

- 고정도강(HRc52~68), 프리하든강 계열의 고정밀 가공 엔드밀
- 고품량 실리콘계 코팅(Si) 처리하여 내마모성이 우수합니다.
- 고정밀 공차 적용으로 초정밀 가공에 적합합니다.
- 코너R 형상을 날부치핑이 적도록 설계하였습니다.
- 다양한 코너R과 유효장으로 맞춤 가공이 가능합니다.
- 초미립자 초경합금(0.2µm)을 채택, 고속절삭시 뛰어난 성능을 발휘합니다.

#### • Endmills for pre-hardened and hardened steels(HRc52~68)

- Good wear resistance by high quality Si-based PVD coating.
- High precise edge tolerance.
- Designed for minimizing edge chipping by corner R shape.
- Various corner R and flute length for wide range application.
- Outstanding performance at high speed machining by ultra fine (0.2µm) WC grade.

2 UWC 초미립자 TISIN-S Coating R ±0.005 R ±0.01 R ±0.015 30° Helix Angle CUTTING DATA  
 R0.2 ~ 0.5 R1 ~ 1.5 R2 ~ 3 415P

Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.2 ~ 16	+0 ~ -0.01mm

Condition	D Size	D Tolerance
ØD = Ød	Ø6 ~ 12	-0.005 ~ -0.015mm
	Ø16	-0.01 ~ -0.02mm

단위 : mm

Order Number	날경 Diameter D×R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d	비고
2JJCR 002 0002 005	0.2 X R0.02	0.2	0.5	40	4	
2JJCR 002 0002 010	0.2 X R0.02	0.2	1	40	4	
2JJCR 002 0002 015	0.2 X R0.02	0.2	1.5	40	4	
2JJCR 002 0005 005	0.2 X R0.05	0.2	0.5	40	4	
2JJCR 002 0005 010	0.2 X R0.05	0.2	1	40	4	
2JJCR 002 0005 015	0.2 X R0.05	0.2	1.5	40	4	
2JJCR 003 0002 010	0.3 X R0.02	0.3	1	40	4	
2JJCR 003 0002 020	0.3 X R0.02	0.3	2	40	4	
2JJCR 003 0002 030	0.3 X R0.02	0.3	3	40	4	
2JJCR 003 0005 010	0.3 X R0.05	0.3	1	40	4	
2JJCR 003 0005 020	0.3 X R0.05	0.3	2	40	4	
2JJCR 003 0005 030	0.3 X R0.05	0.3	3	40	4	
2JJCR 004 0002 010	0.4 X R0.02	0.4	1	40	4	
2JJCR 004 0002 020	0.4 X R0.02	0.4	2	40	4	
2JJCR 004 0002 030	0.4 X R0.02	0.4	3	40	4	
2JJCR 004 0002 040	0.4 X R0.02	0.4	4	40	4	
2JJCR 004 0005 010	0.4 X R0.05	0.4	1	40	4	
2JJCR 004 0005 020	0.4 X R0.05	0.4	2	40	4	
2JJCR 004 0005 030	0.4 X R0.05	0.4	3	40	4	
2JJCR 004 0005 040	0.4 X R0.05	0.4	4	40	4	
2JJCR 004 001 010	0.4 X R0.1	0.4	1	40	4	
2JJCR 004 001 015	0.4 X R0.1	0.4	1.5	40	4	
2JJCR 004 001 020	0.4 X R0.1	0.4	2	40	4	
2JJCR 004 001 030	0.4 X R0.1	0.4	3	40	4	
2JJCR 004 001 040	0.4 X R0.1	0.4	4	40	4	
2JJCR 005 0002 010	0.5 X R0.02	0.5	1	45	4	
2JJCR 005 0002 015	0.5 X R0.02	0.5	1.5	45	4	
2JJCR 005 0002 020	0.5 X R0.02	0.5	2	45	4	
2JJCR 005 0002 025	0.5 X R0.02	0.5	2.5	45	4	
2JJCR 005 0002 030	0.5 X R0.02	0.5	3	45	4	
2JJCR 005 0002 040	0.5 X R0.02	0.5	4	45	4	
2JJCR 005 0002 050	0.5 X R0.02	0.5	5	45	4	
2JJCR 005 0002 060	0.5 X R0.02	0.5	6	45	4	
2JJCR 005 0002 080	0.5 X R0.02	0.5	8	45	4	
2JJCR 005 0002 100	0.5 X R0.02	0.5	10	45	4	
2JJCR 005 0005 010	0.5 X R0.05	0.5	1	45	4	
2JJCR 005 0005 015	0.5 X R0.05	0.5	1.5	45	4	
2JJCR 005 0005 020	0.5 X R0.05	0.5	2	45	4	
2JJCR 005 0005 025	0.5 X R0.05	0.5	2.5	45	4	
2JJCR 005 0005 030	0.5 X R0.05	0.5	3	45	4	
2JJCR 005 0005 040	0.5 X R0.05	0.5	4	45	4	
2JJCR 005 0005 050	0.5 X R0.05	0.5	5	45	4	
2JJCR 005 0005 060	0.5 X R0.05	0.5	6	45	4	
2JJCR 005 0005 080	0.5 X R0.05	0.5	8	45	4	
2JJCR 005 0005 100	0.5 X R0.05	0.5	10	45	4	
2JJCR 005 001 010	0.5 X R0.1	0.5	1	45	4	
2JJCR 005 001 015	0.5 X R0.1	0.5	1.5	45	4	
2JJCR 005 001 020	0.5 X R0.1	0.5	2	45	4	
2JJCR 005 001 025	0.5 X R0.1	0.5	2.5	45	4	
2JJCR 005 001 030	0.5 X R0.1	0.5	3	45	4	

