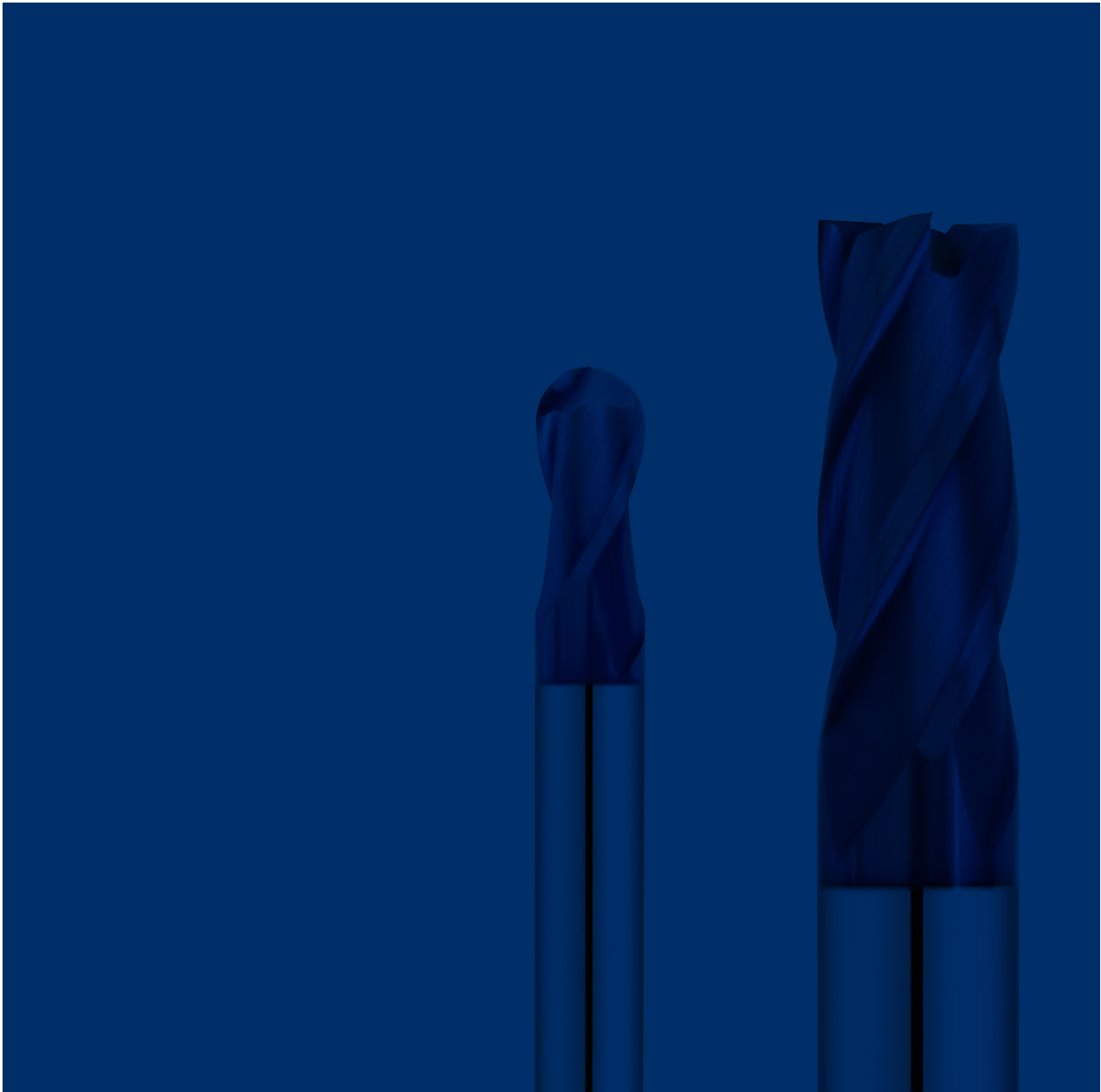
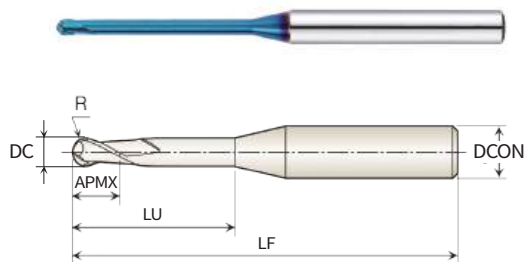


R-PRO 01



2RRB

2날 리브 볼 엔드밀 2 Flutes Rib Ball End Mills



(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEP	반경 RE	날장 APMX	유효장 LU	샙크경 DCON	전장 LF
2RRB-001-002-445	0.1	2	R0.05	0.1	0.2	4	45
2RRB-001-003-445	0.1	2	R0.05	0.1	0.3	4	45
2RRB-001-005-445	0.1	2	R0.05	0.1	0.5	4	45
2RRB-002-006-445	0.2	2	R0.1	0.2	0.6	4	45
2RRB-002-010-445	0.2	2	R0.1	0.2	1	4	45
2RRB-002-015-445	0.2	2	R0.1	0.2	1.5	4	45
2RRB-002-020-445	0.2	2	R0.1	0.2	2	4	45
2RRB-003-010-445	0.3	2	R0.15	0.3	1	4	45
2RRB-003-015-445	0.3	2	R0.15	0.3	1.5	4	45
2RRB-003-020-445	0.3	2	R0.15	0.3	2	4	45
2RRB-003-025-445	0.3	2	R0.15	0.3	2.5	4	45
2RRB-003-030-445	0.3	2	R0.15	0.3	3	4	45
2RRB-004-010-445	0.4	2	R0.2	0.4	1	4	45
2RRB-004-015-445	0.4	2	R0.2	0.4	1.5	4	45
2RRB-004-020-445	0.4	2	R0.2	0.4	2	4	45
2RRB-004-025-445	0.4	2	R0.2	0.4	2.5	4	45
2RRB-004-030-445	0.4	2	R0.2	0.4	3	4	45
2RRB-004-040-445	0.4	2	R0.2	0.4	4	4	45
2RRB-004-050-445	0.4	2	R0.2	0.4	5	4	45
2RRB-005-010-445	0.5	2	R0.25	0.5	1	4	45
2RRB-005-015-445	0.5	2	R0.25	0.5	1.5	4	45
2RRB-005-020-445	0.5	2	R0.25	0.5	2	4	45
2RRB-005-025-445	0.5	2	R0.25	0.5	2.5	4	45
2RRB-005-030-445	0.5	2	R0.25	0.5	3	4	45
2RRB-005-040-445	0.5	2	R0.25	0.5	4	4	45

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEPF	반경 RE	날장 APMX	유효장 LU	생크경 DCON	전장 LF	R-PRO
2RRB-005-050-445	0.5	2	R0.25	0.5	5	4	45	H-PRO
2RRB-005-060-445	0.5	2	R0.25	0.5	6	4	45	
2RRB-005-080-445	0.5	2	R0.25	0.5	8	4	45	
2RRB-006-020-445	0.6	2	R0.3	0.6	2	4	45	A-PRO
2RRB-006-030-445	0.6	2	R0.3	0.6	3	4	45	
2RRB-006-040-445	0.6	2	R0.3	0.6	4	4	45	
2RRB-006-050-445	0.6	2	R0.3	0.6	5	4	45	X-PRO
2RRB-006-060-445	0.6	2	R0.3	0.6	6	4	45	
2RRB-006-080-445	0.6	2	R0.3	0.6	8	4	45	
2RRB-006-100-445	0.6	2	R0.3	0.6	10	4	45	SUS MILL
2RRB-008-020-445	0.8	2	R0.4	0.8	2	4	45	
2RRB-008-030-445	0.8	2	R0.4	0.8	3	4	45	
2RRB-008-040-445	0.8	2	R0.4	0.8	4	4	45	S-PRO
2RRB-008-050-445	0.8	2	R0.4	0.8	5	4	45	
2RRB-008-060-445	0.8	2	R0.4	0.8	6	4	45	
2RRB-008-080-445	0.8	2	R0.4	0.8	8	4	45	D-PRO
2RRB-008-100-445	0.8	2	R0.4	0.8	10	4	45	
2RRB-008-120-445	0.8	2	R0.4	0.8	12	4	45	
2RRB-010-030-445	1.0	2	R0.5	1	3	4	45	A-PLUS
2RRB-010-040-445	1.0	2	R0.5	1	4	4	45	
2RRB-010-050-445	1.0	2	R0.5	1	5	4	45	
2RRB-010-060-445	1.0	2	R0.5	1	6	4	45	AL-PRO
2RRB-010-070-445	1.0	2	R0.5	1	7	4	45	
2RRB-010-080-445	1.0	2	R0.5	1	8	4	45	
2RRB-010-090-445	1.0	2	R0.5	1	9	4	45	AL MILL
2RRB-010-100-445	1.0	2	R0.5	1	10	4	45	
2RRB-010-120-445	1.0	2	R0.5	1	12	4	45	
2RRB-010-140-450	1.0	2	R0.5	1	14	4	50	ABS
2RRB-010-160-450	1.0	2	R0.5	1	16	4	50	
2RRB-010-180-450	1.0	2	R0.5	1	18	4	50	
2RRB-010-200-450	1.0	2	R0.5	1	20	4	50	MICRO GRAIN
2RRB-012-040-445	1.2	2	R0.6	1.2	4	4	45	
2RRB-012-060-445	1.2	2	R0.6	1.2	6	4	45	
2RRB-012-080-445	1.2	2	R0.6	1.2	8	4	45	MULTI
2RRB-012-100-445	1.2	2	R0.6	1.2	10	4	45	
2RRB-012-120-445	1.2	2	R0.6	1.2	12	4	45	
2RRB-015-040-445	1.5	2	R0.75	1.5	4	4	45	Technical data
2RRB-015-060-445	1.5	2	R0.75	1.5	6	4	45	
2RRB-015-080-445	1.5	2	R0.75	1.5	8	4	45	

(Unit: mm)

