



- 고정도강(HRc52~70), 프리하든강 계열의 고정밀 가공 엔드밀
- 고풍량 실리콘 계코팅(Si) 처리하여 내마모성이 우수합니다.
- 고정밀 공차 적용으로 초정밀 가공에 적합합니다.
- 코너R 형상을 날부치평이 적도록 설계하였습니다.
- 다양한 코너R과 유효장으로 맞춤 가공이 가능합니다.
- 초미립자 초경합금 (0.2μm)을 채택, 고속절삭시 뛰어난 성능을 발휘합니다.
- Endmills for pre-hardened and hardened steel (HRc52~70)
- 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.



R0.02 ~ 0.5 R1 ~ 1.5 R2 ~ 3 294P

D Size	D Tolerance
Ø0.5 ~ 5	+0 ~ -0.01mm
Ø6 ~ 12	-0.005 ~ -0.015mm

단위: mm

Order Number	날경 Diameter D×R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샤프크 Shank Dia d	비고
4JJCR 005 0005 020	0.5 X R0.05	0.5	2	45	4	
4JJCR 005 0005 040	0.5 X R0.05	0.5	4	45	4	
4JJCR 005 0005 060	0.5 X R0.05	0.5	6	45	4	
4JJCR 005 0005 080	0.5 X R0.05	0.5	8	45	4	
4JJCR 005 001 020	0.5 X R0.1	0.5	2	45	4	
4JJCR 005 001 040	0.5 X R0.1	0.5	4	45	4	
4JJCR 005 001 060	0.5 X R0.1	0.5	6	45	4	
4JJCR 005 001 080	0.5 X R0.1	0.5	8	45	4	
4JJCR 006 0005 020	0.6 X R0.05	0.6	2	45	4	
4JJCR 006 0005 040	0.6 X R0.05	0.6	4	45	4	
4JJCR 006 0005 060	0.6 X R0.05	0.6	6	45	4	
4JJCR 006 0005 080	0.6 X R0.05	0.6	8	45	4	
4JJCR 006 001 020	0.6 X R0.1	0.6	2	45	4	
4JJCR 006 001 040	0.6 X R0.1	0.6	4	45	4	
4JJCR 006 001 060	0.6 X R0.1	0.6	6	45	4	
4JJCR 006 001 080	0.6 X R0.1	0.6	8	45	4	
4JJCR 007 0005 020	0.7 X R0.05	0.7	2	45	4	
4JJCR 007 0005 040	0.7 X R0.05	0.7	4	45	4	
4JJCR 007 0005 060	0.7 X R0.05	0.7	6	45	4	
4JJCR 007 0005 080	0.7 X R0.05	0.7	8	45	4	
4JJCR 007 001 020	0.7 X R0.1	0.7	2	45	4	
4JJCR 007 001 040	0.7 X R0.1	0.7	4	45	4	
4JJCR 007 001 060	0.7 X R0.1	0.7	6	45	4	
4JJCR 007 001 080	0.7 X R0.1	0.7	8	45	4	
4JJCR 008 0002 020	0.8 X R0.02	0.8	2	45	4	
4JJCR 008 0002 040	0.8 X R0.02	0.8	4	45	4	
4JJCR 008 0002 060	0.8 X R0.02	0.8	6	45	4	
4JJCR 008 0002 080	0.8 X R0.02	0.8	8	45	4	
4JJCR 008 0002 100	0.8 X R0.02	0.8	10	45	4	
New 4JJCR 008 0002 120	0.8 X R0.02	0.8	12	50	4	
4JJCR 008 0005 020	0.8 X R0.05	0.8	2	45	4	
4JJCR 008 0005 040	0.8 X R0.05	0.8	4	45	4	
4JJCR 008 0005 060	0.8 X R0.05	0.8	6	45	4	
4JJCR 008 0005 080	0.8 X R0.05	0.8	8	45	4	
4JJCR 008 0005 100	0.8 X R0.05	0.8	10	45	4	
New 4JJCR 008 0005 120	0.8 X R0.05	0.8	12	50	4	
4JJCR 008 001 020	0.8 X R0.1	0.8	2	45	4	
4JJCR 008 001 040	0.8 X R0.1	0.8	4	45	4	
4JJCR 008 001 060	0.8 X R0.1	0.8	6	45	4	
4JJCR 008 001 080	0.8 X R0.1	0.8	8	45	4	
4JJCR 008 001 100	0.8 X R0.1	0.8	10	45	4	
4JJCR 008 001 120	0.8 X R0.1	0.8	12	50	4	
4JJCR 010 0002 040	1 X R0.02	1	4	45	4	
