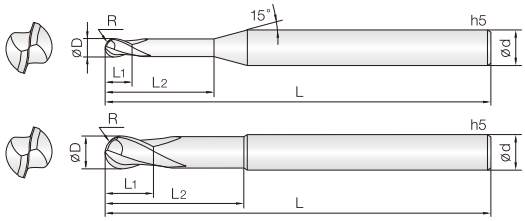
2ALB

2 Flutes 45°Helix Ball End Mills for Aluminum

2날 45°헬릭스 알루미늄 전용 볼 엔드밀

New



- 알루미늄, 알루미늄 합금, 동 및 동합금 등 비철 비금속 계열 전용 엔드밀
- 날부인선을 고광면 설계하여 절삭시 피삭재의 표면조도가 우수합니다.
- 45°헬릭스 형상과 깊은 포켓으로 설계하여 칩배출이 우수하며, 고속, 고이송 가공에 적합합니다.
- 항절력이 높은 미립자 초경합금(0.5㎛)을 채택, 엔드밀의 파손을 최소화.

- Endmills for Aluminum, AL alloy, copper, copper alloy, non-ferrous and non-metallic materials.
- Applied fine WC grade for excellent surface finish.
- Minimize fracturing by high TRS fine(0.5㎛) WC grade.
- High speed, feed applicable by 45°degree helix and deep chip pocket design

2 | WC 미립자 | R ± 0.005 (0.25 ~ 2.5R) | R ± 0.01 (3R ~ 6R) | R ± 0.015 (8R) | 45° Helix Angle | CUTTING DATA 472P

D Size	D Tolerance
Ø 0.5 ~ 5	+0 ~ -0.01mm
Ø 6 ~ 12	-0.005 ~ -0.015mm
Ø 16	-0.01 ~ -0.02mm

단위 : mm

Order Number	날경 Diameter D	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d	비고
2ALB 005 010 S04	0.25R X 0.5	0.7	1	45	4	
2ALB 005 020 S04	0.25R X 0.5	0.7	2	45	4	
2ALB 005 030 S04	0.25R X 0.5	0.7	3	45	4	
2ALB 005 040 S04	0.25R X 0.5	0.7	4	45	4	
2ALB 005 050 S04	0.25R X 0.5	0.7	5	45	4	
2ALB 005 060 S04	0.25R X 0.5	0.7	6	45	4	
2ALB 006 020 S04	0.3R X 0.6	0.9	2	45	4	
2ALB 006 030 S04	0.3R X 0.6	0.9	3	45	4	
2ALB 006 040 S04	0.3R X 0.6	0.9	4	45	4	
2ALB 006 050 S04	0.3R X 0.6	0.9	5	45	4	
2ALB 006 060 S04	0.3R X 0.6	0.9	6	45	4	
2ALB 006 080 S04	0.3R X 0.6	0.9	8	45	4	
2ALB 006 100 S04	0.3R X 0.6	0.9	10	45	4	
2ALB 008 020 S04	0.4R X 0.8	1.2	2	45	4	
2ALB 008 030 S04	0.4R X 0.8	1.2	3	45	4	
2ALB 008 040 S04	0.4R X 0.8	1.2	4	45	4	
2ALB 008 060 S04	0.4R X 0.8	1.2	6	45	4	
2ALB 008 080 S04	0.4R X 0.8	1.2	8	45	4	
2ALB 008 100 S04	0.4R X 0.8	1.2	10	45	4	
2ALB 008 120 S04	0.4R X 0.8	1.2	12	45	4	
2ALB 010 030 S04	0.5R X 1	1.5	3	50	4	
2ALB 010 050 S04	0.5R X 1	1.5	5	50	4	
2ALB 010 080 S04	0.5R X 1	1.5	8	50	4	
2ALB 010 100 S04	0.5R X 1	1.5	10	50	4	
2ALB 010 120 S04	0.5R X 1	1.5	12	50	4	
2ALB 010 160 S04	0.5R X 1	1.5	16	50	4	
2ALB 010 200 S04	0.5R X 1	1.5	20	50	4	
2ALB 012 030 S04	0.6R X 1.2	1.8	3	50	4	
2ALB 012 040 S04	0.6R X 1.2	1.8	4	50	4	
2ALB 012 060 S04	0.6R X 1.2	1.8	6	50	4	
2ALB 012 080 S04	0.6R X 1.2	1.8	8	50	4	
2ALB 012 100 S04	0.6R X 1.2	1.8	10	50	4	
2ALB 012 120 S04	0.6R X 1.2	1.8	12	50	4	
2ALB 015 050 S04	0.75R X 1.5	2	5	50	4	
2ALB 015 080 S04	0.75R X 1.5	2	8	50	4	
2ALB 015 100 S04	0.75R X 1.5	2	10	50	4	
2ALB 015 120 S04	0.75R X 1.5	2	12	50	4	
2ALB 015 160 S04	0.75R X 1.5	2	16	50	4	
2ALB 015 200 S04	0.75R X 1.5	2	20	50	4	
2ALB 020 050 S06	1R X 2	3	5	50	6	
2ALB 020 080 S06	1R X 2	3	8	50	6	
2ALB 020 100 S06	1R X 2	3	10	50	6	
2ALB 020 120 S06	1R X 2	3	12	60	6	
2ALB 020 160 S06	1R X 2	3	16	60	6	
2ALB 020 200 S06	1R X 2	3	20	60	6	
2ALB 020 250 S06	1R X 2	3	25	65	6	
2ALB 025 060 S06	1.25R X 2.5	4	6	50	6	
2ALB 025 100 S06	1.25R X 2.5	4	10	50	6	
2ALB 025 120 S06	1.25R X 2.5	4	12	60	6	
2ALB 025 160 S06	1.25R X 2.5	4	16	60	6	