	R-PRO	제품코드 Product Code	직경 DC	날수 ZEFP	반경 RE	날장 APMX	유효장 LU	생크경 DCON	전장 LF
		2RRB-015-100-445	1.5	2	R0.75	1.5	10	4	45
		2RRB-015-120-445	1.5	2	R0.75	1.5	12	4	45
		2RRB-015-140-450	1.5	2	R0.75	1.5	14	4	50
		2RRB-015-160-450	1.5	2	R0.75	1.5	16	4	50
		2RRB-015-180-450	1.5	2	R0.75	1.5	18	4	50
		2RRB-015-200-450	1.5	2	R0.75	1.5	20	4	50
		2RRB-020-060-445	2.0	2	R1.0	2	6	4	45
		2RRB-020-080-445	2.0	2	R1.0	2	8	4	45
		2RRB-020-100-445	2.0	2	R1.0	2	10	4	45
		2RRB-020-120-445	2.0	2	R1.0	2	12	4	45
		2RRB-020-140-450	2.0	2	R1.0	2	14	4	50
		2RRB-020-160-450	2.0	2	R1.0	2	16	4	50
		2RRB-020-180-450	2.0	2	R1.0	2	18	4	50
		2RRB-020-200-450	2.0	2	R1.0	2	20	4	50
		2RRB-020-250-460	2.0	2	R1.0	2	25	4	60
		2RRB-020-300-470	2.0	2	R1.0	2	30	4	70
		2RRB-025-080-445	2.5	2	R1.25	2.5	8	4	45
		2RRB-025-100-445	2.5	2	R1.25	2.5	10	4	45
		2RRB-025-120-445	2.5	2	R1.25	2.5	12	4	45
		2RRB-025-160-450	2.5	2	R1.25	2.5	16	4	50
		2RRB-025-200-450	2.5	2	R1.25	2.5	20	4	50
		2RRB-030-080-650	3.0	2	R1.5	3	8	6	50
		2RRB-030-100-650	3.0	2	R1.5	3	10	6	50
		2RRB-030-120-650	3.0	2	R1.5	3	12	6	50
		2RRB-030-140-660	3.0	2	R1.5	3	14	6	60
		2RRB-030-160-660	3.0	2	R1.5	3	16	6	60
		2RRB-030-180-660	3.0	2	R1.5	3	18	6	60
		2RRB-030-200-660	3.0	2	R1.5	3	20	6	60
		2RRB-030-250-665	3.0	2	R1.5	3	25	6	65
		2RRB-030-300-670	3.0	2	R1.5	3	30	6	70
		2RRB-030-350-680	3.0	2	R1.5	3	35	6	80
		2RRB-040-100-650	4.0	2	R2.0	4	10	6	50
		2RRB-040-120-650	4.0	2	R2.0	4	12	6	50
		2RRB-040-160-660	4.0	2	R2.0	4	16	6	60
		2RRB-040-200-660	4.0	2	R2.0	4	20	6	60
		2RRB-040-250-665	4.0	2	R2.0	4	25	6	65
		2RRB-040-300-670	4.0	2	R2.0	4	30	6	70
		2RRB-040-350-680	4.0	2	R2.0	4	35	6	80
		2RRB-040-400-680	4.0	2	R2.0	4	40	6	80

(Unit: mm)

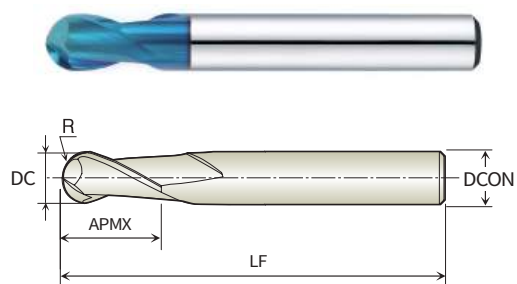
제품코드 Product Code	직경 DC	날수 ZEFP	반경 RE	날장 APMX	유효장 LU	생크경 DCON	전장 LF
2RRB-050-120-650	5.0	2	R2.5	5	12	6	50
2RRB-050-300-670	5.0	2	R2.5	5	30	6	70
2RRB-060-150-660	6.0	2	R3.0	7	15	6	60
2RRB-060-200-660	6.0	2	R3.0	7	20	6	60
2RRB-060-300-670	6.0	2	R3.0	7	30	6	70
2RRB-080-150-865	8.0	2	R4.0	8	15	8	65
2RRB-080-200-860	8.0	2	R4.0	8	20	8	60
2RRB-080-300-880	8.0	2	R4.0	8	30	8	80
2RRB-100-200-A60	10.0	2	R5.0	10	20	10	60
2RRB-100-250-A70	10.0	2	R5.0	10	25	10	70
2RRB-100-350-AA0	10.0	2	R5.0	10	35	10	100
2RRB-120-300-C80	12.0	2	R6.0	12	30	12	80
2RRB-120-400-CB0	12.0	2	R6.0	12	40	12	110

R-PRO	
H-PRO	
A-PRO	
X-PRO	
SUS MILL	
S-PRO	
D-PRO	
A-PLUS	
AL-PRO	
AL MILL	
ABS	
MICRO GRAIN	
MULTI	
Technical data	

2RSB

2날 슷 볼 엔드밀

2 Flutes Short Ball End Mills

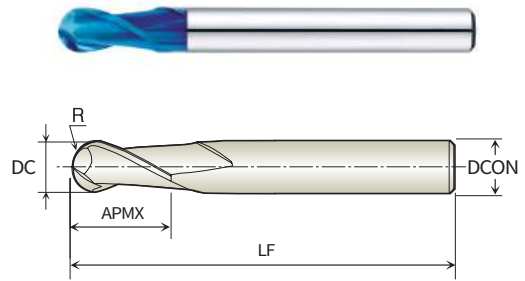


(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEP	반경 RE	날장 APMX	생크경 DCON	전장 LF
2RSB-001-001-440	0.1	2	R0.05	0.1	4	40
2RSB-002-002-440	0.2	2	R0.1	0.2	4	40
2RSB-003-003-440	0.3	2	R0.15	0.3	4	40
2RSB-004-004-440	0.4	2	R0.2	0.4	4	40
2RSB-005-005-440	0.5	2	R0.25	0.5	4	40
2RSB-006-006-440	0.6	2	R0.3	0.6	4	40
2RSB-007-007-440	0.7	2	R0.35	0.7	4	40
2RSB-008-008-440	0.8	2	R0.4	0.8	4	40
2RSB-009-009-440	0.9	2	R0.45	0.9	4	40
2RSB-010-015-640	1.0	2	R0.5	1.5	6	40
2RSB-015-023-640	1.5	2	R0.75	2.3	6	40
2RSB-020-030-645	2.0	2	R1.0	3	6	45
2RSB-030-045-645	3.0	2	R1.5	4.5	6	45
2RSB-040-060-645	4.0	2	R2.0	6	6	45
2RSB-050-075-650	5.0	2	R2.5	7.5	6	50
2RSB-060-080-660	6.0	2	R3.0	8	6	60
2RSB-080-110-860	8.0	2	R4.0	11	8	60
2RSB-100-130-A60	10.0	2	R5.0	13	10	60
2RSB-120-150-C60	12.0	2	R6.0	15	12	60

2RPB

2날 볼 엔드밀 2 Flutes Ball End Mills



(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZFP	반경 RE	날장 APMX	생크경 DCON	전장 LF
2RPB-001-002-445	0.1	2	R0.05	0.2	4	45
2RPB-002-004-445	0.2	2	R0.1	0.4	4	45
2RPB-003-006-445	0.3	2	R0.15	0.6	4	45
2RPB-004-008-445	0.4	2	R0.2	0.8	4	45
2RPB-005-010-445	0.5	2	R0.25	1	4	45
2RPB-006-012-445	0.6	2	R0.3	1.2	4	45
2RPB-007-015-445	0.7	2	R0.35	1.5	4	45
2RPB-008-015-445	0.8	2	R0.4	1.5	4	45
2RPB-010-020-450	1.0	2	R0.5	2	4	50
2RPB-010-020-650	1.0	2	R0.5	2	6	50
2RPB-012-025-450	1.2	2	R0.6	2.5	4	50
2RPB-015-040-450	1.5	2	R0.75	4	4	50
2RPB-015-040-650	1.5	2	R0.75	4	6	50
2RPB-020-050-450	2.0	2	R1.0	5	4	50
2RPB-020-050-660	2.0	2	R1.0	5	6	60
2RPB-025-060-660	2.5	2	R1.25	6	6	60
2RPB-030-080-360	3.0	2	R1.5	8	3	60
2RPB-030-080-460	3.0	2	R1.5	8	4	60
2RPB-030-080-680	3.0	2	R1.5	8	6	80
2RPB-035-080-660	3.5	2	R1.75	8	6	60
2RPB-040-080-460	4.0	2	R2.0	8	4	60
2RPB-040-080-480	4.0	2	R2.0	8	4	80
2RPB-040-080-670	4.0	2	R2.0	8	6	70
2RPB-045-100-670	4.5	2	R2.25	10	6	70
2RPB-050-100-680	5.0	2	R2.5	10	6	80

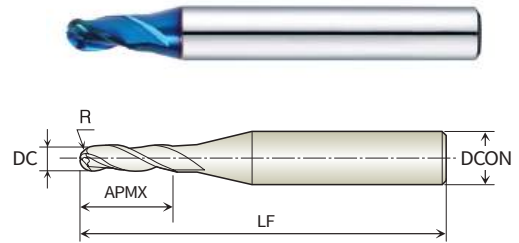
(Unit: mm)

(Unit: mm)

	R-PRO	제품코드 Product Code	직경 DC	날수 ZEFP	반경 RE	날장 APMX	생크경 DCON	전장 LF
	H-PRO	2RPB-055-120-680	5.5	2	R2.75	12	6	80
		2RPB-060-120-675	6.0	2	R3.0	12	6	75
		2RPB-060-120-690	6.0	2	R3.0	12	6	90
	A-PRO	2RPB-070-140-8A0	7.0	2	R3.5	14	8	100
		2RPB-080-140-875	8.0	2	R4.0	14	8	75
		2RPB-080-140-8A0	8.0	2	R4.0	14	8	100
	X-PRO	2RPB-090-180-AA0	9.0	2	R4.5	18	10	100
		2RPB-100-180-A75	10.0	2	R5.0	18	10	75
		2RPB-100-180-AA0	10.0	2	R5.0	18	10	100
	SUS MILL	2RPB-120-220-C80	12.0	2	R6.0	22	12	80
		2RPB-120-220-CB0	12.0	2	R6.0	22	12	110
	S-PRO							
	D-PRO							
	A-PLUS							
	AL-PRO							
	AL MILL							
	ABS							
	MICRO GRAIN							
	MULTI							
Technical data								

3RSB

3날 숏 볼 엔드밀
3 Flutes Short Ball End Mills



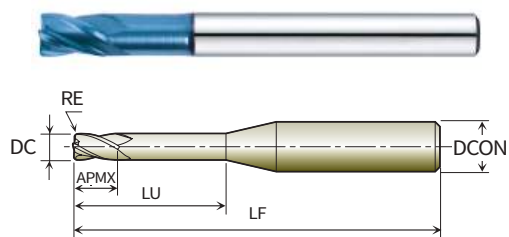
(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZFP	반경 RE	날장 APMX	생크경 DCON	전장 LF
3RSB-010-015-640	1.0	3	R0.5	1.5	6	40
3RSB-020-030-645	2.0	3	R1.0	3	6	45
3RSB-030-045-645	3.0	3	R1.5	4.5	6	45
3RSB-040-060-645	4.0	3	R2.0	6	6	45
3RSB-050-075-650	5.0	3	R2.5	7.5	6	50
3RSB-060-080-660	6.0	3	R3.0	8	6	60
3RSB-080-110-860	8.0	3	R4.0	11	8	60
3RSB-100-130-A60	10.0	3	R5.0	13	10	60
3RSB-120-150-C60	12.0	3	R6.0	15	12	60