4JJCR 010 0002 060	1 X R0.02	1	6	45	4	
4JJCR 010 0002 080	1 X R0.02	1	8	45	4	
4JJCR 010 0002 100	1 X R0.02	1	10	50	4	
4JJCR 010 0002 120	1 X R0.02	1	12	50	4	
New 4JJCR 010 0002 140	1 X R0.02	1	14	50	4	
New 4JJCR 010 0002 160	1 X R0.02	1	16	50	4	
New 4JJCR 010 0002 200	1 X R0.02	1	20	50	4	
4JJCR 010 0005 040	1 X R0.05	1	4	45	4	
4JJCR 010 0005 060	1 X R0.05	1	6	45	4	
4JJCR 010 0005 080	1 X R0.05	1	8	45	4	
4JJCR 010 0005 100	1 X R0.05	1	10	50	4	
4JJCR 010 0005 120	1 X R0.05	1	12	50	4	
New 4JJCR 010 0005 140	1 X R0.05	1	14	50	4	
New 4JJCR 010 0005 160	1 X R0.05	1	16	50	4	
New 4JJCR 010 0005 200	1 X R0.05	1	20	50	4	
4JJCR 010 001 040	1 X R0.1	1	4	45	4	
4JJCR 010 001 060	1 X R0.1	1	6	45	4	
4JJCR 010 001 080	1 X R0.1	1	8	45	4	
4JJCR 010 001 100	1 X R0.1	1	10	50	4	
4JJCR 010 001 120	1 X R0.1	1	12	50	4	
New 4JJCR 010 001 140	1 X R0.1	1	14	50	4	
New 4JJCR 010 001 160	1 X R0.1	1	16	50	4	
New 4JJCR 010 001 200	1 X R0.1	1	20	50	4	
4JJCR 010 002 040	1 X R0.2	1	4	45	4	
4JJCR 010 002 060	1 X R0.2	1	6	45	4	
4JJCR 010 002 080	1 X R0.2	1	8	45	4	
4JJCR 010 002 100	1 X R0.2	1	10	50	4	
4JJCR 010 002 120	1 X R0.2	1	12	50	4	
New 4JJCR 010 002 140	1 X R0.2	1	14	50	4	
New 4JJCR 010 002 160	1 X R0.2	1	16	50	4	
New 4JJCR 010 002 200	1 X R0.2	1	20	50	4	
4JJCR 010 003 040	1 X R0.3	1	4	45	4	
4JJCR 010 003 060	1 X R0.3	1	6	45	4	
4JJCR 010 003 080	1 X R0.3	1	8	45	4	
4JJCR 010 003 100	1 X R0.3	1	10	50	4	
4JJCR 010 003 120	1 X R0.3	1	12	50	4	
New 4JJCR 010 003 140	1 X R0.3	1	14	50	4	
New 4JJCR 010 003 160	1 X R0.3	1	16	50	4	
New 4JJCR 010 003 200	1 X R0.3	1	20	50	4	
4JJCR 012 0002 040	1.2 X R0.02	1.2	4	45	4	
4JJCR 012 0002 060	1.2 X R0.02	1.2	6	45	4	
4JJCR 012 0002 080	1.2 X R0.02	1.2	8	45	4	
4JJCR 012 0002 100	1.2 X R0.02	1.2	10	50	4	
4JJCR 012 0002 120	1.2 X R0.02	1.2	12	50	4	
New 4JJCR 012 0002 140	1.2 X R0.02	1.2	14	50	4	
New 4JJCR 012 0002 160	1.2 X R0.02	1.2	16	50	4	
New 4JJCR 012 0002 200	1.2 X R0.02	1.2	20	50	4	
4JJCR 012 0005 040	1.2 X R0.05	1.2	4	45	4	
4JJCR 012 0005 060	1.2 X R0.05	1.2	6	45	4	
4JJCR 012 0005 080	1.2 X R0.05	1.2	8	45	4	
4JJCR 012 0005 100	1.2 X R0.05	1.2	10	50	4	
4JJCR 012 0005 120	1.2 X R0.05	1.2	12	50	4	
New 4JJCR 012 0005 140	1.2 X R0.05	1.2	14	50	4	
New 4JJCR 012 0005 160	1.2 X R0.05	1.2	16	50	4	
New 4JJCR 012 0005 200	1.2 X R0.05	1.2	20	50	4	
4JJCR 012 001 040	1.2 X R0.1	1.2	4	45	4	
4JJCR 012 001 060	1.2 X R0.1	1.2	6	45	4	