Order Number	날경 Diameter D×R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d	비고
2JJCR 005 001 040	0.5 X R0.1	0.5	4	45	4	
2JJCR 005 001 050	0.5 X R0.1	0.5	5	45	4	
2JJCR 005 001 060	0.5 X R0.1	0.5	6	45	4	
2JJCR 005 001 080	0.5 X R0.1	0.5	8	45	4	
2JJCR 005 001 100	0.5 X R0.1	0.5	10	45	4	
2JJCR 006 0002 020	0.6 X R0.02	0.6	2	45	4	
2JJCR 006 0002 030	0.6 X R0.02	0.6	3	45	4	
2JJCR 006 0002 040	0.6 X R0.02	0.6	4	45	4	
2JJCR 006 0002 060	0.6 X R0.02	0.6	6	45	4	
2JJCR 006 0002 080	0.6 X R0.02	0.6	8	45	4	
2JJCR 0060002 100	0.6 X R0.02	0.6	10	45	4	
2JJCR 0060002 120	0.6 X R0.02	0.6	12	50	4	
2JJCR 006 0005 020	0.6 X R0.05	0.6	2	45	4	
2JJCR 006 0005 030	0.6 X R0.05	0.6	3	45	4	
2JJCR 006 0005 040	0.6 X R0.05	0.6	4	45	4	
2JJCR 006 0005 060	0.6 X R0.05	0.6	6	45	4	
2JJCR 006 0005 080	0.6 X R0.05	0.6	8	45	4	
2JJCR 0060005 100	0.6 X R0.05	0.6	10	45	4	
2JJCR 0060005 120	0.6 X R0.05	0.6	12	50	4	
2JJCR 006 001 020	0.6 X R0.1	0.6	2	45	4	
2JJCR 006 001 030	0.6 X R0.1	0.6	3	45	4	
2JJCR 006 001 040	0.6 X R0.1	0.6	4	45	4	
2JJCR 006 001 060	0.6 X R0.1	0.6	6	45	4	
2JJCR 006 001 080	0.6 X R0.1	0.6	8	45	4	
2JJCR 006001 100	0.6 X R0.1	0.6	10	45	4	
2JJCR 006001 120	0.6 X R0.1	0.6	12	50	4	
2JJCR 007 001 020	0.7 X R0.1	0.7	2	45	4	
2JJCR 007 001 040	0.7 X R0.1	0.7	4	45	4	
2JJCR 007 001 060	0.7 X R0.1	0.7	6	45	4	
2JJCR 007 001 080	0.7 X R0.1	0.7	8	45	4	
2JJCR 007 001 100	0.7 X R0.1	0.7	10	45	4	
2JJCR 008 0002 020	0.8 X R0.02	0.8	2	45	4	
2JJCR 008 0002 040	0.8 X R0.02	0.8	4	45	4	
2JJCR 008 0002 060	0.8 X R0.02	0.8	6	45	4	
2JJCR 008 0002 080	0.8 X R0.02	0.8	8	45	4	
2JJCR 008 0002 100	0.8 X R0.02	0.8	10	45	4	
2JJCR 008 0002 120	0.8 X R0.02	0.8	12	50	4	
2JJCR 008 0005 020	0.8 X R0.05	0.8	2	45	4	
2JJCR 008 0005 040	0.8 X R0.05	0.8	4	45	4	
2JJCR 008 0005 060	0.8 X R0.05	0.8	6	45	4	
2JJCR 008 0005 080	0.8 X R0.05	0.8	8	45	4	
2JJCR 008 0005 100	0.8 X R0.05	0.8	10	45	4	
2JJCR 008 0005 120	0.8 X R0.05	0.8	12	50	4	
2JJCR 008 001 020	0.8 X R0.1	0.8	2	45	4	
2JJCR 008 001 040	0.8 X R0.1	0.8	4	45	4	
2JJCR 008 001 060	0.8 X R0.1	0.8	6	45	4	
2JJCR 008 001 080	0.8 X R0.1	0.8	8	45	4	
2JJCR 008 001 100	0.8 X R0.1	0.8	10	45	4	
2JJCR 008 001 120	0.8 X R0.1	0.8	12	50	4	
2JJCR 008 002 020	0.8 X R0.2	0.8	2	45	4	