4RRR

4날 리브 코너 래디우스 엔드밀

4 Flutes Rib Corner Radius End Mills



(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEP	반경 RE	날장 APMX	유효장 LU	샙크경 DCON	전장 LF
4RRR-008-R005-020-445	0.8	4	R0.05	1.2	2	4	45
4RRR-008-R005-040-445	0.8	4	R0.05	1.2	4	4	45
4RRR-008-R005-060-445	0.8	4	R0.05	1.2	6	4	45
4RRR-008-R01-020-445	0.8	4	R0.1	1.2	2	4	45
4RRR-008-R01-040-445	0.8	4	R0.1	1.2	4	4	45
4RRR-010-R005-040-445	1.0	4	R0.05	1.5	4	4	45
4RRR-010-R005-060-445	1.0	4	R0.05	1.5	6	4	45
4RRR-010-R005-080-445	1.0	4	R0.05	1.5	8	4	45
4RRR-010-R005-100-445	1.0	4	R0.05	1.5	10	4	45
4RRR-010-R01-040-445	1.0	4	R0.1	1.5	4	4	45
4RRR-010-R01-060-445	1.0	4	R0.1	1.5	6	4	45
4RRR-010-R01-080-445	1.0	4	R0.1	1.5	8	4	45
4RRR-010-R02-040-445	1.0	4	R0.2	1.5	4	4	45
4RRR-010-R02-060-445	1.0	4	R0.2	1.5	6	4	45
4RRR-010-R02-080-445	1.0	4	R0.2	1.5	8	4	45
4RRR-010-R02-100-445	1.0	4	R0.2	1.5	10	4	45
4RRR-010-R02-120-445	1.0	4	R0.2	1.5	12	4	45
4RRR-010-R03-040-445	1.0	4	R0.3	1.5	4	4	45
4RRR-010-R03-060-445	1.0	4	R0.3	1.5	6	4	45
4RRR-010-R03-080-445	1.0	4	R0.3	1.5	8	4	45
4RRR-015-R01-040-445	1.5	4	R0.1	2.3	4	4	45
4RRR-015-R01-060-445	1.5	4	R0.1	2.3	6	4	45
4RRR-015-R01-080-445	1.5	4	R0.1	2.3	8	4	45
4RRR-015-R01-100-445	1.5	4	R0.1	2.3	10	4	45
4RRR-015-R02-040-445	1.5	4	R0.2	2.3	4	4	45

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEPF	반경 RE	날장 APMX	유효장 LU	생크경 DCON	전장 LF	R-PRO
4RRR-015-R02-060-445	1.5	4	R0.2	2.3	6	4	45	H-PRO
4RRR-015-R02-080-445	1.5	4	R0.2	2.3	8	4	45	
4RRR-015-R02-100-445	1.5	4	R0.2	2.3	10	4	45	
4RRR-015-R02-120-445	1.5	4	R0.2	2.3	12	4	45	
4RRR-015-R02-160-450	1.5	4	R0.2	2.3	16	4	50	A-PRO
4RRR-020-R01-040-445	2.0	4	R0.1	3	4	4	45	X-PRO
4RRR-020-R01-060-445	2.0	4	R0.1	3	6	4	45	
4RRR-020-R01-080-445	2.0	4	R0.1	3	8	4	45	
4RRR-020-R01-100-445	2.0	4	R0.1	3	10	4	45	
4RRR-020-R01-120-445	2.0	4	R0.1	3	12	4	45	SUS MILL
4RRR-020-R02-040-445	2.0	4	R0.2	3	4	4	45	
4RRR-020-R02-060-445	2.0	4	R0.2	3	6	4	45	
4RRR-020-R02-080-445	2.0	4	R0.2	3	8	4	45	
4RRR-020-R02-100-445	2.0	4	R0.2	3	10	4	45	S-PRO
4RRR-020-R02-120-445	2.0	4	R0.2	3	12	4	45	
4RRR-020-R02-160-450	2.0	4	R0.2	3	16	4	50	
4RRR-020-R03-060-445	2.0	4	R0.3	3	6	4	45	
4RRR-020-R03-080-445	2.0	4	R0.3	3	8	4	45	D-PRO
4RRR-020-R03-100-445	2.0	4	R0.3	3	10	4	45	
4RRR-020-R03-120-445	2.0	4	R0.3	3	12	4	45	
4RRR-020-R05-040-445	2.0	4	R0.5	3	4	4	45	
4RRR-020-R05-060-445	2.0	4	R0.5	3	6	4	45	A-PLUS
4RRR-020-R05-080-445	2.0	4	R0.5	3	8	4	45	
4RRR-020-R05-100-445	2.0	4	R0.5	3	10	4	45	
4RRR-020-R05-120-445	2.0	4	R0.5	3	12	4	45	
4RRR-030-R01-100-450	3.0	4	R0.1	4.5	10	4	50	AL-PRO
4RRR-030-R01-120-650	3.0	4	R0.1	4.5	12	6	50	
4RRR-030-R02-100-350	3.0	4	R0.2	4.5	10	3	50	
4RRR-030-R02-100-450	3.0	4	R0.2	4.5	10	4	50	
4RRR-030-R02-080-650	3.0	4	R0.2	4.5	8	6	50	ABS
4RRR-030-R02-100-650	3.0	4	R0.2	4.5	10	6	50	
4RRR-030-R02-120-650	3.0	4	R0.2	4.5	12	6	50	
4RRR-030-R02-160-660	3.0	4	R0.2	4.5	16	6	60	
4RRR-030-R02-200-660	3.0	4	R0.2	4.5	20	6	60	MICRO GRAIN
4RRR-030-R03-100-350	3.0	4	R0.3	4.5	10	3	50	
4RRR-030-R03-100-450	3.0	4	R0.3	4.5	10	4	50	
4RRR-030-R03-080-650	3.0	4	R0.3	4.5	8	6	50	
4RRR-030-R03-100-650	3.0	4	R0.3	4.5	10	6	50	MULTI
4RRR-030-R03-120-650	3.0	4	R0.3	4.5	12	6	50	
Technical data								

(Unit: mm)

	R-PRO	제품코드 Product Code	직경 DC	날수 ZEP	반경 RE	날장 APMX	유효장 LU	생크경 DCON	전장 LF
		4RRR-030-R03-160-660	3.0	4	R0.3	4.5	16	6	60
		4RRR-030-R03-200-660	3.0	4	R0.3	4.5	20	6	60
		4RRR-030-R05-100-350	3.0	4	R0.5	4.5	10	3	50
		4RRR-030-R05-100-450	3.0	4	R0.5	4.5	10	4	50
		4RRR-030-R05-080-650	3.0	4	R0.5	4.5	8	6	50
		4RRR-030-R05-100-650	3.0	4	R0.5	4.5	10	6	50
		4RRR-030-R05-120-650	3.0	4	R0.5	4.5	12	6	50
		4RRR-030-R05-160-660	3.0	4	R0.5	4.5	16	6	60
		4RRR-030-R05-200-660	3.0	4	R0.5	4.5	20	6	60
		4RRR-030-R10-100-350	3.0	4	R1.0	4.5	10	3	50
		4RRR-030-R10-100-450	3.0	4	R1.0	4.5	10	4	50
		4RRR-030-R10-080-650	3.0	4	R1.0	4.5	8	6	50
		4RRR-030-R10-100-650	3.0	4	R1.0	4.5	10	6	50
		4RRR-030-R10-120-650	3.0	4	R1.0	4.5	12	6	50
		4RRR-030-R10-160-660	3.0	4	R1.0	4.5	16	6	60
		4RRR-030-R10-200-660	3.0	4	R1.0	4.5	20	6	60
		4RRR-040-R01-120-450	4.0	4	R0.1	6	12	4	50
		4RRR-040-R02-120-450	4.0	4	R0.2	6	12	4	50
		4RRR-040-R02-100-650	4.0	4	R0.2	6	10	6	50
		4RRR-040-R02-120-650	4.0	4	R0.2	6	12	6	50
		4RRR-040-R02-160-660	4.0	4	R0.2	6	16	6	60
		4RRR-040-R02-200-660	4.0	4	R0.2	6	20	6	60
		4RRR-040-R02-250-665	4.0	4	R0.2	6	25	6	65
		4RRR-040-R02-300-670	4.0	4	R0.2	6	30	6	70
		4RRR-040-R03-120-450	4.0	4	R0.3	6	12	4	50
		4RRR-040-R03-100-650	4.0	4	R0.3	6	10	6	50
		4RRR-040-R03-120-650	4.0	4	R0.3	6	12	6	50
		4RRR-040-R03-160-660	4.0	4	R0.3	6	16	6	60
		4RRR-040-R03-200-660	4.0	4	R0.3	6	20	6	60
		4RRR-040-R05-120-450	4.0	4	R0.3	6	12	4	50
		4RRR-040-R05-160-450	4.0	4	R0.5	6	16	4	50
		4RRR-040-R05-160-4A0	4.0	4	R0.5	6	16	4	100
		4RRR-040-R05-100-650	4.0	4	R0.5	6	10	6	50
		4RRR-040-R05-120-650	4.0	4	R0.5	6	12	6	50
		4RRR-040-R05-160-660	4.0	4	R0.5	6	16	6	60
		4RRR-040-R05-200-660	4.0	4	R0.5	6	20	6	60
		4RRR-040-R05-250-665	4.0	4	R0.5	6	25	6	65
		4RRR-040-R05-300-670	4.0	4	R0.5	6	30	6	70
		4RRR-040-R10-120-450	4.0	4	R1.0	6	12	4	50