단위: mm

Order Number	날경 Diameter D × R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d	비고	Order Number	날경 Diameter D × R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d	비고
4JJCR 012 001 080	1.2 X R0.1	1.2	8	45	4		4JJCR 015 005 120	1.5 X R0.5	1.5	12	50	4	
4JJCR 012 001 100	1.2 X R0.1	1.2	10	50	4		New 4JJCR 015 005 140	1.5 X R0.5	1.5	14	50	4	
4JJCR 012 001 120	1.2 X R0.1	1.2	12	50	4		4JJCR 015 005 160	1.5 X R0.5	1.5	16	50	4	
New 4JJCR 012 001 140	1.2 X R0.1	1.2	14	50	4		New 4JJCR 015 005 200	1.5 X R0.5	1.5	20	50	4	
New 4JJCR 012 001 160	1.2 X R0.1	1.2	16	50	4		New 4JJCR 015 005 220	1.5 X R0.5	1.5	22	60	4	
New 4JJCR 012 001 200	1.2 X R0.1	1.2	20	50	4		New 4JJCR 015 005 250	1.5 X R0.5	1.5	25	60	4	
4JJCR 012 002 040	1.2 X R0.2	1.2	4	45	4		4JJCR 020 0002 060	2 X R0.02	2	6	45	4	
4JJCR 012 002 060	1.2 X R0.2	1.2	6	45	4		4JJCR 020 0002 080	2 X R0.02	2	8	45	4	
4JJCR 012 002 080	1.2 X R0.2	1.2	8	45	4		4JJCR 020 0002 100	2 X R0.02	2	10	50	4	
4JJCR 012 002 100	1.2 X R0.2	1.2	10	50	4		4JJCR 020 0002 120	2 X R0.02	2	12	50	4	
4JJCR 012 002 120	1.2 X R0.2	1.2	12	50	4		New 4JJCR 020 0002 140	2 X R0.02	2	14	50	4	
New 4JJCR 012 002 140	1.2 X R0.2	1.2	14	50	4		4JJCR 020 0002 160	2 X R0.02	2	16	50	4	
New 4JJCR 012 002 160	1.2 X R0.2	1.2	16	50	4		4JJCR 020 0002 200	2 X R0.02	2	20	50	4	
New 4JJCR 012 002 200	1.2 X R0.2	1.2	20	50	4		4JJCR 020 0002 250	2 X R0.02	2	25	60	4	
4JJCR 012 003 040	1.2 X R0.3	1.2	4	45	4		New 4JJCR 020 0002 300	2 X R0.02	2	30	70	4	
4JJCR 012 003 060	1.2 X R0.3	1.2	6	45	4		4JJCR 020 0005 060	2 X R0.05	2	6	45	4	
4JJCR 012 003 080	1.2 X R0.3	1.2	8	45	4		4JJCR 020 0005 080	2 X R0.05	2	8	45	4	
4JJCR 012 003 100	1.2 X R0.3	1.2	10	50	4		4JJCR 020 0005 100	2 X R0.05	2	10	50	4	
4JJCR 012 003 120	1.2 X R0.3	1.2	12	50	4		4JJCR 020 0005 120	2 X R0.05	2	12	50	4	
4JJCR 015 0002 060	1.5 X R0.02	1.5	6	45	4		New 4JJCR 020 0005 140	2 X R0.05	2	14	50	4	
4JJCR 015 0002 080	1.5 X R0.02	1.5	8	45	4		4JJCR 020 0005 160	2 X R0.05	2	16	50	4	
4JJCR 015 0002 100	1.5 X R0.02	1.5	10	50	4		4JJCR 020 0005 200	2 X R0.05	2	20	50	4	
4JJCR 015 0002 120	1.5 X R0.02	1.5	12	50	4		4JJCR 020 0005 250	2 X R0.05	2	25	60	4	
New 4JJCR 015 0002 140	1.5 X R0.02	1.5	14	50	4		New 4JJCR 020 0005 300	2 X R0.05	2	30	70	4	
4JJCR 015 0002 160	1.5 X R0.02	1.5	16	50	4		4JJCR 020 001 060	2 X R0.1	2	6	45	4	
New 4JJCR 015 0002 200	1.5 X R0.02	1.5	20	50	4		4JJCR 020 001 080	2 X R0.1	2	8	45	4	
New 4JJCR 015 0002 220	1.5 X R0.02	1.5	22	60	4		4JJCR 020 001 100	2 X R0.1	2	10	50	4	
4JJCR 015 0005 060	1.5 X R0.05	1.5	6	45	4		4JJCR 020 001 120	2 X R0.1	2	12	50	4	
4JJCR 015 0005 080	1.5 X R0.05	1.5	8	45	4		New 4JJCR 020 001 140	2 X R0.1	2	14	50	4	
4JJCR 015 0005 100	1.5 X R0.05	1.5	10	50	4		4JJCR 020 001 160	2 X R0.1	2	16	50	4	
4JJCR 015 0005 120	1.5 X R0.05	1.5	12	50	4		4JJCR 020 001 200	2 X R0.1	2	20	50	4	