2ALB

2 Flutes 45°Helix Ball End Mills for Aluminum

2날 45°헬릭스 알루미늄 전용 볼 엔드밀

New

단위 : mm

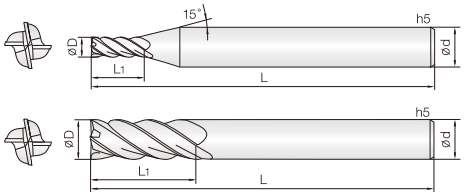
Order Number	날경 Diameter D	날장 Length of cut L1	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d	비고
2ALB 025 200 S06	1.25R X 2.5	4	20	60	6	
2ALB 030 080 S06	1.5R X 3	4.5	8	60	6	
2ALB 030 120 S06	1.5R X 3	4.5	12	60	6	
2ALB 030 160 S06	1.5R X 3	4.5	16	60	6	
2ALB 030 200 S06	1.5R X 3	4.5	20	60	6	
2ALB 030 250 S06	1.5R X 3	4.5	25	70	6	
2ALB 030 300 S06	1.5R X 3	4.5	30	70	6	
2ALB 030 400 S06	1.5R X 3	4.5	40	80	6	
2ALB 040 100 S06	2R X 4	6	10	60	6	
2ALB 040 160 S06	2R X 4	6	16	60	6	
2ALB 040 200 S06	2R X 4	6	20	60	6	
2ALB 040 250 S06	2R X 4	6	25	70	6	
2ALB 040 300 S06	2R X 4	6	30	70	6	
2ALB 040 400 S06	2R X 4	6	40	80	6	
2ALB 050 160 S06	2.5R X 5	8	16	80	6	
2ALB 050 200 S06	2.5R X 5	8	20	80	6	
2ALB 050 250 S06	2.5R X 5	8	25	80	6	
2ALB 060 150 S06	3R X 6	9	15	90	6	
2ALB 060 300 S06	3R X 6	9	30	90	6	
2ALB 060 400 S06	3R X 6	9	40	90	6	
2ALB 080 200 S08	4R X 8	12	20	100	8	
2ALB 100 250 S10	5R X 10	15	25	100	10	
2ALB 120 300 S12	6R X 12	18	30	110	12	
2ALB 160 600 S16	8R X 16	30	60	160	16	