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEPF	반경 RE	날장 APMX	유효장 LU	생크경 DCON	전장 LF	R-PRO
4RRR-050-R05-180-660	5.0	4	R0.5	7.5	18	6	60	H-PRO
4RRR-060-R01-200-660	6.0	4	R0.1	9	20	6	60	
4RRR-060-R02-200-660	6.0	4	R0.2	9	20	6	60	
4RRR-060-R02-200-675	6.0	4	R0.2	9	20	6	75	A-PRO
4RRR-060-R02-200-6A0	6.0	4	R0.2	9	20	6	100	
4RRR-060-R03-200-660	6.0	4	R0.3	9	20	6	60	
4RRR-060-R03-200-675	6.0	4	R0.3	9	20	6	75	X-PRO
4RRR-060-R03-200-6A0	6.0	4	R0.3	9	20	6	100	
4RRR-060-R05-200-660	6.0	4	R0.5	9	20	6	60	
4RRR-060-R05-200-675	6.0	4	R0.5	9	20	6	75	SUS MILL
4RRR-060-R05-200-6A0	6.0	4	R0.5	9	20	6	100	
4RRR-060-R10-200-660	6.0	4	R1.0	9	20	6	60	
4RRR-060-R10-200-675	6.0	4	R1.0	9	20	6	75	S-PRO
4RRR-060-R10-200-6A0	6.0	4	R1.0	9	20	6	100	
4RRR-080-R01-240-865	8.0	4	R0.1	12	24	8	65	
4RRR-080-R02-240-865	8.0	4	R0.2	12	24	8	65	D-PRO
4RRR-080-R02-240-875	8.0	4	R0.2	12	24	8	75	
4RRR-080-R02-240-8A0	8.0	4	R0.2	12	24	8	100	
4RRR-080-R03-240-865	8.0	4	R0.3	12	24	8	65	A-PLUS
4RRR-080-R03-240-875	8.0	4	R0.3	12	24	8	75	
4RRR-080-R03-240-8A0	8.0	4	R0.3	12	24	8	100	
4RRR-080-R05-240-865	8.0	4	R0.5	12	24	8	65	AL-PRO
4RRR-080-R05-240-875	8.0	4	R0.5	12	24	8	75	
4RRR-080-R05-240-8A0	8.0	4	R0.5	12	24	8	100	
4RRR-080-R10-240-865	8.0	4	R1.0	12	24	8	65	AL MILL
4RRR-080-R10-240-875	8.0	4	R1.0	12	24	8	75	
4RRR-080-R10-240-8A0	8.0	4	R1.0	12	24	8	100	
4RRR-100-R02-300-A75	10.0	4	R0.2	15	30	10	75	ABS
4RRR-100-R02-300-AA0	10.0	4	R0.2	15	30	10	100	
4RRR-100-R05-300-A75	10.0	4	R0.5	15	30	10	75	
4RRR-100-R05-300-AA0	10.0	4	R0.5	15	30	10	100	MICRO GRAIN
4RRR-100-R10-300-A75	10.0	4	R1.0	15	30	10	75	
4RRR-100-R10-300-AA0	10.0	4	R1.0	15	30	10	100	
4RRR-100-R10-300-AF0	10.0	4	R1.0	15	30	10	150	MULTI
4RRR-120-R05-300-C80	12.0	4	R0.5	18	30	12	80	
4RRR-120-R05-300-CB0	12.0	4	R0.5	18	30	12	110	
4RRR-120-R05-300-CF0	12.0	4	R0.5	18	30	12	150	Technical data
4RRR-120-R10-300-C80	12.0	4	R1.0	18	30	12	80	
4RRR-120-R10-300-CB0	12.0	4	R1.0	18	30	12	110	

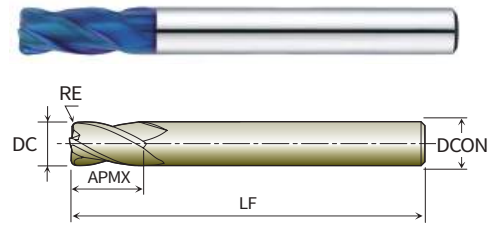
	R-PRO
	H-PRO
	A-PRO
	X-PRO
	SUS MILL
	S-PRO
	D-PRO
	A-PLUS
	AL-PRO
	AL MILL
	ABS
	MICRO GRAIN
	MULTI
Technical data	

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEFP	반경 RE	날장 APMX	유효장 LU	생크경 DCON	전장 LF
4RRR-120-R10-300-CF0	12.0	4	R1.0	18	30	12	150

4RCR

4날 코너 래디우스 엔드밀 4 Flutes Corner Radius End Mills



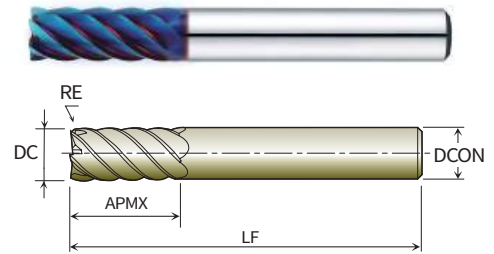
(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEPF	반경 RE	날장 APMX	생크경 DCON	전장 LF
4RCR-010-R01-025-445	1.0	4	R0.1	2.5	4	45
4RCR-010-R02-025-445	1.0	4	R0.2	2.5	4	45
4RCR-010-R03-025-445	1.0	4	R0.3	2.5	4	45
4RCR-015-R01-040-445	1.5	4	R0.1	4	4	45
4RCR-015-R02-040-445	1.5	4	R0.2	4	4	45
4RCR-015-R03-040-445	1.5	4	R0.3	4	4	45
4RCR-015-R05-040-445	1.5	4	R0.5	4	4	45
4RCR-020-R01-060-445	2.0	4	R0.1	6	4	45
4RCR-020-R02-060-445	2.0	4	R0.2	6	4	45
4RCR-020-R03-060-445	2.0	4	R0.3	6	4	45
4RCR-020-R05-060-445	2.0	4	R0.5	6	4	45
4RCR-025-R01-060-450	2.5	4	R0.1	6	4	50
4RCR-025-R02-060-450	2.5	4	R0.2	6	4	50
4RCR-025-R03-060-450	2.5	4	R0.3	6	4	50
4RCR-025-R05-060-450	2.5	4	R0.5	6	4	50
4RCR-030-R01-080-660	3.0	4	R0.1	8	6	60
4RCR-030-R02-080-660	3.0	4	R0.2	8	6	60
4RCR-030-R03-080-660	3.0	4	R0.3	8	6	60
4RCR-030-R05-080-660	3.0	4	R0.5	8	6	60
4RCR-040-R01-100-670	4.0	4	R0.1	10	6	70
4RCR-040-R02-100-670	4.0	4	R0.2	10	6	70
4RCR-040-R03-100-670	4.0	4	R0.3	10	6	70
4RCR-040-R05-100-670	4.0	4	R0.5	10	6	70
4RCR-040-R10-100-670	4.0	4	R1.0	10	6	70
4RCR-050-R01-130-675	5.0	4	R0.1	13	6	75

제품코드 Product Code	직경 DC	날수 ZEFP	반경 RE	날장 APMX	생크경 DCON	전장 LF	(Unit: mm)	
4RCR-050-R02-130-675	5.0	4	R0.2	13	6	75		
4RCR-050-R03-130-675	5.0	4	R0.3	13	6	75		
4RCR-050-R05-130-675	5.0	4	R0.5	13	6	75		
4RCR-050-R10-130-675	5.0	4	R1.0	13	6	75		
4RCR-060-R01-130-690	6.0	4	R0.1	13	6	90		
4RCR-060-R02-130-690	6.0	4	R0.2	13	6	90		
4RCR-060-R03-130-690	6.0	4	R0.3	13	6	90		
4RCR-060-R05-130-690	6.0	4	R0.5	13	6	90		
4RCR-060-R10-130-690	6.0	4	R1.0	13	6	90		
4RCR-080-R01-190-8A0	8.0	4	R0.1	19	8	100		
4RCR-080-R02-190-8A0	8.0	4	R0.2	19	8	100		
4RCR-080-R03-190-8A0	8.0	4	R0.3	19	8	100		
4RCR-080-R05-190-8A0	8.0	4	R0.5	19	8	100		
4RCR-080-R10-190-8A0	8.0	4	R1.0	19	8	100		
4RCR-080-R20-190-8A0	8.0	4	R2.0	19	8	100		
4RCR-100-R02-220-AA0	10.0	4	R0.2	22	10	100		
4RCR-100-R03-220-AA0	10.0	4	R0.3	22	10	100		
4RCR-100-R05-220-AA0	10.0	4	R0.5	22	10	100		
4RCR-100-R10-220-AA0	10.0	4	R1.0	22	10	100		
4RCR-100-R20-220-AA0	10.0	4	R2.0	22	10	100		
4RCR-120-R02-260-CB0	12.0	4	R0.2	26	12	110		
4RCR-120-R03-260-CB0	12.0	4	R0.3	26	12	110		
4RCR-120-R05-260-CB0	12.0	4	R0.5	26	12	110		
4RCR-120-R10-260-CB0	12.0	4	R1.0	26	12	110		
4RCR-120-R20-260-CB0	12.0	4	R2.0	26	12	110		

6RCR

6날 45° 코너 라디우스 엔드밀
6 Flutes 45° Corner Radius End Mills



(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEFP	반경 RE	날장 APMX	생크경 DCON	전장 LF
6RCR-030-R05-080-650	3.0	6	R0.5	8	6	50
6RCR-040-R05-100-650	4.0	6	R0.5	10	6	50
6RCR-060-R05-130-650	6.0	6	R0.5	13	6	50
6RCR-080-R05-190-865	8.0	6	R0.5	19	8	65
6RCR-100-R05-220-A70	10.0	6	R0.5	22	10	70
6RCR-120-R05-260-C80	12.0	6	R0.5	26	12	80

R-PRO

H-PRO

A-PRO

X-PRO

SUS MILL

S-PRO

D-PRO

A-PLUS

AL-PRO

AL MILL

ABS

MICRO
GRAIN

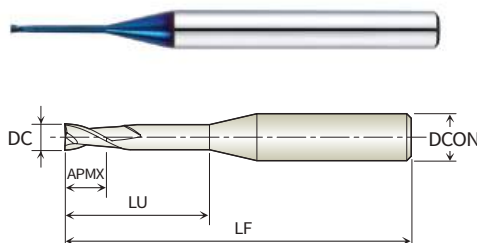
MULTI

Technical data

2RRE

2날 리브 플랫 엔드밀 2 Flutes Rib Flat End Mills

R

page
No.255

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZFP	날장 APMX	유효장 LU	생크경 DCON	전장 LF
2RRE-001-003-445	0.1	2	0.15	0.3	4	45
2RRE-001-005-445	0.1	2	0.15	0.5	4	45
2RRE-002-005-445	0.2	2	0.3	0.5	4	45
2RRE-002-010-445	0.2	2	0.3	1	4	45
2RRE-002-020-445	0.2	2	0.3	2	4	45
2RRE-003-005-445	0.3	2	0.45	0.5	4	45
2RRE-003-010-445	0.3	2	0.45	1	4	45
2RRE-003-015-445	0.3	2	0.45	1.5	4	45
2RRE-003-020-445	0.3	2	0.45	2	4	45
2RRE-003-025-445	0.3	2	0.45	2.5	4	45
2RRE-003-030-445	0.3	2	0.45	3	4	45
2RRE-004-010-445	0.4	2	0.6	1	4	45
2RRE-004-015-445	0.4	2	0.6	1.5	4	45
2RRE-004-020-445	0.4	2	0.6	2	4	45
2RRE-004-025-445	0.4	2	0.6	2.5	4	45
2RRE-004-030-445	0.4	2	0.6	3	4	45
2RRE-004-035-445	0.4	2	0.6	3.5	4	45
2RRE-004-040-445	0.4	2	0.6	4	4	45
2RRE-005-010-445	0.5	2	0.7	1	4	45
2RRE-005-020-445	0.5	2	0.7	2	4	45
2RRE-005-030-445	0.5	2	0.7	3	4	45
2RRE-005-040-445	0.5	2	0.7	4	4	45
2RRE-005-050-445	0.5	2	0.7	5	4	45
2RRE-005-060-445	0.5	2	0.7	6	4	45
2RRE-005-080-445	0.5	2	0.7	8	4	45