New 4JJCR 015 0005 140	1.5 X R0.05	1.5	14	50	4		4JJCR 020 001 250	2 X R0.1	2	25	60	4	
4JJCR 015 0005 160	1.5 X R0.05	1.5	16	50	4		New 4JJCR 020 001 300	2 X R0.1	2	30	70	4	
New 4JJCR 015 0005 200	1.5 X R0.05	1.5	20	50	4		4JJCR 020 002 060	2 X R0.2	2	6	45	4	
New 4JJCR 015 0005 220	1.5 X R0.05	1.5	22	60	4		4JJCR 020 002 080	2 X R0.2	2	8	45	4	
4JJCR 015 001 060	1.5 X R0.1	1.5	6	45	4		4JJCR 020 002 100	2 X R0.2	2	10	50	4	
4JJCR 015 001 080	1.5 X R0.1	1.5	8	45	4		4JJCR 020 002 120	2 X R0.2	2	12	50	4	
4JJCR 015 001 100	1.5 X R0.1	1.5	10	50	4		New 4JJCR 020 002 140	2 X R0.2	2	14	50	4	
4JJCR 015 001 120	1.5 X R0.1	1.5	12	50	4		4JJCR 020 002 160	2 X R0.2	2	16	50	4	
New 4JJCR 015 001 140	1.5 X R0.1	1.5	14	50	4		4JJCR 020 002 200	2 X R0.2	2	20	50	4	
4JJCR 015 001 160	1.5 X R0.1	1.5	16	50	4		4JJCR 020 002 250	2 X R0.2	2	25	60	4	
New 4JJCR 015 001 200	1.5 X R0.1	1.5	20	50	4		New 4JJCR 020 002 300	2 X R0.2	2	30	70	4	
New 4JJCR 015 001 220	1.5 X R0.1	1.5	22	60	4		4JJCR 020 003 060	2 X R0.3	2	6	45	4	
4JJCR 015 002 060	1.5 X R0.2	1.5	6	45	4		4JJCR 020 003 080	2 X R0.3	2	8	45	4	
4JJCR 015 002 080	1.5 X R0.2	1.5	8	45	4		4JJCR 020 003 100	2 X R0.3	2	10	50	4	
4JJCR 015 002 100	1.5 X R0.2	1.5	10	50	4		4JJCR 020 003 120	2 X R0.3	2	12	50	4	
4JJCR 015 002 120	1.5 X R0.2	1.5	12	50	4		New 4JJCR 020 003 140	2 X R0.3	2	14	50	4	
New 4JJCR 015 002 140	1.5 X R0.2	1.5	14	50	4		4JJCR 020 003 160	2 X R0.3	2	16	50	4	
4JJCR 015 002 160	1.5 X R0.2	1.5	16	50	4		4JJCR 020 003 200	2 X R0.3	2	20	50	4	
New 4JJCR 015 002 200	1.5 X R0.2	1.5	20	50	4		4JJCR 020 003 250	2 X R0.3	2	25	60	4	
New 4JJCR 015 002 220	1.5 X R0.2	1.5	22	60	4		New 4JJCR 020 003 300	2 X R0.3	2	30	70	4	
New 4JJCR 015 002 250	1.5 X R0.2	1.5	25	60	4		4JJCR 020 005 060	2 X R0.5	2	6	45	4	
4JJCR 015 003 060	1.5 X R0.3	1.5	6	45	4		4JJCR 020 005 080	2 X R0.5	2	8	45	4	
4JJCR 015 003 080	1.5 X R0.3	1.5	8	45	4		4JJCR 020 005 100	2 X R0.5	2	10	50	4	
4JJCR 015 003 100	1.5 X R0.3	1.5	10	50	4		4JJCR 020 005 120	2 X R0.5	2	12	50	4	
4JJCR 015 003 120	1.5 X R0.3	1.5	12	50	4		New 4JJCR 020 005 140	2 X R0.5	2	14	50	4	
New 4JJCR 015 003 140	1.5 X R0.3	1.5	14	50	4		4JJCR 020 005 160	2 X R0.5	2	16	50	4	
4JJCR 015 003 160	1.5 X R0.3	1.5	16	50	4		4JJCR 020 005 200	2 X R0.5	2	20	50	4	
New 4JJCR 015 003 200	1.5 X R0.3	1.5	20	50	4		4JJCR 020 005 250	2 X R0.5	2	25	60	4	
New 4JJCR 015 003 220	1.5 X R0.3	1.5	22	60	4		New 4JJCR 020 005 300	2 X R0.5	2	30	70	4	
New 4JJCR 015 003 250	1.5 X R0.3	1.5	25	60	4		4JJCR 025 001 100	2.5 X R0.1	2.5	10	50	4	
4JJCR 015 005 060	1.5 X R0.5	1.5	6	45	4		4JJCR 025 001 160	2.5 X R0.1	2.5	16	50	4	
4JJCR 015 005 080	1.5 X R0.5	1.5	8	45	4		4JJCR 025 001 200	2.5 X R0.1	2.5	20	50	4	
4JJCR 015 005 100	1.5 X R0.5	1.5	10	50	4		4JJCR 025 001 250	2.5 X R0.1	2.5	25	60	4	

