



- **알루미늄 합금 및 비철 금속 전용 PCD 엔드밀**
- LASER 가공으로 날부 인선을 $5\mu\text{m}$ 이하로 구현하여 탁월한 절삭성능과 피삭재의 표면 조도가 뛰어납니다.
- 뛰어난 동성도로 제작되어 정밀가공이 가능합니다.
- 인선부를 폴리싱 처리하여 절삭 칩의 배출이 원활합니다.

- PCD endmills for aluminum alloys and non-ferrous metals.
- Laser processing enables the blade to be less than 5 μ m, providing excellent cutting performance and surface finish of the workpiece.
- Designed with excellent concentricity for precision machining.
- An additional polishing process on the edge of flutes to facilitates the cutting chip emission.



D Size	D Tolerance
Ø 4 ~ 6	+0 ~ -0.012mm
Ø 8 ~ 10	+0 ~ -0.015mm
Ø 12	+0 ~ -0.018mm

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
1PCDC 040 002 100	4 X R0.2	5	10	50	6	
1PCDC 040 003 100	4 X R0.3	5	10	50	6	
2PCDC 060 003 200	6 X R0.3	6	20	60	6	
2PCDC 060 003 250	6 X R0.3	15	25	60	6	
2PCDC 060 005 200	6 X R0.5	6	20	60	6	
2PCDC 060 005 250	6 X R0.5	15	25	60	6	
2PCDC 060 010 200	6 X R1	6	20	60	6	
2PCDC 060 010 250	6 X R1	15	25	60	6	
2PCDC 080 003 200	8 X R0.3	8	20	60	8	
2PCDC 080 003 250	8 X R0.3	15	25	60	8	
2PCDC 080 005 200	8 X R0.5	8	20	60	8	
2PCDC 080 005 250	8 X R0.5	15	25	60	8	
2PCDC 080 010 200	8 X R1	8	20	60	8	
2PCDC 080 010 250	8 X R1	15	25	60	8	
2PCDC 100 005 250	10 X R0.5	10	25	70	10	
2PCDC 100 005 300	10 X R0.5	15	30	70	10	
2PCDC 100 010 250	10 X R1	10	25	70	10	
2PCDC 100 010 300	10 X R1	15	30	70	10	
2PCDC 120 005 250	12 X R0.5	10	25	80	12	
2PCDC 120 005 300	12 X R0.5	15	30	80	12	
2PCDC 120 010 250	12 X R1	10	25	80	12	
2PCDC 120 010 300	12 X R1	15	30	80	12	

[illegible]

PCD End Mill Cutting Condition

• RPM : rev./min • Feed : mm/min

피삭재 Material	VC m/min	FEED RATE (fz)			
		2 ~ 3mm	4 ~ 6mm	7 ~ 11mm	12 ~ 20mm
AL-alloy Si <1%	150 ~ 6,000	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3
AL-alloy Si <12%	150 ~ 4,000	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3
AL-alloy Si >12%	150 ~ 2,000	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3
Magnesium alloy	150 ~ 6,000	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3
Cooper alloy	150 ~ 5,000	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3
Brass ally	150 ~ 5,001	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3
GFRP	150 ~ 3,000	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3
CFRP	150 ~ 4,000	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3
Graphite	150 ~ 3,000	0.007 ~ 0.05	0.02 ~ 0.150	0.02 ~ 0.20	0.04 ~ 0.3

2SPO Cutting Condition

• RPM : rev./min • Feed : mm/min

피삭재 Material	구조용강/ 탄소강/ 회주철 SS / SC / FC		합금강/ 프리하든강 SCM / NAK / HPM		금형강/ 열처리강 SKD	
경도 Hardness	~ 200 HB		20~ 30HRC		30~ 40HRC	
외경 Outside Diameter	절삭속도 (V/C)	이송량 (f)	절삭속도 (V/C)	이송량 (f)	절삭속도 (V/C)	이송량 (f)
Ø 1	23,800	500	2,000	400	19,100	380
Ø 2	12,000	700	10,350	400	9,550	380
Ø 3	8,000	800	6,900	550	6,400	510
Ø 4	5,900	800	5,200	620	4,800	570
Ø 6	3,980	700	3,450	550	3,180	510
Ø 8	3,000	600	2,600	520	2,400	480
Ø 10	2,400	580	2,070	500	2,000	460
Ø 12	2,000	560	1,720	480	1,600	450
Ø 16	1,500	500	1,300	400	1,200	380