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEP	날장 APMX	유효장 LU	생크경 DCON	전장 LF	R-PRO	
2RRE-006-020-445	0.6	2	0.9	2	4	45		
2RRE-006-030-445	0.6	2	0.9	3	4	45	H-PRO	
2RRE-006-040-445	0.6	2	0.9	4	4	45		
2RRE-006-050-445	0.6	2	0.9	5	4	45		
2RRE-006-060-445	0.6	2	0.9	6	4	45	A-PRO	
2RRE-006-080-445	0.6	2	0.9	8	4	45		
2RRE-006-100-445	0.6	2	0.9	10	4	45		
2RRE-007-020-445	0.7	2	1	2	4	45	X-PRO	
2RRE-007-040-445	0.7	2	1	4	4	45		
2RRE-007-060-445	0.7	2	1	6	4	45		
2RRE-007-080-445	0.7	2	1	8	4	45	SUS MILL	
2RRE-007-100-445	0.7	2	1	10	4	45		
2RRE-007-120-445	0.7	2	1	12	4	45		
2RRE-008-020-445	0.8	2	1.2	2	4	45	S-PRO	
2RRE-008-030-445	0.8	2	1.2	3	4	45		
2RRE-008-040-445	0.8	2	1.2	4	4	45		
2RRE-008-050-445	0.8	2	1.2	5	4	45	D-PRO	
2RRE-008-060-445	0.8	2	1.2	6	4	45		
2RRE-008-080-445	0.8	2	1.2	8	4	45		
2RRE-008-100-445	0.8	2	1.2	10	4	45	A-PLUS	
2RRE-008-120-445	0.8	2	1.2	12	4	45		
2RRE-009-060-445	0.9	2	1.3	6	4	45		
2RRE-009-080-445	0.9	2	1.3	8	4	45	AL-PRO	
2RRE-009-100-445	0.9	2	1.3	10	4	45		
							AL MILL	
							ABS	
							MICRO GRAIN	
							MULTI	
							Technical data	

4RRE

4날 리브 플랫 엔드밀

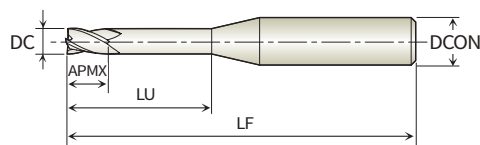
4 Flutes Rib Flat End Mills

R

4

OD

30°

page
No.256

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZFP	날장 APMX	유효장 LU	생크경 DCON	전장 LF
4RRE-010-030-445	1.0	4	1.5	3	4	45
4RRE-010-040-445	1.0	4	1.5	4	4	45
4RRE-010-060-445	1.0	4	1.5	6	4	45
4RRE-010-080-445	1.0	4	1.5	8	4	45
4RRE-010-100-445	1.0	4	1.5	10	4	45
4RRE-015-040-445	1.5	4	2.3	4	4	45
4RRE-015-060-445	1.5	4	2.3	6	4	45
4RRE-015-080-445	1.5	4	2.3	8	4	45
4RRE-015-100-445	1.5	4	2.3	10	4	45
4RRE-015-120-445	1.5	4	2.3	12	4	45
4RRE-015-160-450	1.5	4	2.3	16	4	50
4RRE-020-060-445	2.0	4	3	6	4	45
4RRE-020-080-445	2.0	4	3	8	4	45
4RRE-020-100-445	2.0	4	3	10	4	45
4RRE-020-120-445	2.0	4	3	12	4	45
4RRE-020-160-450	2.0	4	3	16	4	50
4RRE-020-200-450	2.0	4	3	20	4	50
4RRE-030-080-650	3.0	4	4.5	8	6	50
4RRE-030-100-650	3.0	4	4.5	10	6	50
4RRE-030-120-650	3.0	4	4.5	12	6	50
4RRE-030-160-660	3.0	4	4.5	16	6	60
4RRE-030-200-660	3.0	4	4.5	20	6	60
4RRE-040-100-650	4.0	4	6	10	6	50
4RRE-040-120-650	4.0	4	6	12	6	50
4RRE-040-160-660	4.0	4	6	16	6	60

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEPF	날장 APMX	유효장 LU	생크경 DCON	전장 LF
4RRE-040-200-660	4.0	4	6	20	6	60
4RRE-040-250-665	4.0	4	6	25	6	65
4RRE-050-160-660	5.0	4	8	16	6	60
4RRE-050-300-670	5.0	4	8	30	6	70
4RRE-060-150-660	6.0	4	9	15	6	60
4RRE-060-200-660	6.0	4	9	20	6	60
4RRE-060-300-670	6.0	4	9	30	6	70
4RRE-080-200-865	8.0	4	12	20	8	65
4RRE-080-300-880	8.0	4	12	30	8	80
4RRE-080-400-8A0	8.0	4	12	40	8	100
4RRE-100-250-A70	10.0	4	15	25	10	70
4RRE-100-350-AA0	10.0	4	15	35	10	100
4RRE-100-450-AA0	10.0	4	15	45	10	100
4RRE-120-300-C80	12.0	4	18	30	12	80
4RRE-120-400-CB0	12.0	4	18	40	12	110
4RRE-120-500-CB0	12.0	4	18	50	12	110

R-PRO	
H-PRO	
A-PRO	
X-PRO	
SUS MILL	
S-PRO	
D-PRO	
A-PLUS	
AL-PRO	
AL MILL	
ABS	
MICRO GRAIN	
MULTI	
Technical data	

4RPE

4날 플랫 엔드밀

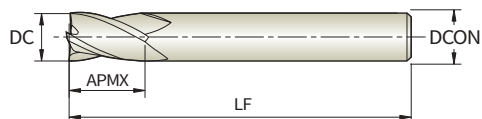
4 Flutes Flat End Mills

R

4

OD

30°

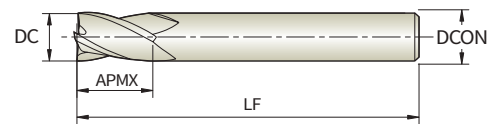
page
No.257

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZFP	날장 APMX	샙크경 DCON	전장 LF
4RPE-010-025-445	1.0	4	2.5	4	45
4RPE-012-040-445	1.2	4	4	4	45
4RPE-015-040-445	1.5	4	4	4	45
4RPE-020-060-445	2.0	4	6	4	45
4RPE-025-080-445	2.5	4	8	4	45
4RPE-030-100-450	3.0	4	10	4	50
4RPE-035-100-650	3.5	4	10	6	50
4RPE-040-120-450	4.0	4	12	4	50
4RPE-050-150-650	5.0	4	15	6	50
4RPE-060-150-650	6.0	4	15	6	50
4RPE-060-150-675	6.0	4	15	6	75
4RPE-070-200-865	7.0	4	20	8	65
4RPE-080-200-865	8.0	4	20	8	65
4RPE-080-200-875	8.0	4	20	8	75
4RPE-100-250-A70	10.0	4	25	10	70
4RPE-100-250-A75	10.0	4	25	10	75
4RPE-120-300-C80	12.0	4	30	12	80

4RLE

4날 롱 플랫 엔드밀
4 Flutes Long Flat End Mills



(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEP	날장 APMX	생크경 DCON	전장 LF
4RLE-080-300-8A0	8.0	4	30	8	100
4RLE-100-350-AA0	10.0	4	35	10	100
4RLE-120-400-CA0	12.0	4	40	12	100

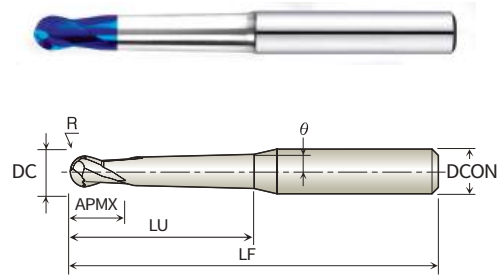
2RTB

2날 테이퍼 넥 볼 엔드밀 2 Flutes Taper Neck Ball End Mills

R



30°

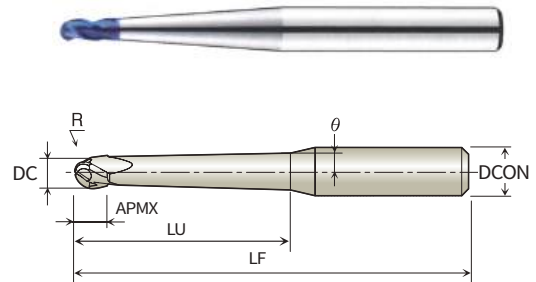
page
No.250

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEPF	반경 RE	테이퍼각 PSIR	날장 APMX	유효장 LU	생크경 DCON	전장 LF
2RTB-010-010-460	1.0	2	R0.5	고객 맞춤 주문	1	고객 맞춤 주문	4	60
2RTB-010-010-480	1.0	2	R0.5		1		4	80
2RTB-010-010-690	1.0	2	R0.5		1		6	90
2RTB-015-015-460	1.5	2	R0.75		1.5		4	60
2RTB-015-015-480	1.5	2	R0.75		1.5		4	80
2RTB-015-015-690	1.5	2	R0.75		1.5		6	90
2RTB-020-020-470	2.0	2	R1		2		4	70
2RTB-020-020-490	2.0	2	R1		2		4	90
2RTB-020-020-690	2.0	2	R1		2		6	90
2RTB-030-030-680	3.0	2	R1.5		3		6	80
2RTB-030-030-6A0	3.0	2	R1.5	Provide Custom- made Order	3	Provide Custom- made Order	6	100
2RTB-030-030-8B0	3.0	2	R1.5		3		8	110
2RTB-040-040-680	4.0	2	R2		4		6	80
2RTB-040-040-6B0	4.0	2	R2		4		6	110
2RTB-040-040-8B0	4.0	2	R2		4		8	110
2RTB-050-050-890	5.0	2	R2.5		5		8	90
2RTB-050-050-8B0	5.0	2	R2.5		5		8	110
2RTB-060-060-8B0	6.0	2	R3		6		8	110
2RTB-060-060-AF0	6.0	2	R3		6		10	150
2RTB-080-080-AB0	8.0	2	R4		8		10	110
2RTB-080-080-CG0	8.0	2	R4		8		12	160
2RTB-100-100-CB0	10.0	2	R5		10		12	110
2RTB-100-100-CG0	10.0	2	R5		10		12	160
2RTB-120-120-GG0	12.0	2	R6		12		16	160

3RTB

3날 테이퍼 넥 볼 엔드밀 3 Flutes Taper Neck Ball End Mills



(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZFP	반경 RE	테이퍼각 PSIR	날장 APMX	유효장 LU	생크경 DCON	전장 LF
3RTB-010-010-460	1.0	3	R0.5	고객 맞춤 주문	1	고객 맞춤 주문	4	60
3RTB-010-010-480	1.0	3	R0.5		1		4	80
3RTB-010-010-690	1.0	3	R0.5		1		6	90
3RTB-015-015-460	1.5	3	R0.75		1.5		4	60
3RTB-015-015-480	1.5	3	R0.75		1.5		4	80
3RTB-015-015-690	1.5	3	R0.75		1.5		6	90
3RTB-020-020-470	2.0	3	R1		2		4	70
3RTB-020-020-490	2.0	3	R1		2		4	90
3RTB-020-020-690	2.0	3	R1		2		6	90
3RTB-030-030-680	3.0	3	R1.5		3		6	80
3RTB-030-030-6A0	3.0	3	R1.5	Provide Custom- made Order	3	Provide Custom- made Order	6	100
3RTB-030-030-8B0	3.0	3	R1.5		3		8	110
3RTB-040-040-680	4.0	3	R2		4		6	80
3RTB-040-040-6B0	4.0	3	R2		4		6	110
3RTB-040-040-8B0	4.0	3	R2		4		8	110
3RTB-050-050-890	5.0	3	R2.5		5		8	90
3RTB-050-050-8B0	5.0	3	R2.5		5		8	110
3RTB-060-060-8B0	6.0	3	R3		6		8	110
3RTB-060-060-AF0	6.0	3	R3		6		10	150
3RTB-080-080-AB0	8.0	3	R4		8		10	110
3RTB-080-080-CG0	8.0	3	R4	MULTI	8		12	160
3RTB-100-100-CB0	10.0	3	R5		10		12	110
3RTB-100-100-CG0	10.0	3	R5		10		12	160
3RTB-120-120-GG0	12.0	3	R6		12		16	160