4ALE

4 Flutes 38°Helix End Mills for Aluminum

4날 38°헬릭스 알루미늄 전용 엔드밀

New



- **알루미늄, 알루미늄 합금 등 비철 비금속 계열 전용 엔드밀**
- 강력한 채터링 방지 설계로 측벽 가공 시 엔드밀의 진동을 최소화하였습니다.
- 2중 인선을 적용하여 중, 황삭 가공 시 뛰어난 성능을 발휘합니다.
- 코팅 피막에 경도가 높고 마찰계수가 낮은 Tetrabond TAC코팅을 적용하여 내마모성이 우수하며, 피삭재의 표면조도가 월등히 우수합니다.
- 홈포켓을 깊게 설계하여 흡착현상을 최소화 하였습니다.

- **Endmills for Aluminum, AL alloy, non-ferrous and non-metallic materials.**
- The powerful anti-chattering design minimizes the vibration of the endmill during side milling.
- Excellent performance in semi-finishing and roughing by applying a double cutting edge.
- the poket is deeply designed to adsorption.

D Size	D Tolerance
Ø 3 ~ 5	+0 ~ -0.01mm
Ø 6 ~ 12	-0.01 ~ -0.025mm
Ø 16 ~ 20	-0.015 ~ -0.03mm

4 | WC 미립자 | RTAC Coating | D +0-0.01 Ø3~5 | D -0.01-0.025 Ø6~12 | D -0.015-0.03 Ø16~20 | 38° Helix Angle | Shield Edge | CUTTING DATA 472P

단위 : mm

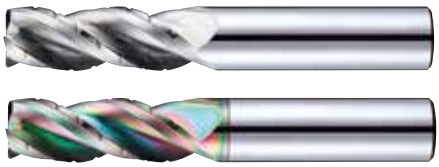
Order Number 비코팅 Un coated	RTAC 코팅 RTAC Coated	날경 Diameter D	날장 Length of cut L1	전장 Overall Length L	생크 Shank Dia d	비고 비코팅 Un coated	코팅 Coated
4ALE 030 120 S06	4ALEC 030 120 S06	3	12	50	6		
4ALE 030 150 S06	4ALEC 030 150 S06	3	15	50	6		
4ALE 030 150 070	4ALEC 030 150 070	3	15	70	6		
4ALE 030 200 S06	4ALEC 030 200 S06	3	20	55	6		
4ALE 040 110 S06	4ALEC 040 110 S06	4	11	50	6		
4ALE 040 160 S06	4ALEC 040 160 S06	4	16	50	6		
4ALE 040 160 070	4ALEC 040 160 070	4	16	70	6		
4ALE 040 200 S06	4ALEC 040 200 S06	4	20	55	6		
4ALE 050 130 S06	4ALEC 050 130 S06	5	13	50	6		
4ALE 050 200 S06	4ALEC 050 200 S06	5	20	55	6		
4ALE 050 200 080	4ALEC 050 200 080	5	20	80	6		
4ALE 050 250 S06	4ALEC 050 250 S06	5	25	60	6		
4ALE 060 150 S06	4ALEC 060 150 S06	6	15	50	6		
4ALE 060 200 S06	4ALEC 060 200 S06	6	20	55	6		
4ALE 060 200 080	4ALEC 060 200 080	6	20	80	6		
4ALE 060 250 S06	4ALEC 060 250 S06	6	25	60	6		
4ALE 060 300 S06	4ALEC 060 300 S06	6	30	70	6		
4ALE 080 200 S08	4ALEC 080 200 S08	8	20	60	8		
4ALE 080 250 S08	4ALEC 080 250 S08	8	25	65	8		
4ALE 080 250 090	4ALEC 080 250 090	8	25	90	8		
4ALE 080 300 S08	4ALEC 080 300 S08	8	30	70	8		
4ALE 080 350 S08	4ALEC 080 350 S08	8	35	75	8		
4ALE 100 250 S10	4ALEC 100 250 S10	10	25	70	10		
4ALE 100 300 S10	4ALEC 100 300 S10	10	30	75	10		
4ALE 100 300 100	4ALEC 100 300 100	10	30	100	10		
4ALE 100 350 S10	4ALEC 100 350 S10	10	35	80	10		
4ALE 100 400 S10	4ALEC 100 400 S10	10	40	90	10		
4ALE 120 260 S12	4ALEC 120 260 S12	12	26	75	12		
4ALE 120 350 S12	4ALEC 120 350 S12	12	35	80	12		
4ALE 120 350 110	4ALEC 120 350 110	12	35	110	12		
4ALE 120 400 S12	4ALEC 120 400 S12	12	40	90	12		
4ALE 120 450 S12	4ALEC 120 450 S12	12	45	90	12		
4ALE 160 300 S16	4ALEC 160 300 S16	16	30	90	16		
4ALE 160 500 S16	4ALEC 160 500 S16	16	50	110	16		
4ALE 160 500 150	4ALEC 160 500 150	16	50	150	16		
4ALE 160 650 S16	4ALEC 160 650 S16	16	65	120	16		
4ALE 160 800 S16	4ALEC 160 800 S16	16	80	130	16		
4ALE 200 500 S20	4ALEC 200 500 S20	20	50	110	20		
4ALE 200 750 S20	4ALEC 200 750 S20	20	75	130	20		
4ALE 200 750 160	4ALEC 200 750 160	20	75	160	20		
4ALE 200 1000 S20	4ALEC 200 1000 S20	20	100	160	20		