단위: mm

Order Number	날경 Diameter D × R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샤프크 Shank Dia d	비고	Order Number	날경 Diameter D × R	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	샤프크 Shank Dia d	비고
New 4JJCR 025 001 300	2.5 X R0.1	2.5	30	70	4		4JJCR 040 001 160	4 X R0.1	4	16	55	6	
4JJCR 025 002 100	2.5 X R0.2	2.5	10	50	4		4JJCR 040 001 200	4 X R0.1	4	20	60	6	
4JJCR 025 002 160	2.5 X R0.2	2.5	16	50	4		4JJCR 040 001 250	4 X R0.1	4	25	65	6	
4JJCR 025 002 200	2.5 X R0.2	2.5	20	50	4		4JJCR 040 001 300	4 X R0.1	4	30	70	6	
4JJCR 025 002 250	2.5 X R0.2	2.5	25	60	4		4JJCR 040 001 350	4 X R0.1	4	35	75	6	
New 4JJCR 025 002 300	2.5 X R0.2	2.5	30	70	4		4JJCR 040 001 400	4 X R0.1	4	40	80	6	
4JJCR 025 003 100	2.5 X R0.3	2.5	10	50	4		4JJCR 040 002 130	4 X R0.2	4	13	55	6	
4JJCR 025 003 160	2.5 X R0.3	2.5	16	50	4		4JJCR 040 002 160	4 X R0.2	4	16	55	6	
4JJCR 025 003 200	2.5 X R0.3	2.5	20	50	4		4JJCR 040 002 200	4 X R0.2	4	20	60	6	
4JJCR 025 003 250	2.5 X R0.3	2.5	25	60	4		4JJCR 040 002 250	4 X R0.2	4	25	65	6	
New 4JJCR 025 003 300	2.5 X R0.3	2.5	30	70	4		4JJCR 040 002 300	4 X R0.2	4	30	70	6	
4JJCR 025 005 100	2.5 X R0.5	2.5	10	50	4		4JJCR 040 002 350	4 X R0.2	4	35	75	6	
4JJCR 025 005 160	2.5 X R0.5	2.5	16	50	4		4JJCR 040 002 400	4 X R0.2	4	40	80	6	
4JJCR 025 005 200	2.5 X R0.5	2.5	20	50	4		4JJCR 040 002 450	4 X R0.2	4	45	90	6	
4JJCR 025 005 250	2.5 X R0.5	2.5	25	60	4		4JJCR 040 002 500	4 X R0.2	4	50	100	6	
New 4JJCR 025 005 300	2.5 X R0.5	2.5	30	70	4		4JJCR 040 003 130	4 X R0.3	4	13	55	6	
4JJCR 030 001 100	3 X R0.1	3	10	50	6		4JJCR 040 003 160	4 X R0.3	4	16	55	6	
4JJCR 030 001 120	3 X R0.1	3	12	50	6		4JJCR 040 003 200	4 X R0.3	4	20	60	6	
4JJCR 030 001 160	3 X R0.1	3	16	55	6		4JJCR 040 003 250	4 X R0.3	4	25	65	6	
4JJCR 030 001 200	3 X R0.1	3	20	60	6		4JJCR 040 003 300	4 X R0.3	4	30	70	6	
4JJCR 030 001 250	3 X R0.1	3	25	65	6		4JJCR 040 003 350	4 X R0.3	4	35	75	6	
4JJCR 030 001 300	3 X R0.1	3	30	70	6		4JJCR 040 003 400	4 X R0.3	4	40	80	6	
4JJCR 030 001 350	3 X R0.1	3	35	75	6		4JJCR 040 003 450	4 X R0.3	4	45	90	6	
New 4JJCR 030 001 400	3 X R0.1	3	40	80	6		4JJCR 040 003 500	4 X R0.3	4	50	100	6	
New 4JJCR 030 001 450	3 X R0.1	3	45	90	6		4JJCR 040 005 130	4 X R0.5	4	13	55	6	
4JJCR 030 002 100	3 X R0.2	3	10	50	6		4JJCR 040 005 160	4 X R0.5	4	16	55	6	
4JJCR 030 002 120	3 X R0.2	3	12	50	6		4JJCR 040 005 200	4 X R0.5	4	20	60	6	
4JJCR 030 002 160	3 X R0.2	3	16	55	6		4JJCR 040 005 250	4 X R0.5	4	25	65	6	
4JJCR 030 002 200	3 X R0.2	3	20	60	6		4JJCR 040 005 300	4 X R0.5	4	30	70	6	
4JJCR 030 002 250	3 X R0.2	3	25	65	6		4JJCR 040 005 350	4 X R0.5	4	35	75	6	
4JJCR 030 002 300	3 X R0.2	3	30	70	6		4JJCR 040 005 400	4 X R0.5	4	40	80	6	
4JJCR 030 002 350	3 X R0.2	3	35	75	6		4JJCR 040 005 450	4 X R0.5	4	45	90	6	
4JJCR 030 002 400	3 X R0.2	3	40	80	6		4JJCR 040 005 500	4 X R0.5	4	50	100	6	