R-PRO

H-PRO

A-PRO

X-PRO

SUS MILL

S-PRO

D-PRO

A-PLUS

AL-PRO

AL MILL

ABS

MICRO
GRAIN

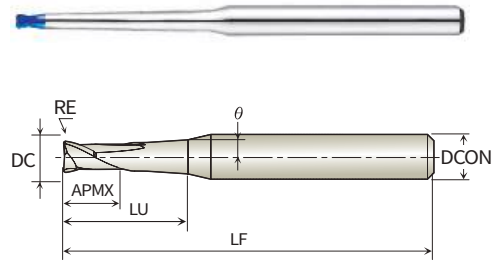
MULTI

Technical data

2RTR

2날 테이퍼 넥 코너 라디우스 엔드밀 2 Flutes Taper Neck Corner Radius End Mills

R

page
No.258

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEPF	반경 RE	테이퍼각 PSIR	날장 APMX	유효장 LU	생크경 DCON	전장 LF
2RTR-010-R01-010-460	1.0	2	R0.1	고객 맞춤 주문 Provide Custom- made Order	1	고객 맞춤 주문 Provide Custom- made Order	4	60
2RTR-010-R01-010-480	1.0	2	R0.1		1		4	80
2RTR-010-R01-010-680	1.0	2	R0.1		1		6	80
2RTR-010-R02-010-460	1.0	2	R0.2		1		4	60
2RTR-010-R02-010-480	1.0	2	R0.2		1		4	80
2RTR-010-R02-010-680	1.0	2	R0.2		1		6	80
2RTR-010-R03-010-460	1.0	2	R0.3		1		4	60
2RTR-010-R03-010-480	1.0	2	R0.3		1		4	80
2RTR-010-R03-010-680	1.0	2	R0.3		1		6	80
2RTR-015-R02-015-460	1.5	2	R0.2		1.5		4	60
2RTR-015-R02-015-480	1.5	2	R0.2		1.5		4	80
2RTR-015-R02-015-680	1.5	2	R0.2		1.5		6	80
2RTR-015-R03-015-460	1.5	2	R0.3		1.5		4	60
2RTR-015-R03-015-480	1.5	2	R0.3		1.5		4	80
2RTR-015-R03-015-680	1.5	2	R0.3		1.5		6	80
2RTR-015-R05-015-460	1.5	2	R0.5		1.5		4	60
2RTR-015-R05-015-480	1.5	2	R0.5		1.5		4	80
2RTR-015-R05-015-680	1.5	2	R0.5		1.5		6	80
2RTR-020-R02-020-470	2.0	2	R0.2		2		4	70
2RTR-020-R02-020-480	2.0	2	R0.2		2		4	80
2RTR-020-R02-020-680	2.0	2	R0.2		2		6	80
2RTR-020-R03-015-460	2.0	2	R0.3		1.5		4	60
2RTR-020-R03-015-480	2.0	2	R0.3		1.5		4	80
2RTR-020-R03-015-680	2.0	2	R0.3		1.5		6	80
2RTR-020-R05-020-470	2.0	2	R0.5		2		4	70

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEP	반경 RE	테이퍼각 PSIR	날장 APMX	유효장 LU	생크경 DCON	전장 LF
2RTR-020-R05-020-480	2.0	2	R0.5	고객 맞춤 주문	2	고객 맞춤 주문	4	80
2RTR-020-R05-020-680	2.0	2	R0.5		2		6	80
2RTR-030-R02-030-680	3.0	2	R0.2		3		6	80
2RTR-030-R02-030-6A0	3.0	2	R0.2		3		6	100
2RTR-030-R03-030-680	3.0	2	R0.3		3		6	80
2RTR-030-R03-030-6A0	3.0	2	R0.3		3		6	100
2RTR-030-R05-030-680	3.0	2	R0.5		3		6	80
2RTR-030-R05-030-6A0	3.0	2	R0.5		3		6	100
2RTR-040-R02-040-680	4.0	2	R0.2	Provide Custom- made Order	4	Provide Custom- made Order	6	80
2RTR-040-R02-040-6A0	4.0	2	R0.2		4		6	100
2RTR-040-R03-040-680	4.0	2	R0.3		4		6	80
2RTR-040-R03-040-6A0	4.0	2	R0.3		4		6	100
2RTR-040-R05-040-680	4.0	2	R0.5		4		6	80
2RTR-040-R05-040-6A0	4.0	2	R0.5		4		6	100
2RTR-040-R10-040-680	4.0	2	R1		4		6	80
2RTR-040-R10-040-6A0	4.0	2	R1		4		6	100

R-PRO	
H-PRO	
A-PRO	
X-PRO	
SUS MILL	
S-PRO	
D-PRO	
A-PLUS	
AL-PRO	
AL MILL	
ABS	
MICRO GRAIN	
MULTI	
Technical data	

4RTR

4날 테이퍼 넥 코너 라디우스 엔드밀

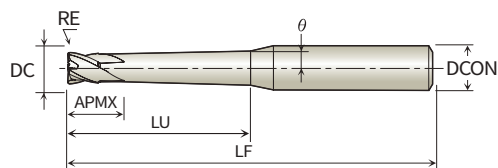
4 Flutes Taper Neck Corner Radius End Mills

R

4

CR

30°

page
No.254

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEPF	반경 RE	테이퍼각 PSIR	날장 APMX	유효장 LU	생크경 DCON	전장 LF
4RTR-010-R01-010-460	1.0	4	R0.1	고객 맞춤 주문 Provide Custom- made Order	1	고객 맞춤 주문 Provide Custom- made Order	4	60
4RTR-010-R01-010-480	1.0	4	R0.1		1		4	80
4RTR-010-R01-010-680	1.0	4	R0.1		1		6	80
4RTR-010-R02-010-460	1.0	4	R0.2		1		4	60
4RTR-010-R02-010-480	1.0	4	R0.2		1		4	80
4RTR-010-R02-010-680	1.0	4	R0.2		1		6	80
4RTR-015-R02-015-460	1.5	4	R0.2		1.5		4	60
4RTR-015-R02-015-480	1.5	4	R0.2		1.5		4	80
4RTR-015-R02-015-680	1.5	4	R0.2		1.5		6	80
4RTR-015-R03-015-460	1.5	4	R0.3		1.5		4	60
4RTR-015-R03-015-480	1.5	4	R0.3		1.5		4	80
4RTR-015-R03-015-680	1.5	4	R0.3		1.5		6	80
4RTR-015-R05-015-460	1.5	4	R0.5		1.5		4	60
4RTR-015-R05-015-480	1.5	4	R0.5		1.5		4	80
4RTR-015-R05-015-680	1.5	4	R0.5		1.5		6	80
4RTR-020-R02-020-470	2.0	4	R0.2		2		4	70
4RTR-020-R02-020-480	2.0	4	R0.2		2		4	80
4RTR-020-R02-020-680	2.0	4	R0.2		2		6	80
4RTR-020-R05-020-470	2.0	4	R0.5		2		4	70
4RTR-020-R05-020-480	2.0	4	R0.5		2		4	80
4RTR-020-R05-020-680	2.0	4	R0.5		2		6	80
4RTR-025-R03-025-470	2.5	4	R0.3		2.5		4	70
4RTR-025-R03-025-480	2.5	4	R0.3		2.5		4	80
4RTR-025-R03-025-680	2.5	4	R0.3		2.5		6	80
4RTR-025-R05-025-470	2.5	4	R0.5		2.5		4	70

(Unit: mm)

제품코드 Product Code	직경 DC	날수 ZEP	반경 RE	테이퍼각 PSIR	날장 APMX	유효장 LU	생크경 DCON	전장 LF
4RTR-025-R05-025-480	2.5	4	R0.5		2.5		4	80
4RTR-025-R05-025-680	2.5	4	R0.5		2.5		6	80
4RTR-030-R03-030-680	3.0	4	R0.3		3		6	80
4RTR-030-R03-030-6A0	3.0	4	R0.3		3		6	100
4RTR-030-R05-030-680	3.0	4	R0.5		3		6	80
4RTR-030-R05-030-6A0	3.0	4	R0.5		3		6	100
4RTR-040-R03-040-680	4.0	4	R0.3		4		6	80
4RTR-040-R03-040-6A0	4.0	4	R0.3		4		6	100
4RTR-040-R05-040-680	4.0	4	R0.5		4		6	80
4RTR-040-R05-040-6A0	4.0	4	R0.5		4		6	100

