

497P

- 비코팅 : 아크릴, ABS, 알루미늄 등 비철, 비금속 피삭재 가공
- 코팅 : 프리하든강, 일반강, 주물 비철합금 가공엔드밀
- 센터링 작업 및 모서리 면취와 측면절삭을 동시에 할 수 있는 다기능 엔드밀.
- 미립자 초경합금을 채택, 다양한 비철합금과 목업의 피삭재에 적용 가능합니다.
- JCRO 코팅과 비코팅을 구분하여 HRC50이하의 고경도강, 프리하든강, 주철 등 다양한 피삭재 가공이 가능합니다.

- Non coating : acryl, A.B.S, aluminum, non-ferrous and non-metallic materials
- Coating : pre-hardened steels, cast irons, non-metallic materials
- Multi function endmill for corner chamfering, side wall and centering.
- Applied fine WC grade optimized for various non-ferrous and nonmetallic work materials.
- Endmills for various work materials, hardened steel (HRC ~50), pre-hardened steel, tool steel and cast iron.

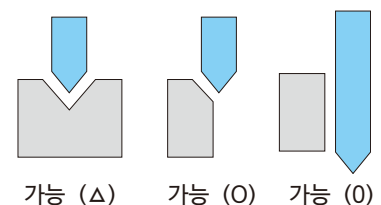
Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.2 ~ 6	+0 ~ -0.01mm
	Ø8 ~ 12	-0.01 ~ -0.025mm
	Ø14 ~ 16	-0.015 ~ -0.03mm

단위 : mm

Order Number		날경 Diameter D	각도 Angle θ	날장 Length of cut L1	전장 Overall Length L	샙크 Shank Dia d	비고	
비코팅 Un coated	코팅 Coated						비코팅 Un coated	코팅 Coated
2CEN 002 600 S03	2CENC 002 600 S03	0.2	60°	0.4	40	3		
2CEN 002 900 S03	2CENC 002 900 S03	0.2	90°	0.4	40	3		
New 2CEN 002 1200 S03	New 2CENC 002 1200 S03	0.2	120°	0.4	40	3		
2CEN 003 600 S03	2CENC 003 600 S03	0.3	60°	0.6	45	3		
2CEN 003 900 S03	2CENC 003 900 S03	0.3	90°	0.6	45	3		
New 2CEN 003 1200 S03	New 2CENC 003 1200 S03	0.3	120°	0.6	45	3		
2CEN 005 600 S03	2CENC 005 600 S03	0.5	60°	1	50	3		
2CEN 005 900 S03	2CENC 005 900 S03	0.5	90°	1	50	3		
New 2CEN 005 1200 S03	New 2CENC 005 1200 S03	0.5	120°	1	50	3		
2CEN 008 600 S03	2CENC 008 600 S03	0.8	60°	1.6	50	3		
2CEN 008 900 S03	2CENC 008 900 S03	0.8	90°	1.6	50	3		
New 2CEN 008 1200 S03	New 2CENC 008 1200 S03	0.8	120°	1.6	50	3		
2CEN 010 600 S03	2CENC 010 600 S03	1	60°	2	50	3		
2CEN 010 900 S03	2CENC 010 900 S03	1	90°	2	50	3		
New 2CEN 010 1200 S03	New 2CENC 010 1200 S03	1	120°	2	50	3		
2CEN 015 600 S03	2CENC 015 600 S03	1.5	60°	3	50	3		
2CEN 015 900 S03	2CENC 015 900 S03	1.5	90°	3	50	3		
New 2CEN 015 1200 S03	New 2CENC 015 1200 S03	1.5	120°	3	50	3		
2CEN 020 600 S03	2CENC 020 600 S03	2	60°	4	50	3		
2CEN 020 900 S03	2CENC 020 900 S03	2	90°	4	50	3		
New 2CEN 020 1200 S03	New 2CENC 020 1200 S03	2	120°	4	50	3		
2CEN 030 600 S03	2CENC 030 600 S03	3	60°	6	50	3		
2CEN 030 900 S03	2CENC 030 900 S03	3	90°	6	50	3		
2CEN 030 600 S06	2CENC 030 600 S06	3	60°	6	50	6		
2CEN 030 900 S06	2CENC 030 900 S06	3	90°	6	50	6		
New 2CEN 030 1200 S03	New 2CENC 030 1200 S03	3	120°	6	50	3		
New 2CEN 030 1200 S06	New 2CENC 030 1200 S06	3	120°	6	50	6		
2CEN 040 600 S06	2CENC 040 600 S06	4	60°	8	50	6		
2CEN 040 900 S06	2CENC 040 900 S06	4	90°	8	50	6		
New 2CEN 040 1200 S06	New 2CENC 040 1200 S06	4	120°	8	50	6		
2CEN 050 600 S06	2CENC 050 600 S06	5	60°	10	50	6		
2CEN 050 900 S06	2CENC 050 900 S06	5	90°	10	50	6		
New 2CEN 050 1200 S06	New 2CENC 050 1200 S06	5	120°	10	50	6		
2CEN 060 600 S06	2CENC 060 600 S06	6	60°	12	60	6		
2CEN 060 900 S06	2CENC 060 900 S06	6	90°	12	60	6		
New 2CEN 060 1200 S06	New 2CENC 060 1200 S06	6	120°	12	60	6		
New 2CEN 070 600 S08	New 2CENC 070 600 S08	7	60°	14	70	8		
New 2CEN 070 900 S08	New 2CENC 070 900 S08	7	90°	14	70	8		

가공형상에따른절삭가능여부

Available Cutting Shape

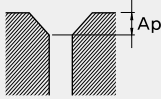


단위 : mm

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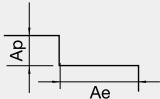
2CEN Cutting Condition

• 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
ø 2	1,400	100	2	800	50	2	650	40	1	4,800	280	2
ø 3	1,400	100	3	800	50	3	650	40	1.5	4,800	280	3
ø 4	1,280	100	4	690	50	4	580	40	2	4,200	280	4
ø 5	1,300	100	5	640	50	5	520	40	2.5	3,300	280	5
ø 6	1,150	100	6	600	50	6	480	40	3	2,900	280	6
ø 8	1,000	100	8	530	50	8	420	40	4	2,600	280	8
ø 10	850	90	10	490	40	10	390	30	5	2,400	260	10
ø 12	720	90	12	410	40	12	310	30	6	1,900	260	12
ø 14	610	90	14	340	40	14	270	30	7	1,700	240	14
ø 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				동 합금 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
ø 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
ø 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
ø 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
ø 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
ø 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
ø 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
ø 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
ø 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
ø 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
ø 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.