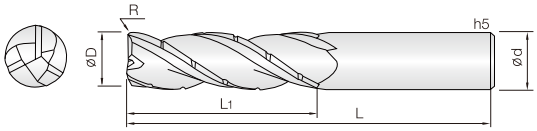
3ALCB

3 Flutes Chip Breaker End Mills for Aluminum

3날 칩 브레이커 알루미늄 전용 엔드밀

New





- **알루미늄, 알루미늄 합금 등 비철 비금속 계열 고속 중, 황삭 전용 엔드밀**
- 강력한 채터링 방지 설계로 측벽 가공 시 엔드밀의 진동을 최소화하였습니다.
- 2중 인선을 적용하여 중, 황삭 가공 시 뛰어난 성능을 발휘합니다.
- 코팅 피막에 경도가 높고 마찰계수가 낮은 Tetrabond TAC코팅을 적용하여 내마모성이 우수하며, 피삭재의 표면조도가 월등히 우수합니다.
- 홈포켓을 깊게 설계하여 흡착현상을 최소화 하였습니다.

- **Endmills for Aluminum, AL alloy, non-ferrous and non-metallic materials.**
- The powerful anti-chattering design minimizes the vibration of the end mill during side milling.
- Excellent performance in semi-finishing and roughing by applying a double cutting edge.
- The poket is deeply designed to minimize adsorption.

3 | WC 미립자 | RTAC Coating | R ± 0.005 R0.2 | 38° Helix Angle | CUTTING DATA 473P

D Size	D Tolerance
Ø 3 ~ 5	+0 ~ -0.01mm
Ø 6 ~ 12	-0.01 ~ -0.025mm
Ø 16 ~ 20	-0.015 ~ -0.03mm