단위 : mm

Order Number	날경 D×R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Dia d	비고	Order Number	날경 D×R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Dia d	비고
2JJCR 008 002 040	0.8 X R0.2	0.8	4	45	4		2JJCR 012 001 100	1.2 X R0.1	1.2	10	50	4	
2JJCR 008 002 060	0.8 X R0.2	0.8	6	45	4		2JJCR 012 001 120	1.2 X R0.1	1.2	12	50	4	
2JJCR 008 002 080	0.8 X R0.2	0.8	8	45	4		2JJCR 012 001 140	1.2 X R0.1	1.2	14	50	4	
2JJCR 008 002 100	0.8 X R0.2	0.8	10	45	4		2JJCR 012 001 160	1.2 X R0.1	1.2	16	50	4	
2JJCR 008 002 120	0.8 X R0.2	0.8	12	50	4		2JJCR 012 001 200	1.2 X R0.1	1.2	20	50	4	
2JJCR 010 0002 040	1 X R0.02	1	4	45	4		2JJCR 012 002 040	1.2 X R0.2	1.2	4	45	4	
2JJCR 010 0002 060	1 X R0.02	1	6	45	4		2JJCR 012 002 060	1.2 X R0.2	1.2	6	45	4	
2JJCR 010 0002 080	1 X R0.02	1	8	45	4		2JJCR 012 002 080	1.2 X R0.2	1.2	8	45	4	
2JJCR 010 0002 100	1 X R0.02	1	10	50	4		2JJCR 012 002 100	1.2 X R0.2	1.2	10	50	4	
2JJCR 010 0002 120	1 X R0.02	1	12	50	4		2JJCR 012 002 120	1.2 X R0.2	1.2	12	50	4	
2JJCR 010 0002 140	1 X R0.02	1	14	50	4		2JJCR 012 002 140	1.2 X R0.2	1.2	14	50	4	
2JJCR 010 0002 160	1 X R0.02	1	16	50	4		2JJCR 012 002 160	1.2 X R0.2	1.2	16	50	4	
2JJCR 010 0002 200	1 X R0.02	1	20	50	4		2JJCR 012 002 200	1.2 X R0.2	1.2	20	50	4	
2JJCR 010 0005 040	1 X R0.05	1	4	45	4		2JJCR 012 003 040	1.2 X R0.3	1.2	4	45	4	
2JJCR 010 0005 060	1 X R0.05	1	6	45	4		2JJCR 012 003 060	1.2 X R0.3	1.2	6	45	4	
2JJCR 010 0005 080	1 X R0.05	1	8	45	4		2JJCR 012 003 080	1.2 X R0.3	1.2	8	45	4	
2JJCR 010 0005 100	1 X R0.05	1	10	50	4		2JJCR 012 003 100	1.2 X R0.3	1.2	10	50	4	
2JJCR 010 0005 120	1 X R0.05	1	12	50	4		2JJCR 012 003 120	1.2 X R0.3	1.2	12	50	4	
2JJCR 010 0005 140	1 X R0.05	1	14	50	4		2JJCR 012 003 140	1.2 X R0.3	1.2	14	50	4	
2JJCR 010 0005 160	1 X R0.05	1	16	50	4		2JJCR 012 003 160	1.2 X R0.3	1.2	16	50	4	
2JJCR 010 0005 200	1 X R0.05	1	20	50	4		2JJCR 012 003 200	1.2 X R0.3	1.2	20	50	4	
2JJCR 010 001 040	1 X R0.1	1	4	45	4		2JJCR 015 0002 040	1.5 X R0.02	1.5	4	45	4	
2JJCR 010 001 060	1 X R0.1	1	6	45	4		2JJCR 015 0002 060	1.5 X R0.02	1.5	6	45	4	
2JJCR 010 001 080	1 X R0.1	1	8	45	4		2JJCR 015 0002 080	1.5 X R0.02	1.5	8	45	4	
2JJCR 010 001 100	1 X R0.1	1	10	50	4		2JJCR 015 0002 100	1.5 X R0.02	1.5	10	50	4	
2JJCR 010 001 120	1 X R0.1	1	12	50	4		2JJCR 015 0002 120	1.5 X R0.02	1.5	12	50	4	
2JJCR 010 001 140	1 X R0.1	1	14	50	4		2JJCR 015 0002 140	1.5 X R0.02	1.5	14	50	4	
2JJCR 010 001 160	1 X R0.1	1	16	50	4		2JJCR 015 0002 160	1.5 X R0.02	1.5	16	50	4	
2JJCR 010 001 200	1 X R0.1	1	20	50	4		2JJCR 015 0002 200	1.5 X R0.02	1.5	20	50	4	
2JJCR 010 002 040	1 X R0.2	1	4	45	4		2JJCR 015 0005 040	1.5 X R0.05	1.5	4	45	4	
2JJCR 010 002 060	1 X R0.2	1	6	45	4		2JJCR 015 0005 060	1.5 X R0.05	1.5	6	45	4	