New 4JJCR 030 002 450	3 X R0.2	3	45	90	6		New 4JJCR 040 005 550	4 X R0.5	4	55	100	6	
4JJCR 030 003 100	3 X R0.3	3	10	50	6		4JJCR 040 010 130	4 X R1	4	13	55	6	
4JJCR 030 003 120	3 X R0.3	3	12	50	6		4JJCR 040 010 160	4 X R1	4	16	55	6	
4JJCR 030 003 160	3 X R0.3	3	16	55	6		4JJCR 040 010 200	4 X R1	4	20	60	6	
4JJCR 030 003 200	3 X R0.3	3	20	60	6		4JJCR 040 010 250	4 X R1	4	25	65	6	
4JJCR 030 003 250	3 X R0.3	3	25	65	6		4JJCR 040 010 300	4 X R1	4	30	70	6	
4JJCR 030 003 300	3 X R0.3	3	30	70	6		4JJCR 040 010 350	4 X R1	4	35	75	6	
4JJCR 030 003 350	3 X R0.3	3	35	75	6		4JJCR 040 010 400	4 X R1	4	40	80	6	
4JJCR 030 003 400	3 X R0.3	3	40	80	6		4JJCR 040 010 450	4 X R1	4	45	90	6	
New 4JJCR 030 003 450	3 X R0.3	3	45	90	6		4JJCR 040 010 500	4 X R1	4	50	100	6	
4JJCR 030 005 100	3 X R0.5	3	10	50	6		New 4JJCR 040 010 550	4 X R1	4	55	100	6	
4JJCR 030 005 120	3 X R0.5	3	12	50	6		4JJCR 050 001 160	5 X R0.1	5	16	60	6	
4JJCR 030 005 160	3 X R0.5	3	16	55	6		4JJCR 050 001 300	5 X R0.1	5	30	70	6	
4JJCR 030 005 200	3 X R0.5	3	20	60	6		New 4JJCR 050 001 400	5 X R0.1	5	40	80	6	
4JJCR 030 005 250	3 X R0.5	3	25	65	6		4JJCR 050 002 160	5 X R0.2	5	16	60	6	
4JJCR 030 005 300	3 X R0.5	3	30	70	6		4JJCR 050 002 300	5 X R0.2	5	30	70	6	
4JJCR 030 005 350	3 X R0.5	3	35	75	6		New 4JJCR 050 002 400	5 X R0.2	5	40	80	6	
4JJCR 030 005 400	3 X R0.5	3	40	80	6		4JJCR 050 003 160	5 X R0.3	5	16	60	6	
New 4JJCR 030 005 450	3 X R0.5	3	45	90	6		4JJCR 050 003 300	5 X R0.3	5	30	70	6	
New 4JJCR 030 005 500	3 X R0.5	3	50	100	6		New 4JJCR 050 003 400	5 X R0.3	5	40	80	6	
4JJCR 030 010 100	3 X R1	3	10	50	6		4JJCR 050 005 160	5 X R0.5	5	16	60	6	
4JJCR 030 010 120	3 X R1	3	12	50	6		4JJCR 050 005 300	5 X R0.5	5	30	70	6	
4JJCR 030 010 160	3 X R1	3	16	55	6		4JJCR 050 005 400	5 X R0.5	5	40	80	6	
4JJCR 030 010 200	3 X R1	3	20	60	6		4JJCR 050 005 500	5 X R0.5	5	50	100	6	
4JJCR 030 010 250	3 X R1	3	25	65	6		New 4JJCR 050 005 600	5 X R0.5	5	60	110	6	
4JJCR 030 010 300	3 X R1	3	30	70	6		4JJCR 050 010 160	5 X R1	5	16	60	6	
4JJCR 030 010 350	3 X R1	3	35	75	6		4JJCR 050 010 300	5 X R1	5	30	70	6	
4JJCR 030 010 400	3 X R1	3	40	80	6		4JJCR 050 010 400	5 X R1	5	40	80	6	
New 4JJCR 030 010 450	3 X R1	3	45	90	6		4JJCR 050 010 500	5 X R1	5	50	100	6	
New 4JJCR 030 010 500	3 X R1	3	50	100	6		New 4JJCR 050 010 600	5 X R1	5	60	110	6	
4JJCR 040 001 130	4 X R0.1	4	13	55	6		4JJCR 060 001 200	6 X R0.1	7	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
4JJCR 060 001 400	6 X R0.1	7	40	80	6		4JJCR 120 015 260	12 X R1.5	13	26	80	12	
New 4JJCR 060 001 500	6 X R0.1	7	50	100	6		4JJCR 120 020 260	12 X R2	13	26	80	12	
4JJCR 060 002 200	6 X R0.2	7	20	60	6		4JJCR 120 020 400	12 X R2	13	40	110	12	
4JJCR 060 002 400	6 X R0.2	7	40	80	6		4JJCR 120 030 260	12 X R3	13	26	80	12	
New 4JJCR 060 002 500	6 X R0.2	7	50	100	6								