R-PRO	
H-PRO	
A-PRO	
X-PRO	
SUS MILL	
S-PRO	
D-PRO	
A-PLUS	
AL-PRO	
AL MILL	
ABS	
MICRO GRAIN	
MULTI	
Technical data	

기술자료

Technical data 14



R-PRO

H-PRO

A-PRO

X-PRO

SUS MILL

S-PRO

D-PRO

A-PLUS

AL-PRO

AL MILL

ABS

MICRO GRAIN

MULTI

Technical data

R-PRO

2RRB & 2RTB

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Preharden Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
R0.05	0.001~0.005	38,000~60,000	50~120	0.001~0.002	38,000~60,000	40~60	0.001~0.002	38,000~48,000	30~50
R0.1	0.001~0.008	38,000~60,000	200~350	0.001~0.003	38,000~60,000	200~280	0.001~0.003	30,000~38,500	150~240
R0.15	0.004~0.020	38,000~60,000	200~450	0.003~0.005	38,000~60,000	200~400	0.003~0.005	30,000~34,000	150~350
R0.2	0.005~0.020	30,000~50,000	250~500	0.003~0.007	30,000~45,000	200~500	0.003~0.007	25,000~27,000	160~400
R0.25	0.006~0.030	25,000~44,000	300~650	0.003~0.010	25,000~42,000	250~500	0.003~0.010	16,000~27,500	220~400
R0.3	0.006~0.050	22,000~40,000	300~1,300	0.003~0.015	22,000~40,000	250~800	0.003~0.015	16,000~26,700	210~380
R0.4	0.006~0.100	20,000~35,000	260~1,500	0.006~0.017	20,000~40,000	240~1,500	0.006~0.017	16,000~26,700	190~480
R0.5	0.010~0.200	20,000~35,000	500~1,800	0.007~0.020	20,000~38,000	300~2,400	0.007~0.020	16,000~26,700	230~420
R0.6	0.050~0.100	20,000~35,000	600~2,500	0.011~0.015	20,000~30,000	400~2,300	0.011~0.015	23,500~24,800	260~450
R0.75	0.050~0.200	18,000~30,000	600~2,800	0.010~0.025	18,000~30,000	550~2,500	0.010~0.025	18,000~19,800	200~400
R1.0	0.050~0.200	12,000~28,000	800~3,000	0.015~0.030	12,000~20,000	850~2,300	0.015~0.030	10,000~13,000	280~400
R1.5	0.050~0.200	10,000~22,000	1,100~3,000	0.020~0.045	10,000~20,000	900~2,900	0.020~0.045	8,000~10,500	380~550
R2.0	0.100~0.300	10,000~18,000	1,300~3,300	0.030~0.050	10,000~20,000	1,800~3,000	0.030~0.050	7,000~9,000	380~590
R2.5	0.100~0.300	9,000~15,000	1,500~3,700	0.025~0.045	8,000~18,000	1,300~3,800	0.025~0.045	6,500~8,500	450~1,000
R3.0	0.100~0.300	8,000~13,000	1,800~4,000	0.020~0.040	8,000~18,000	1,500~3,800	0.020~0.040	6,500~8,000	450~1,000
R4.0	0.150~0.350	8,000~10,000	2,000~4,000	0.015~0.030	6,000~10,000	1,800~3,700	0.015~0.030	4,500~6,300	800~1,500
R5.0	0.200~0.400	6,000~9,500	2,000~4,000	0.012~0.025	4,000~9,000	1,800~3,700	0.012~0.025	3,000~6,300	800~1,500
R6.0	0.300~0.500	5,000~8,000	2,000~4,000	0.010~0.020	3,000~8,000	1,800~3,700	0.010~0.020	2,500~5,800	800~1,500

Depth of Cut



⚠ 경고 WARNING

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- 강재 가공 시 Air Blow나 Oil Mist 사용을 추천합니다.
- 회전수와 테이블 이송은 같은 비율로 조정해주시요.
- 상기 조건표는 참고 자료이니 실제 가공 시 가공 형상, 기계 용량, 작업환경에 따라 조건을 조정해서 가공하시기 바랍니다.

- Use a rigid precise machine and holder.
- ap(mm) : Axial Depth of Cut.
- For milling steels, air blow or MQL(Oil Mist) are recommended.
- Adjust both Spindle speed and Feedrate by the same proportion.
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R-PRO 2RPB

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Preharden Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
R0.05	0.003	60,000	150	0.002	60,000	100	0.001	52,500	30
R0.1	0.004	60,000	180	0.003	60,000	120	0.002	45,000	60
R0.15	0.005	45,000	310	0.004	43,500	180	0.003	32,500	90
R0.2	0.006	37,500	420	0.005	35,000	240	0.004	26,250	120
R0.25	0.007	33,000	530	0.006	30,000	300	0.005	22,500	150
R0.3	0.008	27,000	1,200	0.007	26,500	800	0.006	20,000	400
R0.4	0.100	24,000	1,600	0.009	23,500	1,000	0.008	17,500	500
R0.5	0.100	21,000	2,000	0.100	21,000	1,750	0.100	16,000	875
R0.75	0.150	17,000	2,000	0.100	18,000	1,750	0.100	14,500	875
R1.0	0.200	14,000	2,000	0.200	15,000	1,750	0.150	11,250	875
R1.25	0.200	12,250	1,100	0.200	12,250	1,800	0.150	9,200	900
R1.5	0.200	10,500	2,150	0.200	10,700	1,850	0.150	8,050	925
R2.0	0.250	9,000	2,200	0.200	9,200	1,900	0.150	6,900	950
R2.5	0.250	7,800	2,300	0.200	7,900	2,000	0.150	5,900	1,000
R3.0	0.300	6,500	2,500	0.250	6,800	2,100	0.150	5,100	1,050
R4.0	0.400	5,200	2,500	0.300	5,700	2,200	0.200	5,300	1,100
R5.0	0.500	4,300	2,200	0.400	4,500	1,900	0.300	3,400	950
R6.0	0.600	3,600	2,000	0.500	3,750	1,750	0.400	2,800	875
R6.5	0.600	3,600	1,750	0.500	3,150	1,500	0.400	2,350	750
R7.0	0.700	3,000	1,750	0.600	2,850	1,350	0.450	2,150	700
R8.0	0.700	2,500	1,500	0.600	2,300	1,200	0.450	1,800	650
R10.0	0.800	2,500	1,300	0.700	2,300	1,200	0.500	1,800	650

Depth of Cut



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- ap(mm) : Axial Depth of Cut.
- For milling steels, air blow or MQL(Oil Mist) are recommended.
- Adjust both Spindle speed and Feedrate by the same proportion.
- The above condition are only reference. In actual machining conditions adjust these parameters according to the milling shape, machine capability and the operation environment.

R-PRO

H-PRO

A-PRO

X-PRO

SUS MILL

S-PRO

D-PRO

A-PLUS

AL-PRO

AL MILL

ABS

MICRO GRAIN

MULTI

Technical data

R-PRO

2RSB

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Preharden Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
R0.05	0.002	60,000	150	0.002	60,000	150	0.001	52,500	30
R0.1	0.003	60,000	180	0.002	60,000	180	0.002	45,000	60
R0.15	0.006	60,000	350	0.004	45,000	310	0.003	32,500	90
R0.2	0.010	50,000	500	0.007	37,500	420	0.005	26,250	120
R0.25	0.015	44,000	650	0.010	33,000	550	0.007	22,500	150
R0.3	0.030	40,000	1,100	0.020	30,000	1,200	0.010	20,000	400
R0.4	0.060	35,000	1,600	0.040	27,000	1,600	0.020	17,500	500
R0.5	0.020	30,000	1,750	0.100	24,000	2,000	0.050	16,000	870
R0.6	0.025	30,000	2,000	0.120	21,000	2,000	0.050	14,500	870
R0.75	0.025	30,000	2,450	0.150	17,000	2,000	0.060	11,250	900
R1.0	0.300	28,000	2,900	0.150	14,000	2,100	0.080	9,200	930
R1.5	0.400	24,500	2,950	0.200	12,250	2,150	0.100	8,050	950
R2.0	0.500	21,000	3,000	0.250	10,500	2,200	0.120	6,900	1,000
R2.5	0.500	18,000	3,200	0.250	9,000	2,300	0.150	5,900	1,050
R3.0	0.600	15,600	3,500	0.300	7,800	2,500	0.150	5,000	1,100
R4.0	0.700	13,000	3,000	0.400	6,500	2,500	0.200	4,300	950
R5.0	0.800	9,500	2,500	0.500	5,200	2,200	0.250	3,400	875
R6.0	0.900	7,500	2,000	0.600	4,300	2,000	0.300	2,800	750

Depth of Cut



⚠ 경고 WARNING

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5. 상기 조건표는 참고 자료이니 실제 가공 시 가공 형상, 기계 용량, 작업환경에 따라 조건을 조정해서 가공하시기 바랍니다.

1. Use a rigid precise machine and holder.
2. ap(mm) : Axial Depth of Cut.
3. For milling steels, air blow or MQL(Oil Mist) are recommended.
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R-PRO

3RSB & 3RTB

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Prehardened Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
R0.5	0.015	24,000	1,500	0.015	16,000	1,200	0.010	9,000	850
R1.0	0.250	14,000	2,100	0.250	9,200	1,800	0.060	8,500	900
R1.5	0.300	12,250	2,150	0.300	8,500	1,800	0.080	8,000	930
R2.0	0.400	10,500	2,200	0.400	6,900	2,000	0.090	6,500	950
R2.5	0.400	9,000	2,300	0.400	5,900	2,100	0.120	5,500	1,000
R3.0	0.450	7,800	2,500	0.450	5,000	2,300	0.120	5,000	1,050
R4.0	0.550	6,500	2,500	0.550	4,300	2,300	0.160	4,000	900
R5.0	0.650	5,200	2,200	0.650	3,400	2,300	0.200	3,000	850
R6.0	0.700	4,300	2,000	0.700	2,800	1,850	0.240	2,500	700
Depth of Cut									

△ 경고 WARNING

- 정밀하고 강성이 있는 홀더와 장비를 사용해주시시오.
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R-PRO

H-PRO

A-PRO

X-PRO

SUS MILL

S-PRO

D-PRO

A-PLUS

AL-PRO

AL MILL

ABS

MICRO
GRAN

MULTI

Technical data

R-PRO

H-PRO

A-PRO

X-PRO

SUS MILL

S-PRO

D-PRO

A-PLUS

AL-PRO

AL MILL

ABS

MICRO GRAIN

MULTI

Technical data

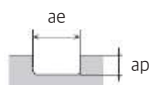
R-PRO

4RRR & 4RCR & 4RTR

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Prehardened Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
1.0	0.003~0.030	25,000~30,500	630~670	0.002~0.040	12,000~25,000	300~430	0.002~0.040	10,000~20,000	200~270
1.2	0.007~0.050	25,000~28,500	650~730	0.003~0.040	10,000~25,000	300~460	0.003~0.040	9,000~20,000	200~290
1.5	0.010~0.030	23,000~24,500	680~780	0.005~0.040	9,000~23,000	400~490	0.005~0.040	8,000~20,000	200~300
2.0	0.015~0.050	20,000~22,500	720~800	0.010~0.050	7,000~20,000	400~520	0.010~0.050	6,000~18,000	200~320
3.0	0.020~0.060	16,000~16,500	720~800	0.015~0.070	5,000~16,000	400~520	0.015~0.070	5,000~15,000	200~320
4.0	0.025~0.080	14,000~13,800	750~830	0.025~0.070	4,500~14,000	400~540	0.025~0.070	4,000~10,000	200~335
5.0	0.040~0.100	12,000~13,300	820~950	0.030~0.080	3,500~12,000	400~580	0.030~0.080	3,000~8,000	250~370
6.0	0.040~0.120	12,000~11,900	800~900	0.030~0.080	3,500~12,000	400~560	0.030~0.080	3,000~8,000	250~350
8.0	0.050~0.120	10,000~10,200	780~850	0.040~0.100	4,500~10,000	350~520	0.040~0.100	2,500~7,000	300~330
10.0	0.060~0.120	8,000~9,100	710~790	0.040~0.100	4,000~8,000	300~480	0.040~0.100	2,000~5,000	300~310
12.0	0.070~0.180	7,000~8,500	710~790	0.050~0.120	3,500~7,000	300~480	0.050~0.120	2,000~4,000	300~300

Depth of Cut



⚠ 경고 WARNING

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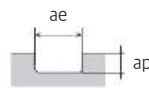
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R-PRO 2RRE