2JJCR 010 002 080	1 X R0.2	1	8	45	4		2JJCR 015 0005 080	1.5 X R0.05	1.5	8	45	4	
2JJCR 010 002 100	1 X R0.2	1	10	50	4		2JJCR 015 0005 100	1.5 X R0.05	1.5	10	50	4	
2JJCR 010 002 120	1 X R0.2	1	12	50	4		2JJCR 015 0005 120	1.5 X R0.05	1.5	12	50	4	
2JJCR 010 002 140	1 X R0.2	1	14	50	4		2JJCR 015 0005 140	1.5 X R0.05	1.5	14	50	4	
2JJCR 010 002 160	1 X R0.2	1	16	50	4		2JJCR 015 0005 160	1.5 X R0.05	1.5	16	50	4	
2JJCR 010 002 200	1 X R0.2	1	20	50	4		2JJCR 015 0005 200	1.5 X R0.05	1.5	20	50	4	
2JJCR 010 003 040	1 X R0.3	1	4	45	4		2JJCR 015 001 040	1.5 X R0.1	1.5	4	45	4	
2JJCR 010 003 060	1 X R0.3	1	6	45	4		2JJCR 015 001 060	1.5 X R0.1	1.5	6	45	4	
2JJCR 010 003 080	1 X R0.3	1	8	45	4		2JJCR 015 001 080	1.5 X R0.1	1.5	8	45	4	
2JJCR 010 003 100	1 X R0.3	1	10	50	4		2JJCR 015 001 100	1.5 X R0.1	1.5	10	50	4	
2JJCR 010 003 120	1 X R0.3	1	12	50	4		2JJCR 015 001 120	1.5 X R0.1	1.5	12	50	4	
2JJCR 010 003 140	1 X R0.3	1	14	50	4		2JJCR 015 001 140	1.5 X R0.1	1.5	14	50	4	
2JJCR 010 003 160	1 X R0.3	1	16	50	4		2JJCR 015 001 160	1.5 X R0.1	1.5	16	50	4	
2JJCR 010 003 200	1 X R0.3	1	20	50	4		2JJCR 015 001 200	1.5 X R0.1	1.5	20	50	4	
2JJCR 012 0002 040	1.2 X R0.02	1.2	4	45	4		2JJCR 015 002 040	1.5 X R0.2	1.5	4	45	4	
2JJCR 012 0002 060	1.2 X R0.02	1.2	6	45	4		2JJCR 015 002 060	1.5 X R0.2	1.5	6	45	4	
2JJCR 012 0002 080	1.2 X R0.02	1.2	8	45	4		2JJCR 015 002 080	1.5 X R0.2	1.5	8	45	4	
2JJCR 012 0002 100	1.2 X R0.02	1.2	10	50	4		2JJCR 015 002 100	1.5 X R0.2	1.5	10	50	4	
2JJCR 012 0002 120	1.2 X R0.02	1.2	12	50	4		2JJCR 015 002 120	1.5 X R0.2	1.5	12	50	4	
2JJCR 012 0002 140	1.2 X R0.02	1.2	14	50	4		2JJCR 015 002 140	1.5 X R0.2	1.5	14	50	4	
2JJCR 012 0002 160	1.2 X R0.02	1.2	16	50	4		2JJCR 015 002 160	1.5 X R0.2	1.5	16	50	4	
2JJCR 012 0002 200	1.2 X R0.02	1.2	20	50	4		2JJCR 015 002 200	1.5 X R0.2	1.5	20	50	4	
2JJCR 012 0005 040	1.2 X R0.05	1.2	4	45	4		2JJCR 015 003 040	1.5 X R0.3	1.5	4	45	4	
2JJCR 012 0005 060	1.2 X R0.05	1.2	6	45	4		2JJCR 015 003 060	1.5 X R0.3	1.5	6	45	4	
2JJCR 012 0005 080	1.2 X R0.05	1.2	8	45	4		2JJCR 015 003 080	1.5 X R0.3	1.5	8	45	4	
2JJCR 012 0005 100	1.2 X R0.05	1.2	10	50	4		2JJCR 015 003 100	1.5 X R0.3	1.5	10	50	4	
2JJCR 012 0005 120	1.2 X R0.05	1.2	12	50	4		2JJCR 015 003 120	1.5 X R0.3	1.5	12	50	4	
2JJCR 012 0005 140	1.2 X R0.05	1.2	14	50	4		2JJCR 015 003 140	1.5 X R0.3	1.5	14	50	4	
2JJCR 012 0005 160	1.2 X R0.05	1.2	16	50	4		2JJCR 015 003 160	1.5 X R0.3	1.5	16	50	4	
2JJCR 012 0005 200	1.2 X R0.05	1.2	20	50	4		2JJCR 015 003 200	1.5 X R0.3	1.5	20	50	4	
2JJCR 012 001 040	1.2 X R0.1	1.2	4	45	4		2JJCR 015 005 040	1.5 X R0.5	1.5	4	45	4	
2JJCR 012 001 060	1.2 X R0.1	1.2	6	45	4		2JJCR 015 005 060	1.5 X R0.5	1.5	6	45	4	
2JJCR 012 001 080	1.2 X R0.1	1.2	8	45	4		2JJCR 015 005 080	1.5 X R0.5	1.5	8	45	4	

