

- 프리하드강, 일반강, 주물 비철합금 가공 엔드밀
- 모서리 면취와 측면절삭을 동시에 가공할 수 있는 다기능 엔드밀입니다.
- 엔드밀의 인선을 면취설계하여 엔드밀의 치핑을 최소화 하였습니다.
- JCRO코팅 처리하여 다양한 피삭재 가공시 인선부에 스트레스가 적으며, 내마모성 또한 향상됩니다.
- 다양한 피삭재 가공이 가능합니다.

Pre-hardened steels, Cast iron, Non-metallic materials

- Multi function endmill for corner chamfering, side wall.
- Minimize edge chipping by applying edge chamfering design.
- JCRO coating provides wear resistance improvement as well as avoid edge stress in various applications.
- Endmills for various work materials.



497P

Condition	D Size	D Tolerance	Condition	D Size	D Tolerance
ØD ≠ Ød	Ø1 ~ 6	+0 ~ -0.01mm	ØD = Ød	Ø6	-0.005 ~ -0.015mm
	Ø8 ~ 12	+0 ~ -0.015mm		Ø8 ~ 12	-0.01 ~ -0.025mm

단위 : mm

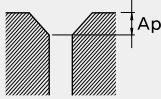
Order Number	날경 Diameter D	면취량 Chamfer C	날장 Length of cut L1	전장 Overall Length L	샙크 Shank Dia d	비고	Order Number	날경 Diameter D	면취량 Chamfer C	날장 Length of cut L1	전장 Overall Length L	샙크 Shank Dia d	비고
2CCMC 010 0002 S04	1	0.02	2.5	45	4		2CCMC 080 025 S08	8	2.5	19	70	8	
2CCMC 010 0005 S04	1	0.05	2.5	45	4		2CCMC 080 030 S08	8	3	19	70	8	
2CCMC 010 001 S04	1	0.1	2.5	45	4		2CCMC 100 001 S10	10	0.1	22	75	10	
2CCMC 010 002 S04	1	0.2	2.5	45	4		2CCMC 100 002 S10	10	0.2	22	75	10	
2CCMC 010 003 S04	1	0.3	2.5	45	4		2CCMC 100 005 S10	10	0.5	22	75	10	
2CCMC 015 0005 S04	1.5	0.05	4	45	4		2CCMC 100 010 S10	10	1	22	75	10	
2CCMC 015 001 S04	1.5	0.1	4	45	4		2CCMC 100 015 S10	10	1.5	22	75	10	
2CCMC 015 002 S04	1.5	0.2	4	45	4		2CCMC 100 020 S10	10	2	22	75	10	
2CCMC 015 003 S04	1.5	0.3	4	45	4		2CCMC 100 030 S10	10	3	22	75	10	
2CCMC 015 005 S04	1.5	0.5	4	45	4		2CCMC 100 040 S10	10	4	22	75	10	
2CCMC 020 0005 S04	2	0.05	6	45	4		2CCMC 120 001 S12	12	0.1	26	80	12	
2CCMC 020 001 S04	2	0.1	6	45	4		2CCMC 120 002 S12	12	0.2	26	80	12	
2CCMC 020 002 S04	2	0.2	6	45	4		2CCMC 120 005 S12	12	0.5	26	80	12	
2CCMC 020 003 S04	2	0.3	6	45	4		2CCMC 120 010 S12	12	1	26	80	12	
2CCMC 020 004 S04	2	0.4	6	45	4		2CCMC 120 015 S12	12	1.5	26	80	12	
2CCMC 020 005 S04	2	0.5	6	45	4		2CCMC 120 020 S12	12	2	26	80	12	
2CCMC 030 0005 S06	3	0.05	8	50	6		2CCMC 120 030 S12	12	3	26	80	12	
2CCMC 030 001 S06	3	0.1	8	50	6		2CCMC 120 040 S12	12	4	26	80	12	
2CCMC 030 002 S06	3	0.2	8	50	6		2CCMC 120 050 S12	12	5	26	80	12	
2CCMC 030 003 S06	3	0.3	8	50	6								
2CCMC 030 005 S06	3	0.5	8	50	6								
2CCMC 030 010 S06	3	1	8	50	6								
2CCMC 040 0005 S06	4	0.05	11	50	6								
2CCMC 040 001 S06	4	0.1	11	50	6								
2CCMC 040 002 S06	4	0.2	11	50	6								
2CCMC 040 003 S06	4	0.3	11	50	6								
2CCMC 040 005 S06	4	0.5	11	50	6								
2CCMC 040 010 S06	4	1	11	50	6								
2CCMC 040 015 S06	4	1.5	11	50	6								
2CCMC 050 001 S06	5	0.1	13	60	6								
2CCMC 050 002 S06	5	0.2	13	60	6								
2CCMC 050 005 S06	5	0.5	13	60	6								
2CCMC 050 010 S06	5	1	13	60	6								
2CCMC 050 015 S06	5	1.5	13	60	6								
2CCMC 050 020 S06	5	2	13	60	6								
2CCMC 060 0005 S06	6	0.05	13	60	6								
2CCMC 060 001 S06	6	0.1	13	60	6								
2CCMC 060 002 S06	6	0.2	13	60	6								
2CCMC 060 003 S06	6	0.3	13	60	6								
2CCMC 060 005 S06	6	0.5	13	60	6								
2CCMC 060 010 S06	6	1	13	60	6								
2CCMC 060 015 S06	6	1.5	13	60	6								
2CCMC 060 020 S06	6	2	13	60	6								
2CCMC 060 025 S06	6	2.5	13	60	6								
2CCMC 080 001 S08	8	0.1	19	70	8								
2CCMC 080 002 S08	8	0.2	19	70	8								
2CCMC 080 005 S08	8	0.5	19	70	8								
2CCMC 080 010 S08	8	1	19	70	8								
2CCMC 080 015 S08	8	1.5	19	70	8								
2CCMC 080 020 S08	8	2	19	70	8								

