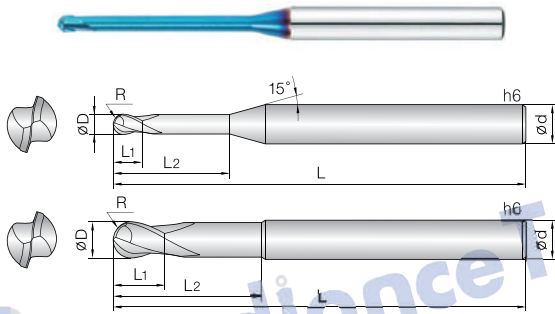


2 Flutes Hard Cut Rib Ball End Mills For Hardened Steels



2HRB

- Ball Endmills for various work materials (HRC 52~68) Pre-hardened steels and hardened steels.
- Good wear resistance by high quality Si-based PVD coating.
- High-Precise edge tolerance.
- Excellent surface finish.
- Good surface finish.
- Outstanding performance at high speed machining by ultra fine (0.2µm) WC grade.

Unit(mm)

Model Number	Cutting Dia. D	Radius Of BN R	Length Of Cut L1	Effective Length L2	Overall Length L	Shank dia d
2HRB 005 010 445	0.5	0.25R	0.5	1	45	4
2HRB 005 010 650	0.5	0.25R	0.5	1	50	6
2HRB 005 015 445	0.5	0.25R	0.5	1.5	45	4
2HRB 005 020 445	0.5	0.25R	0.5	2	45	4
2HRB 005 020 650	0.5	0.25R	0.5	2	50	6
2HRB 005 025 445	0.5	0.25R	0.5	2.5	45	4
2HRB 005 030 445	0.5	0.25R	0.5	3	45	4
2HRB 005 030 650	0.5	0.25R	0.5	3	50	6
2HRB 005 035 445	0.5	0.25R	0.5	3.5	45	4
2HRB 005 040 445	0.5	0.25R	0.5	4	45	4
2HRB 005 040 650	0.5	0.25R	0.5	4	50	6
2HRB 005 045 445	0.5	0.25R	0.5	4.5	45	4
2HRB 005 050 445	0.5	0.25R	0.5	5	45	4
2HRB 005 050 650	0.5	0.25R	0.5	5	50	6
2HRB 005 060 445	0.5	0.25R	0.5	6	45	4
2HRB 005 060 650	0.5	0.25R	0.5	6	50	6
2HRB 005 080 445	0.5	0.25R	0.5	8	45	4
2HRB 005 100 445	0.5	0.25R	0.5	10	45	4
2HRB 005 120 445	0.5	0.25R	0.5	12	45	4
2HRB 006 010 445	0.6	0.3R	0.6	1	45	4
2HRB 006 010 650	0.6	0.3R	0.6	1	50	6
2HRB 006 020 445	0.6	0.3R	0.6	2	45	4
2HRB 006 020 650	0.6	0.3R	0.6	2	50	6
2HRB 006 030 445	0.6	0.3R	0.6	3	45	4
2HRB 006 030 650	0.6	0.3R	0.6	3	50	6
2HRB 006 040 445	0.6	0.3R	0.6	4	45	4