단위 : mm

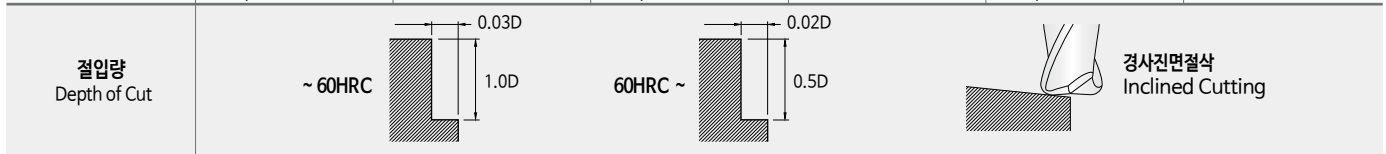
Order Number	날경 D × R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d	비고	Order Number	날경 D × R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d	비고
2JJCR 015 005 100	1.5 X R0.5	1.5	10	50	4		2JJCR 025 002 200	2.5 X R0.2	2.5	20	50	4	
2JJCR 015 005 120	1.5 X R0.5	1.5	12	50	4		2JJCR 025 003 100	2.5 X R0.3	2.5	10	50	4	
2JJCR 015 005 140	1.5 X R0.5	1.5	14	50	4		2JJCR 025 003 160	2.5 X R0.3	2.5	16	50	4	
2JJCR 015 005 160	1.5 X R0.5	1.5	16	50	4		2JJCR 025 003 200	2.5 X R0.3	2.5	20	50	4	
2JJCR 015 005 200	1.5 X R0.5	1.5	20	50	4		2JJCR 025 005 100	2.5 X R0.5	2.5	10	50	4	
2JJCR 020 0002 060	2 X R0.02	2	6	45	4		2JJCR 025 005 160	2.5 X R0.5	2.5	16	50	4	
2JJCR 020 0002 080	2 X R0.02	2	8	45	4		2JJCR 025 005 200	2.5 X R0.5	2.5	20	50	4	
2JJCR 020 0002 100	2 X R0.02	2	10	50	4		2JJCR 030 001 100	3 X R0.1	3	10	50	6	
2JJCR 020 0002 120	2 X R0.02	2	12	50	4		2JJCR 030 001 120	3 X R0.1	3	12	50	6	
2JJCR 020 0002 140	2 X R0.02	2	14	50	4		2JJCR 030 001 160	3 X R0.1	3	16	55	6	
2JJCR 020 0002 160	2 X R0.02	2	16	50	4		2JJCR 030 001 200	3 X R0.1	3	20	60	6	
2JJCR 020 0002 200	2 X R0.02	2	20	50	4		2JJCR 030 001 250	3 X R0.1	3	25	65	6	
2JJCR 020 0002 250	2 X R0.02	2	25	60	4		2JJCR 030 001 300	3 X R0.1	3	30	70	6	
2JJCR 020 0005 060	2 X R0.05	2	6	45	4		2JJCR 030 001 350	3 X R0.1	3	35	75	6	
2JJCR 020 0005 080	2 X R0.05	2	8	45	4		2JJCR 030 001 400	3 X R0.1	3	40	80	6	
2JJCR 020 0005 100	2 X R0.05	2	10	50	4		2JJCR 030 002 100	3 X R0.2	3	10	50	6	
2JJCR 020 0005 120	2 X R0.05	2	12	50	4		2JJCR 030 002 120	3 X R0.2	3	12	50	6	
2JJCR 020 0005 140	2 X R0.05	2	14	50	4		2JJCR 030 002 160	3 X R0.2	3	16	55	6	
2JJCR 020 0005 160	2 X R0.05	2	16	50	4		2JJCR 030 002 200	3 X R0.2	3	20	60	6	
2JJCR 020 0005 200	2 X R0.05	2	20	50	4		2JJCR 030 002 250	3 X R0.2	3	25	65	6	
2JJCR 020 0005 250	2 X R0.05	2	25	60	4		2JJCR 030 002 300	3 X R0.2	3	30	70	6	
2JJCR 020 001 060	2 X R0.1	2	6	45	4		2JJCR 030 002 350	3 X R0.2	3	35	75	6	
2JJCR 020 001 080	2 X R0.1	2	8	45	4		2JJCR 030 002 400	3 X R0.2	3	40	80	6	
2JJCR 020 001 100	2 X R0.1	2	10	50	4		2JJCR 030 003 100	3 X R0.3	3	10	50	6	
2JJCR 020 001 120	2 X R0.1	2	12	50	4		2JJCR 030 003 120	3 X R0.3	3	12	50	6	
2JJCR 020 001 140	2 X R0.1	2	14	50	4		2JJCR 030 003 160	3 X R0.3	3	16	55	6	
2JJCR 020 001 160	2 X R0.1	2	16	50	4		2JJCR 030 003 200	3 X R0.3	3	20	60	6	
2JJCR 020 001 200	2 X R0.1	2	20	50	4		2JJCR 030 003 250	3 X R0.3	3	25	65	6	
2JJCR 020 001 250	2 X R0.1	2	25	60	4		2JJCR 030 003 300	3 X R0.3	3	30	70	6	
2JJCR 020 001 300	2 X R0.1	2	30	70	4		2JJCR 030 003 350	3 X R0.3	3	35	75	6	