2STD Cutting Condition

• RPM : min⁻¹ • Feed : mm/min

피삭재 Material	구조용강/탄소강/회주철 SS / SC / FC ~200HB		합금강/프리하든강 SCM / NAK / HPM 20 ~ 30HRC		금형강/열처리강 SKD 30 ~ 40HRC		덕타일 주철 FCD		스텐레스강 SUS304		알루미늄 합금 A7075		인코넬 inconel	
직경 Diameter	절삭속도 V/C	이송량 f	절삭속도 V/C	이송량 f	절삭속도 V/C	이송량 f	절삭속도 V/C	이송량 f	절삭속도 V/C	이송량 f	절삭속도 V/C	이송량 f	절삭속도 V/C	이송량 f
Ø 3.4	60 ~ 100	0.1 ~ 0.2	60 ~ 100	0.1 ~ 0.2	20 ~ 60	0.05 ~ 0.1	40 ~ 70	0.07 ~ 0.2	20 ~ 60	0.05 ~ 0.2	80 ~ 120	0.1 ~ 0.2	10 ~ 30	0.05 ~ 0.15
Ø 4.3	60 ~ 100	0.1 ~ 0.2	60 ~ 100	0.1 ~ 0.2	20 ~ 60	0.05 ~ 0.1	40 ~ 70	0.07 ~ 0.2	20 ~ 60	0.05 ~ 0.2	80 ~ 120	0.1 ~ 0.2	10 ~ 30	0.05 ~ 0.15
Ø 5.1	60 ~ 100	0.1 ~ 0.2	60 ~ 100	0.1 ~ 0.2	20 ~ 60	0.05 ~ 0.1	40 ~ 70	0.07 ~ 0.2	20 ~ 60	0.05 ~ 0.2	80 ~ 120	0.1 ~ 0.2	10 ~ 30	0.05 ~ 0.15
Ø 6.9	60 ~ 100	0.15 ~ 0.3	60 ~ 100	0.15 ~ 0.3	20 ~ 60	0.08 ~ 0.2	40 ~ 70	0.1 ~ 0.2	20 ~ 60	0.1 ~ 0.2	80 ~ 120	0.15 ~ 0.2	10 ~ 30	0.05 ~ 0.15
Ø 8.6	60 ~ 100	0.15 ~ 0.3	60 ~ 100	0.15 ~ 0.3	20 ~ 60	0.08 ~ 0.2	40 ~ 70	0.1 ~ 0.2	20 ~ 60	0.1 ~ 0.2	80 ~ 120	0.15 ~ 0.2	10 ~ 30	0.05 ~ 0.15
Ø 10.3	60 ~ 100	0.2 ~ 0.4	60 ~ 100	0.2 ~ 0.4	20 ~ 60	0.1 ~ 0.2	40 ~ 70	0.2 ~ 0.4	20 ~ 60	0.15 ~ 0.3	80 ~ 120	0.2 ~ 0.4	10 ~ 30	0.1 ~ 0.2

2DED Cutting Condition

• RPM : rev./min • Feed : mm/min

피삭재 Material	알루미늄 합금 Aluminum Alloys		수지 Resin	
직경 Diameter	RPM	이송량 (f)	RPM	이송량 (f)
Ø 0.1 ~ 0.3	25,000	0.001 ~ 0.003	22,000	0.001 ~ 0.003
Ø 0.3 ~ 0.5	20,000	0.005 ~ 0.02	22,000	0.005 ~ 0.01
Ø 0.5 ~ 0.8	18,000	0.01 ~ 0.03	15,000	0.01 ~ 0.03
Ø 0.8 ~ 1	15,000	0.02 ~ 0.04	13,000	0.02 ~ 0.05
Ø 1 ~ 1.5	12,000	0.03 ~ 0.05	8,000	0.02 ~ 0.05
Ø 1.5 ~ 2	9,000	0.03 ~ 0.05	6,000	0.02 ~ 0.05
Ø 2 ~ 3	7,000	0.03 ~ 0.05	4,500	0.05
Ø 3 ~ 4	3,500	0.03 ~ 0.05	3,200	0.05
Ø 4 ~ 5	2,800	0.03 ~ 0.05	2,500	0.05
Ø 5 ~ 6	2,200	0.03 ~ 0.05	2,000	0.05

- 진동이 적고 강성이 좋은 공작기계 사용요망합니다 (Ø1 이하 사용시 진동 허용 관리 3 μ m 이내 일것.)
- 가급적 열박음 척을 추천합니다.
- 상기 절삭조건은 참고 수치이므로, 실 가공시 가공 형상, 가공 목적, 적용 기계에 따라 조건변경 요망 합니다.
- 조건표가 기계의 최대 스피들 속도를 초과하거나 버 및 적열 현상이 발생할때 스피들 속도와 이송 속도를 비례적으로 조정 하십시오.
- Use a machine with low vibration and good rigidity (ϕ 1 or less, the vibration tolerance management should be within 3 μ m).
- Using shrink-fit chuck is recommended.
- 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.

당신의스페셜은우리의표준품입니다.



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