2 Flutes Hard Cut Rib Ball End Mills For Hardened Steels



Model Number	Cutting Dia. D	Radius Of BN R	Length Of Cut L1	Effective Length L2	Overall Length L	Shank dia d
2HRB 006 040 650	0.6	0.3R	0.6	4	50	6
2HRB 006 050 445	0.6	0.3R	0.6	5	45	4
2HRB 006 050 650	0.6	0.3R	0.6	5	50	6
2HRB 006 060 445	0.6	0.3R	0.6	6	45	4
2HRB 006 060 650	0.6	0.3R	0.6	6	50	6
2HRB 006 080 445	0.6	0.3R	0.6	8	45	4
2HRB 006 080 650	0.6	0.3R	0.6	8	50	6
2HRB 006 100 445	0.6	0.3R	0.6	10	45	4
2HRB 006 120 445	0.6	0.3R	0.6	12	45	4
2HRB 006 140 445	0.6	0.3R	0.6	14	45	4
2HRB 007 020 445	0.7	0.35R	0.7	2	45	4
2HRB 007 040 445	0.7	0.35R	0.7	4	45	4
2HRB 007 060 445	0.7	0.35R	0.7	6	45	4
2HRB 007 080 445	0.7	0.35R	0.7	8	45	4
2HRB 007 100 445	0.7	0.35R	0.7	10	45	4
2HRB 007 120 445	0.7	0.35R	0.7	12	45	4
2HRB 008 020 445	0.8	0.4R	0.8	2	45	4
2HRB 008 020 650	0.8	0.4R	0.8	2	50	6
2HRB 008 030 445	0.8	0.4R	0.8	3	45	4
2HRB 008 030 650	0.8	0.4R	0.8	3	50	6
2HRB 008 040 445	0.8	0.4R	0.8	4	45	4
2HRB 008 040 650	0.8	0.4R	0.8	4	50	6
2HRB 008 050 445	0.8	0.4R	0.8	5	45	4
2HRB 008 050 650	0.8	0.4R	0.8	5	50	6
2HRB 008 060 445	0.8	0.4R	0.8	6	45	4
2HRB 008 060 650	0.8	0.4R	0.8	6	50	6
2HRB 008 080 445	0.8	0.4R	0.8	8	45	4
2HRB 008 080 650	0.8	0.4R	0.8	8	50	6
2HRB 008 100 445	0.8	0.4R	0.8	10	45	4
2HRB 008 120 445	0.8	0.4R	0.8	12	45	4
2HRB 009 040 445	0.9	0.45R	0.9	4	45	4
2HRB 009 060 445	0.9	0.45R	0.9	6	45	4
2HRB 009 080 445	0.9	0.45R	0.9	8	45	4
2HRB 009 100 450	0.9	0.45R	0.9	10	50	4
2HRB 009 120 450	0.9	0.45R	0.9	12	50	4
2HRB 010 020 445	1	0.5R	1	2	45	4
2HRB 010 020 650	1	0.5R	1	2	50	6
2HRB 010 030 445	1	0.5R	1	3	45	4

ECO-CUT

WIDE-CUT

HARD-CUT

ALU-CUT

D-CUT

SUS CUT

MAGIC DRILLS

2 Flutes Hard Cut Rib Ball End Mills For Hardened Steels



Unit(mm)

Model Number	Cutting Dia. D	Radius Of BN R	Length Of Cut L1	Effective Length L2	Overall Length L	Shank dia d
2HRB 010 030 650	1	0.5R	1	3	50	6
2HRB 010 040 445	1	0.5R	1	4	45	4
2HRB 010 040 650	1	0.5R	1	4	50	6
2HRB 010 050 445	1	0.5R	1	5	45	4
2HRB 010 050 650	1	0.5R	1	5	50	6
2HRB 010 060 445	1	0.5R	1	6	45	4
2HRB 010 060 650	1	0.5R	1	6	50	6
2HRB 010 080 445	1	0.5R	1	8	45	4
2HRB 010 080 650	1	0.5R	1	8	50	6
2HRB 010 100 450	1	0.5R	1	10	50	4
2HRB 010 100 650	1	0.5R	1	10	50	6
2HRB 010 120 450	1	0.5R	1	12	50	4
2HRB 010 120 650	1	0.5R	1	12	50	6
2HRB 010 140 450	1	0.5R	1	14	50	4
2HRB 010 160 450	1	0.5R	1	16	50	4
2HRB 010 180 450	1	0.5R	1	18	50	4
2HRB 010 200 450	1	0.5R	1	20	50	4
2HRB 010 220 460	1	0.5R	1	22	60	4
2HRB 010 250 460	1	0.5R	1	25	60	4
2HRB 012 040 445	1.2	0.6R	1.2	4	45	4
2HRB 012 040 650	1.2	0.6R	1.2	4	50	6
2HRB 012 060 445	1.2	0.6R	1.2	6	45	4
2HRB 012 060 650	1.2	0.6R	1.2	6	50	6
2HRB 012 080 445	1.2	0.6R	1.2	8	45	4
2HRB 012 080 650	1.2	0.6R	1.2	8	50	6
2HRB 012 100 450	1.2	0.6R	1.2	10	50	4
2HRB 012 100 650	1.2	0.6R	1.2	10	50	6
2HRB 012 120 450	1.2	0.6R	1.2	12	50	4
2HRB 012 120 650	1.2	0.6R	1.2	12	50	6
2HRB 012 160 450	1.2	0.6R	1.2	16	50	4
2HRB 012 200 450	1.2	0.6R	1.2	20	50	4
2HRB 012 240 460	1.2	0.6R	1.2	24	60	4
2HRB 014 060 445	1.4	0.7R	1.4	6	45	4
2HRB 014 080 445	1.4	0.7R	1.4	8	45	4
2HRB 014 120 450	1.4	0.7R	1.4	12	50	4
2HRB 014 160 450	1.4	0.7R	1.4	16	50	4
2HRB 015 030 445	1.5	0.75R	1.5	3	45	4