2JJCR 020 002 060	2 X R0.2	2	6	45	4		2JJCR 030 003 400	3 X R0.3	3	40	80	6	
2JJCR 020 002 080	2 X R0.2	2	8	45	4		2JJCR 030 005 100	3 X R0.5	3	10	50	6	
2JJCR 020 002 100	2 X R0.2	2	10	50	4		2JJCR 030 005 120	3 X R0.5	3	12	50	6	
2JJCR 020 002 120	2 X R0.2	2	12	50	4		2JJCR 030 005 160	3 X R0.5	3	16	55	6	
2JJCR 020 002 140	2 X R0.2	2	14	50	4		2JJCR 030 005 200	3 X R0.5	3	20	60	6	
2JJCR 020 002 160	2 X R0.2	2	16	50	4		2JJCR 030 005 250	3 X R0.5	3	25	65	6	
2JJCR 020 002 200	2 X R0.2	2	20	50	4		2JJCR 030 005 300	3 X R0.5	3	30	70	6	
2JJCR 020 002 250	2 X R0.2	2	25	60	4		2JJCR 030 005 350	3 X R0.5	3	35	75	6	
2JJCR 020 002 300	2 X R0.2	2	30	70	4		2JJCR 030 005 400	3 X R0.5	3	40	80	6	
2JJCR 020 003 060	2 X R0.3	2	6	45	4		2JJCR 030 010 100	3 X R1	3	10	50	6	
2JJCR 020 003 080	2 X R0.3	2	8	45	4		2JJCR 030 010 120	3 X R1	3	12	50	6	
2JJCR 020 003 100	2 X R0.3	2	10	50	4		2JJCR 030 010 160	3 X R1	3	16	55	6	
2JJCR 020 003 120	2 X R0.3	2	12	50	4		2JJCR 030 010 200	3 X R1	3	20	60	6	
2JJCR 020 003 140	2 X R0.3	2	14	50	4		2JJCR 030 010 250	3 X R1	3	25	65	6	
2JJCR 020 003 160	2 X R0.3	2	16	50	4		2JJCR 030 010 300	3 X R1	3	30	70	6	
2JJCR 020 003 200	2 X R0.3	2	20	50	4		2JJCR 030 010 350	3 X R1	3	35	75	6	
2JJCR 020 003 250	2 X R0.3	2	25	60	4		2JJCR 030 010 400	3 X R1	3	40	80	6	
2JJCR 020 003 300	2 X R0.3	2	30	70	4		2JJCR 040 001 120	4 X R0.1	4	12	50	6	
2JJCR 020 005 060	2 X R0.5	2	6	45	4		2JJCR 040 001 160	4 X R0.1	4	16	55	6	
2JJCR 020 005 080	2 X R0.5	2	8	45	4		2JJCR 040 001 200	4 X R0.1	4	20	60	6	
2JJCR 020 005 100	2 X R0.5	2	10	50	4		2JJCR 040 001 250	4 X R0.1	4	25	65	6	
2JJCR 020 005 120	2 X R0.5	2	12	50	4		2JJCR 040 001 300	4 X R0.1	4	30	70	6	
2JJCR 020 005 140	2 X R0.5	2	14	50	4		2JJCR 040 001 350	4 X R0.1	4	35	75	6	
2JJCR 020 005 160	2 X R0.5	2	16	50	4		2JJCR 040 001 400	4 X R0.1	4	40	80	6	
2JJCR 020 005 200	2 X R0.5	2	20	50	4		2JJCR 040 002 120	4 X R0.2	4	12	50	6	
2JJCR 020 005 250	2 X R0.5	2	25	60	4		2JJCR 040 002 160	4 X R0.2	4	16	55	6	
2JJCR 020 005 300	2 X R0.5	2	30	70	4		2JJCR 040 002 200	4 X R0.2	4	20	60	6	
2JJCR 025 001 100	2.5 X R0.1	2.5	10	50	4		2JJCR 040 002 250	4 X R0.2	4	25	65	6	
2JJCR 025 001 160	2.5 X R0.1	2.5	16	50	4		2JJCR 040 002 300	4 X R0.2	4	30	70	6	
2JJCR 025 001 200	2.5 X R0.1	2.5	20	50	4		2JJCR 040 002 350	4 X R0.2	4	35	75	6	
2JJCR 025 001 250	2.5 X R0.1	2.5	25	60	4		2JJCR 040 002 400	4 X R0.2	4	40	80	6	
2JJCR 025 001 300	2.5 X R0.1	2.5	30	70	4		2JJCR 040 003 120	4 X R0.3	4	12	50	6	
2JJCR 025 002 100	2.5 X R0.2	2.5	10	50	4		2JJCR 040 003 160	4 X R0.3	4	16	55	6	
2JJCR 025 002 160	2.5 X R0.2	2.5	16	50	4		2JJCR 040 003 200	4 X R0.3	4	20	60	6	