2CEN Cutting Condition

• RPM : rev./min • Feed : mm/min

피삭재 Material	일반구조강 / 쾌삭강 Mild steels / Free cutting steel HP / SM			구조용강 / 탄소강 / 회주철 Structural steel / Carbon Steels / Gray cast iron SS / SC / FC			공구강 / 금형강 Tool steels / Mold steels SCM / HPM			알루미늄 합금 Aluminum Alloys AL7075		
	경도 Hardness	~200HB			~30HRc			30~40HRc				
외경 Outside Diameter	RPM	FEED	Ap Axial Depth	RPM	FEED	Ap Axial Depth	RPM	FEED	Ap Axial Depth	RPM	FEED	Ap Axial Depth
∅ 2	1,400	100	2	800	50	2	650	40	1	4,800	280	2
∅ 3	1,400	100	3	800	50	3	650	40	1.5	4,800	280	3
∅ 4	1,280	100	4	690	50	4	580	40	2	4,200	280	4
∅ 5	1,300	100	5	640	50	5	520	40	2.5	3,300	280	5
∅ 6	1,150	100	6	600	50	6	480	40	3	2,900	280	6
∅ 8	1,000	100	8	530	50	8	420	40	4	2,600	280	8
∅ 10	850	90	10	490	40	10	390	30	5	2,400	260	10
∅ 12	720	90	12	410	40	12	310	30	6	1,900	260	12
∅ 14	610	90	14	340	40	14	270	30	7	1,700	240	14
∅ 16	550	90	16	310	40	16	250	30	8	1,500	230	16

절입량
Depth of Cut



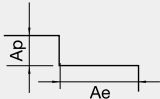
2CENE / 2CCMC

• RPM : rev./min • Feed : mm/min

피삭재 Material	일반구조강 / 쾌삭강 Mild steels / Free cutting steel HP / SM				구조용강 / 탄소강 / 회주철 Structural steel / Carbon Steels / Gray cast iron SS / SC / FC				공구강 / 금형강 Tool steels / Mold steels SCM / HPM				동합금 Copper alloys C1100				알루미늄 Aluminum AL7075			
	경도 Hardness	~200HB				~30HRc				30~40HRc										
외경 Outside Diameter	RPM	FEED	Ap	Ae	RPM	FEED	Ap	Ae	RPM	FEED	Ap	Ae	RPM	FEED	Ap	Ae	RPM	FEED	Ap	Ae
∅ 1	28,000	230	1.5	0.05	24,500	180	1.5	0.05	17,500	120	1.5	0.05	23,000	150	1.5	0.1	50,000	400	1.5	0.2
∅ 1.5	18,700	340	2.0	0.10	16,300	180	2.0	0.10	11,700	120	2.0	0.10	13,000	150	2.0	0.3	40,900	400	2.0	0.3
∅ 2	14,000	360	2.5	0.15	12,300	220	2.5	0.15	8,800	170	2.5	0.15	11,500	150	2.5	0.4	31,800	400	2.5	0.4
∅ 3	9,300	390	4.0	0.30	8,200	240	4.0	0.30	5,800	170	4.0	0.30	8,000	200	4.0	0.6	21,200	400	4.0	0.6
∅ 4	7,000	390	5.0	0.40	6,100	240	5.0	0.40	4,400	180	5.0	0.40	6,000	200	5.0	0.8	15,900	500	5.0	0.8
∅ 5	5,600	470	6.0	0.50	4,900	260	6.0	0.50	3,500	200	6.0	0.50	5,000	200	6.0	1	12,700	500	6.0	1
∅ 6	4,700	480	8.0	0.60	4,100	270	8.0	0.60	2,900	200	8.0	0.60	4,000	200	8.0	1.2	10,600	500	8.0	1.2
∅ 8	3,500	470	10.0	1.00	3,100	270	10.0	1.00	2,200	200	10.0	1.00	3,000	200	10.0	1.6	8,000	600	10.0	1.6
∅ 10	2,800	480	12.0	1.20	2,500	280	12.0	1.20	1,800	200	12.0	1.20	2,400	200	12.0	2	6,400	600	12.0	2
∅ 12	2,300	470	15.0	1.50	2,000	260	15.0	1.50	1,500	200	15.0	1.50	2,000	200	15.0	2.4	5,300	700	15.0	2.4

절입량
Depth of Cut

Side Milling
 • Ap : Axial Depth
 • Ae : Radial Depth



- 2CENE는 홈 절삭이 불가능하며, 2CCMC는 홈 절삭을 추천하지 않습니다.
- 상기 절삭 조건은 측면 절삭조건입니다.
- 상기 절삭조건은 참고 수치이므로 실 가공시 가공 형상, 가공 목적, 적용 기계에 따라 조건변경 요망 합니다.
- 에어브로 혹은 수용성 절삭유 또는 유성 절삭유를 추천합니다.
- Grooving with 2CENE is not possible and 2CCMC is also not recommended.
- Above parameters are for side milling.
- 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.
- If a vibration is occurred while side milling, reduce the feed.