2 Flutes Hard Cut Rib Ball End Mills For Hardened Steels



Unit(mm)

Model Number	Cutting Dia. D	Radius Of BN R	Length Of Cut L1	Effective Length L2	Overall Length L	Shank dia d
2HRB 015 030 650	1.5	0.75R	1.5	3	50	6
2HRB 015 040 445	1.5	0.75R	1.5	4	45	4
2HRB 015 040 650	1.5	0.75R	1.5	4	50	6
2HRB 015 060 445	1.5	0.75R	1.5	6	45	4
2HRB 015 060 650	1.5	0.75R	1.5	6	50	6
2HRB 015 080 445	1.5	0.75R	1.5	8	45	4
2HRB 015 080 650	1.5	0.75R	1.5	8	50	6
2HRB 015 100 450	1.5	0.75R	1.5	10	50	4
2HRB 015 100 650	1.5	0.75R	1.5	10	50	6
2HRB 015 120 450	1.5	0.75R	1.5	12	50	4
2HRB 015 120 650	1.5	0.75R	1.5	12	50	6
2HRB 015 140 450	1.5	0.75R	1.5	14	50	4
2HRB 015 140 650	1.5	0.75R	1.5	14	50	6
2HRB 015 160 450	1.5	0.75R	1.5	16	50	4
2HRB 015 160 660	1.5	0.75R	1.5	16	60	6
2HRB 015 180 450	1.5	0.75R	1.5	18	50	4
2HRB 015 200 450	1.5	0.75R	1.5	20	50	4
2HRB 015 220 460	1.5	0.75R	1.5	22	60	4
2HRB 015 250 460	1.5	0.75R	1.5	25	60	4
2HRB 015 300 475	1.5	0.75R	1.5	30	75	4
2HRB 016 060 445	1.6	0.8R	1.6	6	45	4
2HRB 016 080 445	1.6	0.8R	1.6	8	45	4
2HRB 016 120 450	1.6	0.8R	1.6	12	50	4
2HRB 016 160 450	1.6	0.8R	1.6	16	50	4
2HRB 016 200 450	1.6	0.8R	1.6	20	50	4
2HRB 018 060 445	1.8	0.9R	1.8	6	45	4
2HRB 018 080 445	1.8	0.9R	1.8	8	45	4
2HRB 018 120 450	1.8	0.9R	1.8	12	50	4
2HRB 018 160 450	1.8	0.9R	1.8	16	50	4
2HRB 018 200 450	1.8	0.9R	1.8	20	50	4
2HRB 020 040 445	2	1R	2	4	45	4
2HRB 020 040 650	2	1R	2	4	50	6
2HRB 020 060 445	2	1R	2	6	45	4
2HRB 020 060 650	2	1R	2	6	50	6
2HRB 020 080 445	2	1R	2	8	45	4
2HRB 020 080 650	2	1R	2	8	50	6
2HRB 020 100 450	2	1R	2	10	50	4

ECO-CUT

WIDE-CUT

HARD-CUT

ALU-CUT

D-CUT

SUS CUT

MAGIC DRILLS

2 Flutes Hard Cut Rib Ball End Mills For Hardened Steels



Unit(mm)