단위 : mm

Order Number	날경 Diameter D × R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Dia d	비고	Order Number	날경 Diameter D × R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Dia d	비고
2JJCR 040 003 250	4 X R0.3	4	25	65	6								
2JJCR 040 003 300	4 X R0.3	4	30	70	6								
2JJCR 040 003 350	4 X R0.3	4	35	75	6								
2JJCR 040 003 400	4 X R0.3	4	40	80	6								
2JJCR 040 005 120	4 X R0.5	4	12	50	6								
2JJCR 040 005 160	4 X R0.5	4	16	55	6								
2JJCR 040 005 200	4 X R0.5	4	20	60	6								
2JJCR 040 005 250	4 X R0.5	4	25	65	6								
2JJCR 040 005 300	4 X R0.5	4	30	70	6								
2JJCR 040 005 350	4 X R0.5	4	35	75	6								
2JJCR 040 005 400	4 X R0.5	4	40	80	6								
2JJCR 040 010 120	4 X R1	4	12	50	6								
2JJCR 040 010 160	4 X R1	4	16	55	6								
2JJCR 040 010 200	4 X R1	4	20	60	6								
2JJCR 040 010 250	4 X R1	4	25	65	6								
2JJCR 040 010 300	4 X R1	4	30	70	6								
2JJCR 040 010 350	4 X R1	4	35	75	6								
2JJCR 040 010 400	4 X R1	4	40	80	6								
2JJCR 050 002 150	5 X R0.2	6	15	60	6								
2JJCR 050 002 250	5 X R0.2	6	25	70	6								
2JJCR 050 002 300	5 X R0.2	6	30	70	6								
2JJCR 050 002 400	5 X R0.2	6	40	80	6								
2JJCR 050 005 150	5 X R0.5	6	15	60	6								
2JJCR 050 005 250	5 X R0.5	6	25	70	6								
2JJCR 050 005 300	5 X R0.5	6	30	70	6								
2JJCR 050 005 400	5 X R0.5	6	40	80	6								
2JJCR 050 010 150	5 X R1	6	15	60	6								
2JJCR 050 010 250	5 X R1	6	25	70	6								
2JJCR 050 010 300	5 X R1	6	30	70	6								
2JJCR 050 010 400	5 X R1	6	40	80	6								
2JJCR 060 001 200	6 X R0.1	7	20	60	6								
2JJCR 060 001 400	6 X R0.1	7	40	80	6								
2JJCR 060 002 200	6 X R0.2	7	20	60	6								
2JJCR 060 002 400	6 X R0.2	7	40	80	6								
2JJCR 060 003 200	6 X R0.3	7	20	60	6								
2JJCR 060 003 400	6 X R0.3	7	40	80	6								
2JJCR 060 005 200	6 X R0.5	7	20	60	6								
2JJCR 060 005 400	6 X R0.5	7	40	80	6								
2JJCR 060 010 200	6 X R1	7	20	60	6								
2JJCR 060 010 400	6 X R1	7	40	80	6								
2JJCR 060 015 200	6 X R1.5	7	20	60	6								
2JJCR 060 015 400	6 X R1.5	7	40	80	6								
2JJCR 080 002 220	8 X R0.2	9	22	65	8								
2JJCR 080 003 220	8 X R0.3	9	22	65	8								
2JJCR 080 005 220	8 X R0.5	9	22	65	8								
2JJCR 080 010 220	8 X R1	9	22	65	8								
2JJCR 080 015 220	8 X R1.5	9	22	65	8								
2JJCR 100 002 240	10 X R0.2	11	24	70	10								
2JJCR 100 003 240	10 X R0.3	11	24	70	10								
2JJCR 100 005 240	10 X R0.5	11	24	70	10								
2JJCR 100 010 240	10 X R1	11	24	70	10								
2JJCR 100 015 240	10 X R1.5	11	24	70	10								
2JJCR 100 020 240	10 X R2	11	24	70	10								
2JJCR 120 002 260	12 X R0.2	13	26	80	12								
2JJCR 120 003 260	12 X R0.3	13	26	80	12								
2JJCR 120 005 260	12 X R0.5	13	26	80	12								
2JJCR 120 010 260	12 X R1	13	26	80	12								
2JJCR 120 015 260	12 X R1.5	13	26	80	12								
2JJCR 120 020 260	12 X R2	13	26	80	12								
2JJCR 120 030 260	12 X R3	13	26	80	12								
2JJCR 160 005 110	16 X R0.5	20	35	110	16								
2JJCR 160 010 110	16 X R1	20	35	110	16								