4JJCR 060 003 200	6 X R0.3	7	20	60	6								
4JJCR 060 003 400	6 X R0.3	7	40	80	6								
New 4JJCR 060 003 500	6 X R0.3	7	50	100	6								
4JJCR 060 005 200	6 X R0.5	7	20	60	6								
4JJCR 060 005 400	6 X R0.5	7	40	80	6								
4JJCR 060 005 500	6 X R0.5	7	50	100	6								
New 4JJCR 060 005 600	6 X R0.5	7	60	110	6								
4JJCR 060 010 200	6 X R1	7	20	60	6								
4JJCR 060 010 400	6 X R1	7	40	80	6								
4JJCR 060 010 500	6 X R1	7	50	100	6								
New 4JJCR 060 010 600	6 X R1	7	60	110	6								
4JJCR 060 015 200	6 X R1.5	7	20	60	6								
4JJCR 060 015 400	6 X R1.5	7	40	80	6								
New 4JJCR 060 015 500	6 X R1.5	7	50	100	6								
New 4JJCR 060 020 300	6 X R2	7	30	70	6								
New 4JJCR 060 020 400	6 X R2	7	40	80	6								
New 4JJCR 060 020 500	6 X R2	7	50	100	6								
4JJCR 080 002 220	8 X R0.2	9	22	65	8								
4JJCR 080 002 400	8 X R0.2	9	40	100	8								
4JJCR 080 003 220	8 X R0.3	9	22	65	8								
4JJCR 080 003 400	8 X R0.3	9	40	100	8								
4JJCR 080 005 220	8 X R0.5	9	22	65	8								
4JJCR 080 005 400	8 X R0.5	9	40	100	8								
4JJCR 080 005 500	8 X R0.5	9	50	120	8								
New 4JJCR 080 005 600	8 X R0.5	9	60	120	8								
4JJCR 080 010 220	8 X R1	9	22	65	8								
4JJCR 080 010 400	8 X R1	9	40	100	8								
4JJCR 080 010 500	8 X R1	9	50	120	8								
New 4JJCR 080 010 600	8 X R1	9	60	120	8								
4JJCR 080 015 220	8 X R1.5	9	22	65	8								
4JJCR 080 015 400	8 X R1.5	9	40	100	8								
4JJCR 080 020 220	8 X R2	9	22	65	8								
4JJCR 080 020 400	8 X R2	9	40	100	8								
4JJCR 080 020 500	8 X R2	9	50	120	8								
4JJCR 100 002 240	10 X R0.2	11	24	70	10								
4JJCR 100 002 400	10 X R0.2	11	40	100	10								
4JJCR 100 003 240	10 X R0.3	11	24	70	10								
4JJCR 100 003 400	10 X R0.3	11	40	100	10								
4JJCR 100 005 240	10 X R0.5	11	24	70	10								
4JJCR 100 005 400	10 X R0.5	11	40	100	10								
4JJCR 100 005 500	10 X R0.5	11	50	120	10								
New 4JJCR 100 005 600	10 X R0.5	11	60	120	10								
4JJCR 100 010 240	10 X R1	11	24	70	10								
4JJCR 100 010 400	10 X R1	11	40	100	10								
4JJCR 100 010 500	10 X R1	11	50	120	10								
New 4JJCR 100 010 600	10 X R1	11	60	120	10								
4JJCR 100 015 240	10 X R1.5	11	24	70	10								
4JJCR 100 015 400	10 X R1.5	11	40	100	10								
4JJCR 100 020 240	10 X R2	11	24	70	10								
4JJCR 100 020 400	10 X R2	11	40	100	10								
4JJCR 100 020 500	10 X R2	11	50	120	10								
4JJCR 100 025 240	10 X R2.5	11	24	70	10								
4JJCR 120 003 260	12 X R0.3	13	26	80	12								
4JJCR 120 005 260	12 X R0.5	13	26	80	12								
4JJCR 120 005 400	12 X R0.5	13	40	110	12								
4JJCR 120 005 600	12 X R0.5	13	60	130	12								
4JJCR 120 010 260	12 X R1	13	26	80	12								
4JJCR 120 010 400	12 X R1	13	40	110	12								
4JJCR 120 010 600	12 X R1	13	60	130	12								