Model Number	Cutting Dia. D	Radius Of BN R	Length Of Cut L1	Effective Length L2	Overall Length L	Shank dia d
2HRB 020 100 650	2	1R	2	10	50	6
2HRB 020 120 450	2	1R	2	12	50	4
2HRB 020 120 650	2	1R	2	12	50	6
2HRB 020 140 450	2	1R	2	14	50	4
2HRB 020 140 650	2	1R	2	14	50	6
2HRB 020 160 450	2	1R	2	16	50	4
2HRB 020 160 660	2	1R	2	16	60	6
2HRB 020 180 450	2	1R	2	18	50	4
2HRB 020 180 660	2	1R	2	18	60	6
2HRB 020 200 450	2	1R	2	20	50	4
2HRB 020 200 660	2	1R	2	20	60	6
2HRB 020 220 460	2	1R	2	22	60	4
2HRB 020 250 460	2	1R	2	25	60	4
2HRB 020 300 460	2	1R	2	30	60	4
2HRB 025 080 445	2.5	1.25R	2.5	8	45	4
2HRB 025 080 650	2.5	1.25R	2.5	8	50	6
2HRB 025 100 450	2.5	1.25R	2.5	10	50	4
2HRB 025 100 650	2.5	1.25R	2.5	10	50	6
2HRB 025 120 450	2.5	1.25R	2.5	12	50	4
2HRB 025 120 650	2.5	1.25R	2.5	12	50	6
2HRB 025 160 450	2.5	1.25R	2.5	16	50	4
2HRB 025 160 660	2.5	1.25R	2.5	16	60	6
2HRB 025 200 460	2.5	1.25R	2.5	20	60	4
2HRB 025 200 660	2.5	1.25R	2.5	20	60	6
2HRB 025 250 460	2.5	1.25R	2.5	25	60	4
2HRB 025 300 475	2.5	1.25R	2.5	30	75	4
2HRB 030 060 650	3	1.5R	3	6	50	6
2HRB 030 080 650	3	1.5R	3	8	50	6
2HRB 030 100 650	3	1.5R	3	10	50	6
2HRB 030 120 650	3	1.5R	3	12	50	6
2HRB 030 160 660	3	1.5R	3	16	60	6
2HRB 030 200 660	3	1.5R	3	20	60	6
2HRB 030 250 660	3	1.5R	3	25	60	6
2HRB 030 300 675	3	1.5R	3	30	75	6
2HRB 030 350 675	3	1.5R	3	35	75	6
2HRB 030 400 675	3	1.5R	3	40	75	6
2HRB 030 450 6A0	3	1.5R	3	45	100	6

2 Flutes Hard Cut Rib Ball End Mills For Hardened Steels



Unit(mm)

Model Number	Cutting Dia. D	Radius Of BN R	Length Of Cut L1	Effective Length L2	Overall Length L	Shank dia d
2HRB 030 500 6A0	3	1.5R	3	50	100	6
2HRB 035 100 650	3.5	1.75R	3.5	10	50	6
2HRB 035 150 660	3.5	1.75R	3.5	15	60	6
2HRB 035 200 660	3.5	1.75R	3.5	20	60	6
2HRB 035 250 660	3.5	1.75R	3.5	25	60	6
2HRB 035 300 675	3.5	1.75R	3.5	30	75	6
2HRB 035 350 675	3.5	1.75R	3.5	35	75	6
2HRB 035 400 675	3.5	1.75R	3.5	40	75	6
2HRB 040 080 650	4	2R	4	8	50	6
2HRB 040 100 650	4	2R	4	10	50	6
2HRB 040 120 650	4	2R	4	12	50	6
2HRB 040 160 660	4	2R	4	16	60	6
2HRB 040 200 660	4	2R	4	20	60	6
2HRB 040 250 660	4	2R	4	25	60	6
2HRB 040 300 675	4	2R	4	30	75	6
2HRB 040 350 675	4	2R	4	35	75	6
2HRB 040 400 675	4	2R	4	40	75	6
2HRB 040 450 6A0	4	2R	4	45	100	6
2HRB 040 500 6A0	4	2R	4	50	100	6
2HRB 050 160 660	5	2.5R	6	16	60	6
2HRB 050 200 660	5	2.5R	6	20	60	6
2HRB 050 250 675	5	2.5R	6	25	75	6
2HRB 050 300 675	5	2.5R	6	30	75	6
2HRB 050 400 675	5	2.5R	6	40	75	6
2HRB 050 450 6A0	5	2.5R	6	45	100	6
2HRB 050 500 6A0	5	2.5R	6	50	100	6
2HRB 060 150 650	6	3R	10	15	50	6
2HRB 060 300 6A0	6	3R	10	30	100	6
2HRB 060 500 6C0	6	3R	10	50	120	6
2HRB 080 250 860	8	4R	12	25	60	8
2HRB 080 300 8A0	8	4R	12	30	100	8
2HRB 080 600 8C0	8	4R	12	60	120	8
2HRB 100 300 A75	10	5R	16	30	75	10
2HRB 100 450 AA0	10	5R	16	45	100	10
2HRB 100 600 AF0	10	5R	16	60	150	10
2HRB 120 300 C75	12	6R	18	30	75	12
2HRB 120 500 CA0	12	6R	18	50	100	12
2HRB 120 600 CF0	12	6R	18	60	150	12

ECO-CUT

WIDE-CUT

HARD-CUT

ALU-CUT

D-CUT

SUS CUT

MAGIC DRILLS