홈절삭 Slotting													
피삭재 Material		고경도강 Hardened Steels STAVAX/SKD11				열처리 / 고경도강 Heat-treated steels / Hardened Steels SKD11 / SKD61				열처리 / 고경도강 Heat-treated steels / Hardened Steels YXR7 / SKH51			
경도 Hardness		45 ~ 55HRC				55 ~ 62HRC				62 ~ 70HRC			
외경 Outside Diameter	반경 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
∅ 0.4	R 0.1	33,000	105	0.01	0.01	25,000	60	0.005	0.008	25,000	60	0.005	0.008
∅ 0.5	R 0.1	33,000	110	0.015	0.02	25,000	65	0.007	0.010	20,000	40	0.007	0.010
∅ 0.8	R 0.2	30,000	125	0.02	0.10	25,000	85	0.01	0.075	20,000	50	0.01	0.075
∅ 1	R 0.3	25,000	226	0.04	0.15	19,000	131	0.02	0.12	16,000	74	0.02	0.12
∅ 1.5	R 0.5	20,500	268	0.10	0.30	16,000	157	0.05	0.20	12,500	95	0.05	0.20
∅ 2	R 0.5	14,500	324	0.15	0.50	11,000	186	0.1	0.25	9,500	124	0.10	0.30
∅ 2.5	R 0.5	9,500	324	0.20	0.50	7,500	186	0.12	0.35	6,400	124	0.12	0.40
∅ 3	R 0.5	9,500	324	0.20	0.50	7,500	186	0.12	0.35	6,400	124	0.12	0.40
∅ 4	R 0.3	7,200	337	0.25	0.30	5,600	197	0.15	0.20	4,750	127	0.15	0.30
∅ 5	R 0.5	6,400	356	0.25	0.50	5,100	209	0.15	0.50	4,450	142	0.15	0.40
"	R 1	6,400	356	0.40	1.05	5,100	209	0.35	0.80	4,450	142	0.30	0.70
∅ 6	R 0.5	5,300	349	0.20	0.70	4,200	209	0.2	0.60	3,700	140	0.20	0.50
"	R 1	5,300	349	0.30	1.00	4,200	209	0.3	0.80	3,700	140	0.20	0.65
"	R 1.5	5,300	349	0.50	1.30	4,200	209	0.4	1.00	3,700	140	0.30	0.80
∅ 8	R 0.5	4,000	318	0.30	0.70	3,200	191	0.20	0.60	2,800	130	0.20	0.50
"	R 1	4,000	318	0.40	1.00	3,200	191	0.25	0.90	2,800	130	0.25	0.70
"	R 1.5	4,000	318	0.40	1.30	3,200	191	0.25	1.20	2,800	130	0.25	0.80
∅ 10	R 0.5	3,200	300	0.40	0.80	2,550	180	0.2	0.60	2,200	122	0.20	0.50
"	R 1	3,200	300	0.50	1.00	2,550	180	0.3	0.80	2,200	122	0.30	0.80
"	R 2	3,200	300	0.50	1.70	2,550	180	0.3	1.50	2,200	122	0.30	1.30
∅ 12	R 0.5	2,650	300	0.50	1.00	2,100	180	0.35	0.80	1,860	122	0.20	0.60
"	R 1	2,650	300	0.60	1.30	2,100	180	0.35	1.20	1,860	122	0.30	1.00
"	R 2	2,650	300	0.60	1.80	2,100	180	0.35	1.70	1,860	122	0.30	1.40
"	R 3	2,650	300	0.60	2.50	2,100	180	0.40	2.00	1,860	122	0.30	1.80

측면절삭 Side Cutting													
피삭재 Material		고경도강 Hardened Steels STAVAX/SKD11				열처리 / 고경도강 Heat-treated steels / Hardened Steels SKD11 / SKD61				열처리 / 고경도강 Heat-treated steels / Hardened Steels YXR7 / SKH51			
경도 Hardness		45 ~ 55HRC				55 ~ 62HRC				62 ~ 70HRC			
외경 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
∅ 0.4		33,000	105	0.40	0.012	25,000	60	0.2	0.008	25,000	60	0.2	0.008
∅ 0.5		33,000	110	0.50	0.015	25,000	65	0.25	0.010	20,000	40	0.25	0.010
∅ 0.8		30,000	125	0.80	0.024	25,000	85	0.4	0.016	20,000	50	0.4	0.016
∅ 1		25,000	145	1.00	0.030	19,000	128	0.5	0.02	16,000	74	0.5	0.02
∅ 2		14,500	208	2.00	0.060	11,000	129	1	0.04	9,500	76	1	0.04
∅ 3		9,500	208	3.00	0.090	7,500	131	1.5	0.06	6,400	77	1.5	0.06
∅ 4		7,200	216	4.00	0.120	5,600	132	2	0.08	4,750	78	2	0.08
∅ 6		5,300	224	6.00	0.180	4,200	133	3	0.12	3,700	80	3	0.12
∅ 8		4,000	204	8.00	0.240	3,200	135	4	0.16	2,800	81	4	0.16
∅ 10		3,200	192	10.00	0.300	2,550	136	5	0.20	2,200	82	5	0.20
∅ 12		2,650	192	12.00	0.360	2,100	138	6	0.24	1,860	84	6	0.24



- HRC55 이하 피삭재(합금강, 공구강) 가공시 같은 파이에 대비 상기 절삭조건외의 20% UP 해주십시오.
- 유효장이 긴 경우에는 회전수와 이송속도를 최대30% 이하로 줄이십시오.
- 측면 절삭시 코너R 부분과 각도내용을 참고하여 절삭 하시기 바랍니다.
- 곡면 절삭시 날경의 코너R 보다 낮은 이동 PITCH를 설정 하십시오.
- 곡면 절삭시 안정적인 속도 내에서 피드를 최대 30%까지 UP 해주십시오.
- 상기 절삭조건은 참고 수치이므로 실 가공시 가공 형상, 가공 목적, 적용 기계에 따라 조건 변경 요망합니다.
- 에어브로, 절삭유, 오일미스트 쿨런트를 추천하며, 칩을 잘 제거하고 가공시 발열과 발화에 주의 하십시오
- When milling workpiece, HRC below 55 (Alloy steel, tool steel), Raise up 20% RPM and feed compared to the same diameter.
- In case of long effective length, reduce the RPM and feed by 30% or less.
- For side milling, refer to the corner radius and
- For curved milling, set up the lower value of the pitch than the corner radius value of tool diameter.
- For curved milling, raise up the feed by 30% in stable condition.
- Use this table for your reference. Adjust the parameters depending on your machining geometry, machining purpose and CNC.
- Air blow or mist coolants are recommended and note for chip emission, heat, or ignition.