4JJCR / 6JJCR / 4JJTC

- 6JJCR은 RPM 동일, FEED만 최대 50% Up 적용.
- Use the same RPM and raise up the feed up to 50% for 6JJCR.

피삭재 Material		고경도강 Hardened Steels											
경도 Hardness		55 ~ 60HRC				60 ~ 65HRC				65 ~ 68HRC			
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
Ø 0.5	R 0.1	33,000	365	0.015	0.02	25,000	245	0.007	0.010	20,000	140	0.007	0.010
Ø 0.6	R 0.1	30,000	380	0.02	0.10	25,000	250	0.01	0.075	20,000	150	0.01	0.075
Ø 0.7	R 0.1	28,000	39	0.03	0.13	21,000	255	0.01	0.080	18,000	150	0.01	0.080
Ø 0.8	R 0.1	25,500	400	0.04	0.15	19,000	260	0.02	0.12	16,000	155	0.02	0.12
Ø 1	R 0.1	20,500	430	0.08	0.80	16,000	270	0.04	0.06	12,500	175	0.03	0.05
"	R 0.3	20,500	430	0.10	0.40	16,000	270	0.05	0.08	12,500	175	0.05	0.06
Ø 1.5	R 0.1	18,000	460	0.12	1.30	13,000	300	0.07	0.10	10,500	200	0.05	0.08
"	R 0.5	18,000	460	0.15	0.50	13,000	300	0.10	0.12	10,500	200	0.07	0.10
Ø 2	R 0.1	14,500	520	0.15	1.80	11,000	320	0.10	0.12	9,500	230	0.10	0.10
"	R 0.5	14,500	520	0.18	1.00	11,000	320	0.10	0.14	9,500	230	0.10	0.12
Ø 2.5	R 0.1	11,500	520	0.16	2.00	8,500	320	0.10	0.13	7,500	230	0.10	0.10
"	R 0.5	11,500	520	0.19	1.50	8,500	320	0.10	0.15	7,500	230	0.10	0.12
Ø 3	R 0.1	9,500	520	0.16	2.50	7,500	320	0.12	0.13	6,400	230	0.12	0.10
"	R 0.5	9,500	520	0.18	2.00	7,500	320	0.12	0.14	6,400	230	0.12	0.12
"	R 1	9,500	520	0.20	1.00	7,500	320	0.12	0.16	6,400	230	0.12	0.13
Ø 4	R 0.1	7,200	540	0.20	3.50	5,600	335	0.12	0.16	4,750	240	0.12	0.13
"	R 0.5	7,200	540	0.25	3.00	5,600	335	0.12	0.20	4,750	240	0.15	0.16
"	R 1	7,200	540	0.25	2.00	5,600	335	0.15	0.20	4,750	240	0.15	0.16
Ø 5	R 0.1	6,400	580	0.25	4.50	5,100	370	0.12	0.20	4,450	270	0.12	0.16
"	R 0.5	6,400	580	0.28	4.00	5,100	370	0.15	0.22	4,450	270	0.15	0.18
"	R 1	6,400	580	0.30	3.00	5,100	370	0.15	0.24	4,450	270	0.15	0.19
Ø 6	R 0.1	5,300	560	0.30	5.50	4,200	350	0.20	0.24	3,700	260	0.20	0.19
"	R 0.5	5,300	560	0.30	5.00	4,200	350	0.20	0.24	3,700	260	0.20	0.19
"	R 1	5,300	560	0.40	4.00	4,200	350	0.25	0.32	3,700	260	0.25	0.26
"	R 1.5	5,300	560	0.40	3.00	4,200	350	0.25	0.32	3,700	260	0.25	0.26
Ø 8	R 0.5	4,000	520	0.30	7.50	3,200	330	0.20	0.24	2,800	240	0.20	0.19
"	R 1	4,000	520	0.30	6.00	3,200	330	0.20	0.24	2,800	240	0.20	0.19
"	R 1.5	4,000	520	0.40	5.00	3,200	330	0.25	0.32	2,800	240	0.25	0.26
"	R 2	4,000	520	0.50	4.00	3,200	330	0.30	0.40	2,800	240	0.25	0.32
Ø 10	R 0.5	3,200	480	0.40	9.50	2,550	310	0.20	0.32	2,200	220	0.20	0.26
"	R 1	3,200	480	0.45	9.00	2,550	310	0.25	0.36	2,200	220	0.25	0.29
"	R 1.5	3,200	480	0.50	7.00	2,550	310	0.30	0.40	2,200	220	0.30	0.32
"	R 2	3,200	480	0.50	6.00	2,550	310	0.30	0.40	2,200	220	0.30	0.32
"	R 2.5	3,200	480	0.50	5.00	2,550	310	0.30	0.40	2,200	220	0.30	0.32
Ø 12	R 0.5	2,650	480	0.50	11.00	2,100	300	0.35	0.40	1,860	220	0.30	0.32
"	R 1	2,650	480	0.70	10.00	2,100	300	0.35	0.56	1,860	220	0.35	0.45
"	R 1.5	2,650	480	0.80	9.00	2,100	300	0.40	0.64	1,860	220	0.35	0.51
"	R 2	2,650	480	0.80	8.00	2,100	300	0.40	0.64	1,860	220	0.35	0.51
"	R 3	2,650	480	0.80	6.00	2,100	300	0.40	0.64	1,860	220	0.35	0.51

절입량
Depth of Cut

~ 60HRC

60HRC ~

경사진면절삭
Inclined Cutting

- 상기 조건표는 홈 절삭 조건표이며, 측면 절삭시 절입기준표를 참고바랍니다.
- HRC55 이하 피삭재(합금강, 공구강) 가공시 같은 파이에 대비 상기 절삭조건 20% UP 해주십시오.
- 유효장이 긴 경우에는 회전수와 이송속도를 최대 30% 이하로 줄이십시오.
- 곡면 절삭시 날경의 코너R 보다 낮은 이동 PITCH를 설정 하십시오.
- 곡면 절삭시 안정적인 속도 내에서 피드를 최대 30%까지 UP 해주십시오.
- 6날시 회전수는 유지하고, 피드는 안정적인 속도 내에서 최대 50%까지 UP 해주십시오.
- Above the table is a reference for groove milling, and refer to the depth of cut for side milling.
- 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 curved milling, use the lower value of pitch than corner radius value of tool diameter.
- For curved milling, raise up the feed up to 30% in stable condition.
- With 6flutes milling, raise up the feed up to 50% in stable condition.

당신의스페셜은우리의표준품입니다.

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