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Prehardened Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
0.1	0.006	38,000~48,000	320~345	0.006	30,000~40,000	220~245	0.006	28,350~37800	180~205
0.2	0.020	30,000~38,500	385~405	0.020	25,000~38,000	285~305	0.020	23,620~35,910	245~265
0.3	0.021	30,000~34,000	325~355	0.021	22,000~35,000	225~255	0.021	20,790~33,000	165~215
0.4	0.040	25,000~27,000	400~440	0.040	18,000~32,000	300~340	0.040	17,000~30,200	260~300
0.5	0.050	16,000~27,500	400~440	0.050	15,000~30,000	300~340	0.050	14,170~28,350	260~300
0.6	0.042	16,000~26,700	600~630	0.045	12,000~25,000	500~530	0.045	11,340~23,620	460~490
0.7	0.070	16,000~26,700	600~630	0.070	12,000~25,000	500~530	0.070	11,340~23,620	460~490
0.8	0.056	16,000~26,700	600~630	0.060	12,000~25,000	500~530	0.060	11,340~23,620	460~490
1.0	0.036	23,500~24,800	545~575	0.040	12,000~20,000	445~475	0.040	11,340~18,900	405~435
1.5	0.100	18,000~19,800	645~670	0.100	8,000~15,000	545~570	0.100	7,560~14,170	505~530
2.0	0.200	10,000~14,800	645~670	0.150	7,000~12,000	545~570	0.150	6,610~11,340	505~530
2.5	0.180	10,000~13,000	675~710	0.200	6,000~12,000	575~610	0.200	5,670~11,340	545~570
3.0	0.210	8,000~10,500	605~635	0.210	5,000~10,000	505~535	0.210	4,720~9,450	465~495
4.0	0.400	7,000~9,000	995~1150	0.370	4,000~9,000	695~750	0.370	3,780~8,500	655~710
5.0	0.090	6,500~8,500	985~1000	0.400	3,500~7,500	685~700	0.400	3,310~7,088	645~660
6.0	0.080	6,500~8,000	915~950	0.170	3,500~7,500	715~750	0.170	6,140~7,080	675~710
8.0	0.100	4,500~6,300	675~710	0.150	2,500~5,000	575~610	0.150	2,360~4,720	535~560
10.0	0.100	3,000~6,300	645~670	0.130	2,000~4,500	545~570	0.130	1,890~4,250	515~530
12.0	0.150	2,500~5,800	545~580	0.100	1,500~3,200	445~480	0.100	1,420~3,020	400~440

Depth of Cut



△ 경고 WARNING

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- The above condition are only reference. In actual machining conditions adjust these parameters according to the milling shape, machine capability and the operation environment.

R-PRO

H-PRO

A-PRO

X-PRO

SUS MILL

S-PRO

D-PRO

A-PLUS

AL-PRO

AL MILL

ABS

MICRO GRAIN

MULTI

Technical data

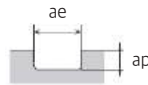
R-PRO

4RRE

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Preharden Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
1.0	0.003~0.030	25,000~38,000	200~1,200	0.002~0.040	12,000~25,000	150~250	0.002~0.010	10,000~20,000	130~155
1.2	0.007~0.050	25,000~33,000	200~1,200	0.003~0.040	10,000~25,000	150~275	0.003~0.010	9,000~20,000	130~170
1.5	0.010~0.030	16,000~28,500	200~1,200	0.005~0.040	9,000~23,000	170~290	0.005~0.015	8,000~20,000	140~185
2.0	0.015~0.050	14,000~26,000	200~1,200	0.010~0.050	7,000~20,000	200~300	0.010~0.020	6,000~18,000	140~200
3.0	0.020~0.060	12,000~17,300	200~1,200	0.015~0.070	5,000~16,000	200~300	0.015~0.025	5,000~15,000	150~230
4.0	0.025~0.080	12,000~13,200	200~1,200	0.025~0.070	4,500~14,000	225~335	0.025~0.030	4,000~10,000	150~250
5.0	0.040~0.100	8,000~12,500	250~800	0.030~0.080	3,500~12,000	225~350	0.030~0.030	3,000~8,000	130~240
6.0	0.040~0.120	7,000~10,350	250~800	0.030~0.080	3,500~12,000	225~330	0.040~0.045	3,000~8,000	130~220
8.0	0.050~0.120	3,500~7,800	300~700	0.040~0.100	4,500~10,000	200~310	0.040~0.060	2,500~7,000	120~200
10.0	0.060~0.120	3,000~6,150	300~700	0.040~0.100	4,000~8,000	200~300	0.040~0.080	2,000~5,000	100~180
12.0	0.070~0.180	3,000~5,250	300~650	0.050~0.120	3,500~7,000	150~250	0.050~0.100	2,000~4,000	100~180

Depth of Cut



⚠ 경고 WARNING

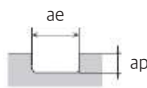
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2. 절입량의 ap는 축방향 절입량을 표시합니다.
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1. Use a rigid precise machine and holder.
2. ap(mm) : Axial Depth of Cut.
3. For milling steels, air blow or MQL(Oil Mist) are recommended.
4. Adjust both Spindle speed and Feedrate by the same proportion.
5. The above condition are only reference. In actual machining conditions adjust these parameters according to the milling shape, machine capability and the operation environment.

R-PRO

4RPE & 4RLE

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Prehardened Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
1.0	0.003~0.030	30,000~38,000	300~1,800	0.002~0.040	12,000~25,000	200~1,200	0.002~0.010	10,000~20,000	250~700
1.2	0.007~0.050	25,000~32,000	300~1,600	0.003~0.040	10,000~25,000	200~1,200	0.003~0.010	9,000~20,000	280~750
1.5	0.010~0.030	20,000~29,000	400~1,600	0.005~0.040	9,000~23,000	200~1,200	0.005~0.015	8,000~20,000	300~780
2.0	0.015~0.050	19,000~26,000	400~1,600	0.010~0.050	7,000~20,000	200~1,200	0.010~0.020	6,000~18,000	300~800
3.0	0.020~0.060	13,000~18,000	400~1,600	0.015~0.070	5,000~16,000	200~1,200	0.015~0.025	5,000~15,000	330~850
4.0	0.025~0.080	10,000~15,000	400~2,000	0.025~0.070	4,500~14,000	200~1,200	0.025~0.030	4,000~10,000	350~880
5.0	0.040~0.100	5,500~13,000	400~1,000	0.030~0.080	3,500~12,000	250~800	0.030~0.050	3,000~8,000	400~950
6.0	0.040~0.120	5,500~10,500	400~1,000	0.030~0.080	3,500~12,000	250~800	0.030~0.050	3,000~8,000	400~900
8.0	0.050~0.120	3,500~8,000	350~900	0.040~0.100	4,500~10,000	300~700	0.040~0.070	2,500~7,000	330~850
10.0	0.060~0.120	3,000~5,500	300~800	0.040~0.100	4,000~8,000	300~700	0.040~0.100	2,000~5,000	280~750
12.0	0.070~0.180	3,000~4,500	300~800	0.050~0.120	3,500~7,000	300~650	0.050~0.120	2,000~4,000	280~750
Depth of Cut									

△ 경고 WARNING

- 정밀하고 강성이 있는 홀더와 장비를 사용해주십시오.
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R-PRO

H-PRO

A-PRO

X-PRO

SUS MILL

S-PRO

D-PRO

A-PLUS

AL-PRO

AL MILL

ABS

MICRO GRAIN

MULTI

Technical data

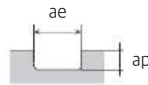
R-PRO

2RTR

High Speed Milling Condition

피삭재	프리하든강			고경도강(열처리강)					
Workpiece	Preharden Steel(NAK, STAVAX)			Hardened Steels(SKD)			Hardened Steels(SKD 11)		
HRC	~ 55			55 ~ 60			60 ~ 65		
Radius of Ball Nose	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)	Depth of Cut Ad(mm)	RPM	Feed (mm/min)
0.1	0.002~0.005	38,000~50,000	40~60	0.002~0.005	32,000~42,000	40~60	0.001~0.004	32,000~42,000	40~60
0.2	0.002~0.005	30,000~50,000	60~100	0.002~0.005	32,000~42,000	60~80	0.001~0.005	32,000~42,000	40~65
0.3	0.005~0.007	30,000~48,000	60~120	0.003~0.006	30,000~36,000	60~100	0.003~0.012	30,000~32,000	40~70
0.4	0.005~0.010	30,000~38,000	80~150	0.003~0.008	28,000~35,000	80~120	0.003~0.011	28,000~30,000	50~85
0.5	0.005~0.020	32,000~40,000	80~150	0.005~0.010	20,000~25,000	80~150	0.003~0.011	20,000~23,000	60~90
0.6	0.006~0.030	32,000~40,000	100~200	0.006~0.020	12,000~25,000	100~180	0.003~0.015	12,000~20,000	60~90
0.8	0.008~0.030	23,000~30,000	250~300	0.008~0.025	12,000~25,000	200~250	0.006~0.021	12,000~18,000	70~100
1	0.010~0.050	14,000~25,000	250~350	0.005~0.050	10,000~20,000	250~300	0.007~0.025	12,000~15,000	70~100
1.5	0.015~0.090	14,000~25,000	300~350	0.005~0.060	8,000~18,000	300~320	0.011~0.020	8,000~13,000	80~100
2	0.020~0.120	9,000~18,000	300~365	0.010~0.050	8,000~16,000	250~280	0.010~0.030	8,000~12,000	80~110
3	0.030~0.150	5,000~17,500	350~380	0.010~0.080	6,000~10,000	265~300	0.015~0.035	6,000~10,000	85~110
4	0.030~0.200	5,000~10,000	350~385	0.025~0.200	4,000~10,000	300~320	0.020~0.050	4,000~8,000	90~110
5	0.100~0.200	5,000~8,500	380~420	0.100~0.200	4,000~10,000	320~330	0.050~0.090	4,000~7,500	90~105
6	0.100~0.200	4,000~8,000	400~420	0.100~0.200	4,000~8,000	330~350	0.030~0.160	4,000~7,200	80~95
8	0.100~0.200	3,500~6,900	400~425	0.100~0.200	3,500~6,500	330~360	0.030~0.160	3,500~6,300	40~70
10	0.100~0.200	3,000~4,100	380~415	0.100~0.200	3,000~5,000	320~335	0.080~0.200	3,000~4,500	50~85
12	0.100~0.200	1,800~3,500	380~410	0.100~0.200	2,300~3,000	325~335	0.080~0.250	2,300~3,000	60~90

Depth of Cut



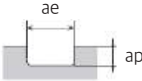
⚠ 경고 WARNING

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R-PRO 6RCR

High Speed Milling Condition

피삭재	프리하든강		고경도강(열처리강)			
Workpiece	Preharden Steel NAK, STAVAX		Hardened Steels SKD		Hardened Steels SKD 11	
HRC	~ 55		55 ~ 60		60 ~ 65	
Radius of Ball Nose	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3.0	18,000	1,600	15,000	1,100	13,000	800
4.0	16,000	1,900	12,000	1,200	11,000	850
6.0	12,000	2,200	8,500	1,300	6,500	850
8.0	10,000	2,500	6,000	1,500	3,500	1,000
10.0	6,000	2,500	3,500	1,500	3,200	1,000
12.0	4,800	1,800	2,700	1,000	2,000	700
Depth of Cut						

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