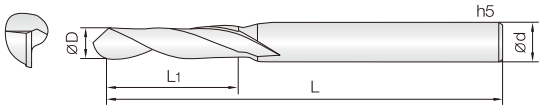
단위 : mm

Order Number		날경 Diameter	날장 Length of cut	전장 Overall Length	생크 Shank Dia	비고	
비코팅 Un coated	RTAC 코팅 RTAC Coated	D × R	L1	L	d	비코팅 Un coated	코팅 Coated
3ALCB 030 080 S06	3ALCBC 030 080 S06	3 X R0.2	8	55	6		
3ALCB 030 110 S06	3ALCBC 030 110 S06	3 X R0.2	11	55	6		
3ALCB 040 100 S06	3ALCBC 040 100 S06	4 X R0.2	10	55	6		
3ALCB 040 130 S06	3ALCBC 040 130 S06	4 X R0.2	13	55	6		
3ALCB 050 120 S06	3ALCBC 050 120 S06	5 X R0.2	12	55	6		
3ALCB 050 170 S06	3ALCBC 050 170 S06	5 X R0.2	17	55	6		
3ALCB 060 170 S06	3ALCBC 060 170 S06	6 X R0.2	17	60	6		
3ALCB 060 250 S06	3ALCBC 060 250 S06	6 X R0.2	25	80	6		
3ALCB 080 220 S08	3ALCBC 080 220 S08	8 X R0.2	22	70	8		
3ALCB 080 300 S08	3ALCBC 080 300 S08	8 X R0.2	30	90	8		
3ALCB 100 270 S10	3ALCBC 100 270 S10	10 X R0.2	27	75	10		
3ALCB 100 400 S10	3ALCBC 100 400 S10	10 X R0.2	40	100	10		
3ALCB 120 350 S12	3ALCBC 120 350 S12	12 X R0.2	35	80	12		
3ALCB 120 500 S12	3ALCBC 120 500 S12	12 X R0.2	50	110	12		
3ALCB 160 420 S16	3ALCBC 160 420 S16	16 X R0.2	42	100	16		
3ALCB 160 520 S16	3ALCBC 160 520 S16	16 X R0.2	52	150	16		
3ALCB 200 480 S20	3ALCBC 200 480 S20	20 X R0.2	48	100	20		
3ALCB 200 550 S20	3ALCBC 200 550 S20	20 X R0.2	55	160	20		

1MBE

1 Flute Ball End Mills
1날 볼 엔드밀

New



- **아크릴, ABS, 목업, 알루미늄 등 비철, 비금속 피삭재 전용 엔드밀**
- 헬릭스 1날 타입으로 칩 배출이 우수하여 비철,비금속 피삭재의 절단 작업 및 측벽 작업에 적합합니다.
- 미립자 초경합금을 채택하여 내마모성이 좋습니다.

- **Endmills for Acryl, A.B.S, Aluminum, non-ferrous and non-metallic materials.**
- Excellent chip removing by a helix 1flute design. Optimum for cut-off and wall machining.
- Excellent wear resistance by applying fine WC grade.

1 | WC 미립자 | R ± 0.005 (0.5 ~ 2.5R) | R ± 0.01 (3 ~ 6R) | R ± 0.015 (8R) | 30° Helix Angle | CUTTING DATA 484P

D Size	D Tolerance
Ø 1 ~ 5	+0 ~ -0.01mm
Ø 6 ~ 12	-0.005 ~ -0.015mm
Ø 16	-0.01 ~ -0.02mm

단위 : mm

Order Number	날경 Diameter D	날장 Length of cut L1	전장 Overall Length L	생크 Shank Dia d	비고
1MBE 010 040 S03	0.5R X 1	4	40	3	
1MBE 015 060 S03	0.75R X 1.5	6	40	3	
1MBE 020 060 S03	1R X 2	6	40	3	
1MBE 020 100 S06	1R X 2	10	60	6	
1MBE 020 120 S06	1R X 2	12	60	6	
1MBE 030 120 040	1.5R X 3	12	40	3	
1MBE 030 120 S06	1.5R X 3	12	60	6	
1MBE 030 150 S06	1.5R X 3	15	60	6	
1MBE 040 150 S60	2R X4	15	60	6	
1MBE 040 150 080	2R X 4	15	80	6	
1MBE 050 160 S06	2.5R X 5	16	60	6	
1MBE 060 200 060	3R X 6	20	60	6	
1MBE 060 250 080	3R X 6	25	80	6	
1MBE 060 300 100	3R X 6	30	100	6	
1MBE 080 300 080	4R X 8	30	80	8	
1MBE 080 350 120	4R X 8	35	120	8	
1MBE 100 350 100	5R X 10	35	100	10	
1MBE 100 450 120	5R X 10	45	120	10	
1MBE 100 550 150	5R X 10	55	150	10	
1MBE 120 450 110	6R X 12	45	110	12	
1MBE 120 550 130	6R X 12	55	130	12	
1MBE 120 600 150	6R X 12	60	150	12	
1MBE 160 550 160	8R X 16	55	160	16	
1MBE 160 650 200	8R X 16	65	200	16	

Order Number	날경 Diameter D	날장 Length of cut L1	전장 Overall Length L	생크 Shank Dia d	비고

FOR A.B.S