120 S04	1.5	1.5	12	45	4	
4HRE 005 050 S04	0.5	0.5	5	45	4		4HRE 015 160 S04	1.5	1.5	16	50	4	
4HRE 005 060 S04	0.5	0.5	6	45	4		4HRE 015 200 S04	1.5	1.5	20	50	4	
4HRE 005 080 S04	0.5	0.5	8	45	4		4HRE 015 250 S04	1.5	1.5	25	60	4	
4HRE 005 100 S04	0.5	0.5	10	50	4		4HRE 020 040 S04	2	2	4	45	4	
4HRE 006 010 S04	0.6	0.6	1	45	4		4HRE 020 060 S04	2	2	6	45	4	
4HRE 006 020 S04	0.6	0.6	2	45	4		4HRE 020 080 S04	2	2	8	45	4	
4HRE 006 030 S04	0.6	0.6	3	45	4		4HRE 020 100 S04	2	2	10	45	4	
4HRE 006 040 S04	0.6	0.6	4	45	4		4HRE 020 120 S04	2	2	12	45	4	
4HRE 006 060 S04	0.6	0.6	6	45	4		4HRE 020 140 S04	2	2	14	50	4	
4HRE 006 080 S04	0.6	0.6	8	45	4		4HRE 020 160 S04	2	2	16	50	4	
4HRE 006 100 S04	0.6	0.6	10	50	4		4HRE 020 180 S04	2	2	18	50	4	
4HRE 006 120 S04	0.6	0.6	12	50	4		4HRE 020 200 S04	2	2	20	50	4	
4HRE 007 020 S04	0.7	0.7	2	45	4		4HRE 020 250 S04	2	2	25	60	4	
4HRE 007 040 S04	0.7	0.7	4	45	4		4HRE 020 300 S04	2	2	30	70	4	
4HRE 007 060 S04	0.7	0.7	6	45	4		4HRE 025 100 S04	2.5	2.5	10	45	4	
4HRE 007 080 S04	0.7	0.7	8	45	4		4HRE 025 120 S04	2.5	2.5	12	45	4	
4HRE 007 100 S04	0.7	0.7	10	50	4		4HRE 025 160 S04	2.5	2.5	16	50	4	
4HRE 008 020 S04	0.8	0.8	2	45	4		4HRE 025 200 S04	2.5	2.5	20	50	4	
4HRE 008 040 S04	0.8	0.8	4	45	4		4HRE 025 250 S04	2.5	2.5	25	60	4	
4HRE 008 060 S04	0.8	0.8	6	45	4		4HRE 025 300 S04	2.5	2.5	30	70	4	
4HRE 008 080 S04	0.8	0.8	8	45	4		4HRE 030 060 S06	3	3	6	45	6	
4HRE 008 100 S04	0.8	0.8	10	45	4		4HRE 030 080 S06	3	3	8	45	6	
4HRE 008 120 S04	0.8	0.8	12	45	4		4HRE 030 100 S06	3	3	10	45	6	
4HRE 008 160 S04	0.8	0.8	16	50	4		4HRE 030 120 S06	3	3	12	50	6	
4HRE 009 020 S04	0.9	0.9	2	45	4		4HRE 030 160 S06	3	3	16	55	6	
4HRE 009 060 S04	0.9	0.9	6	45	4		4HRE 030 200 S06	3	3	20	60	6	
4HRE 009 080 S04	0.9	0.9	8	45	4		4HRE 030 250 S06	3	3	25	65	6	
4HRE 009 100 S04	0.9	0.9	10	45	4		4HRE 030 300 S06	3	3	30	70	6	
4HRE 010 020 S04	1	1	2	45	4		4HRE 030 350 S06	3	3	35	75	6	
4HRE 010 030 S04	1	1	3	45	4		4HRE 030 400 S06	3	3	40	80	6	
4HRE 010 040 S04	1	1	4	45	4		4HRE 030 450 S06	3	3	45	90	6	
4HRE 010 060 S04	1	1	6	45	4		4HRE 030 500 S06	3	3	50	100	6	
4HRE 010 080 S04	1	1	8	45	4		4HRE 035 120 S06	3.5	3.5	12	50	6	
4HRE 010 100 S04	1	1	10	45	4		4HRE 035 160 S06	3.5	3.5	16	55	6	
4HRE 010 120 S04	1	1	12	45	4		4HRE 035 200 S06	3.5	3.5	20	60	6	
4HRE 010 140 S04	1	1	14	50	4		4HRE 035 250 S06	3.5	3.5	25	65	6	
4HRE 010 160 S04	1	1	16	50	4		4HRE 035 300 S06	3.5	3.5	30	70	6	
4HRE 010 200 S04	1	1	20	50	4		4HRE 040 060 S06	4	4	6	50	6	
4HRE 010 250 S04	1	1	25	60	4		4HRE 040 080 S06	4	4	8	50	6	
4HRE 012 040 S04	1.2	1.2	4	45	4		4HRE 040 100 S06	4	4	10	50	6	
4HRE 012 060 S04	1.2	1.2	6	45	4		4HRE 040 120 S06	4	4	12	50	6	
4HRE 012 080 S04	1.2	1.2	8	45	4		4HRE 040 160 S06	4	4	16	55	6	
4HRE 012 100 S04	1.2	1.2	10	45	4		4HRE 040 200 S06	4	4	20	60	6	
4HRE 012 120 S04	1.2	1.2	12	45	4		4HRE 040 250 S06	4	4	25	65	6	
4HRE 012 160 S04	1.2	1.2	16	50	4		4HRE 040 300 S06	4	4	30	70	6	
4HRE 015 040 S04	1.5	1.5	4	45	4		4HRE 040 400 S06	4	4	40	80	6	

