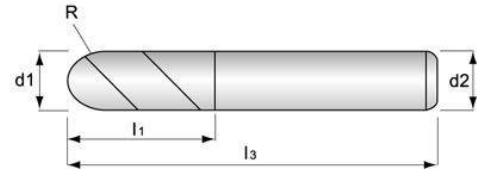




High Speed Cutting
& High Hard Cutting



Micro Diameter

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l1	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
MR2AL010	R 0.5	2	50	4
MR2AL015	R 0.75	3	50	4
MR2AL020	R 1.0	4	50	4
MR2AL025	R 1.25	5	50	4
MR2AL030	R 1.5	6	50	4
MR2AL035	R 1.75	7	50	4
MR2AL040	R 2.0	8	50	4
MR2AL045-6	R 2.25	9	50	6
MR2AL050-6	R 2.5	10	50	6
MR2AL055-6	R 2.75	11	50	6
MR2AL060-6	R 3.0	12	50	6
MR2AL065	R 3.25	12	60	8
MR2AL070	R 3.5	12	60	8
MR2AL075	R 3.75	14	60	8
MR2AL080	R 4.0	16	60	8
MR2AL090	R 4.5	18	75	10
MR2AL100	R 5.0	20	75	10
MR2AL120	R 6.0	24	75	12
MR2AL160	R 8.0	32	100	16
MR2AL200	R 10.0	40	100	20

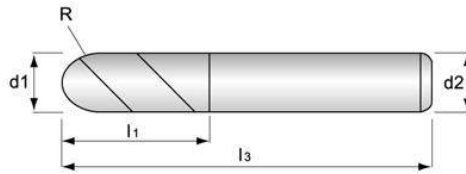
Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l1	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
MR2AL010-3	R 0.5	2	50	3
MR2AL015-3	R 0.75	3	50	3
MR2AL020-3	R 1.0	4	50	3
MR2AL025-3	R 1.25	5	50	3
MR2AL030-3	R 1.5	6	50	3
MR60AL010	R 0.5	2	50	6
MR60AL015	R 0.75	3	50	6
MR60AL020	R 1.0	4	50	6
MR60AL025	R 1.25	5	50	6
MR60AL030	R 1.5	6	50	6
MR60AL040	R 2.0	8	50	6

d1 (mm)	d1(mm) tolerance
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.01
R6	±0.015
R8	±0.02
R10	±0.02

Shank(mm) (h6)	d2(mm) tolerance
Ø 6	⁰ / _{-0.008}
Ø 8	⁰ / _{-0.008}
Ø 10	⁰ / _{-0.009}
Ø 12	⁰ / _{-0.011}
Ø 16	⁰ / _{-0.011}
Ø 20	⁰ / _{-0.013}



Micro Diameter



Type No. 型號	Diameter R	Flute Length 刃長 l ₁	O. A. L. 全長 l ₃	Shank Dia. 柄徑 d ₂
LR2AL010F	R 0.5	2	75	4
LR2AL015F	R 0.75	3	75	4
LR2AL020F	R 1	4	75	4
LR2AL030F	R 1.5	6	75	4
LR2AL030-3	R 1.5	6	75	3
LR2AL040F	R 2	8	75	4
LR2AL010-75-6	R 0.5	2	75	6
LR2AL015-75-6	R 0.75	3	75	6
LR2AL020-75-6	R 1	4	75	6
LR2AL030-75-6	R 1.5	6	75	6
LR2AL040-75-6	R 2	8	75	6
LR2AL050-75-6	R 2.5	10	75	6
LR2AL060-75-6	R 3	12	75	6
LR2AL080-75	R 4	16	75	8
LR2AL020-100-6	R 1	4	100	6
LR2AL030F-100	R 1.5	6	100	4
LR2AL030-100-3	R 1.5	6	100	3
LR2AL030-100-6	R 1.5	6	100	6
LR2AL040F-100	R 2	8	100	4
LR2AL040-100-6	R 2	8	100	6
LR2AL050-100-6	R 2.5	10	100	6
LR2AL060-100-6	R 3	12	100	6
LR2AL080-100	R 4	16	100	8
LR2AL100-100	R 5	20	100	10
LR2AL120-100	R 6	24	100	12
XLR2AL060-6	R 3	12	150	6
XLR2AL080	R 4	16	150	8
XLR2AL100	R 5	20	150	10
XLR2AL120	R 6	24	150	12
XLR2AL160	R 8	32	150	16
XLR2AL200	R 10	40	150	20



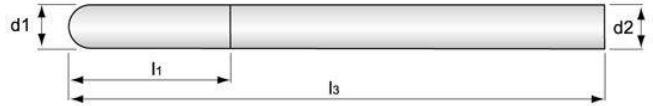
High Speed Cutting
& High Hard Cutting

d1 (mm)	d1(mm) tolerance
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.01
R6	±0.015
R8	±0.02
R10	±0.02

Shank(mm) (h6)	d2(mm) tolerance
Ø 6	0 -0.008
Ø 8	0 -0.008
Ø 10	0 -0.009
Ø 12	0 -0.011
Ø 16	0 -0.011
Ø 20	0 -0.013



極細微粒碳化鎢 4刃球型立銑刀
Micro Grain Carbide, 4-flute, Ball End Mills

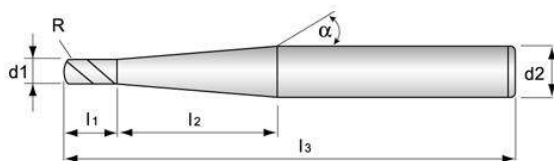


Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l1	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
MR4AL010	R 0.5	2	50	4
MR4AL015	R 0.75	3	50	4
MR4AL020	R 1	4	50	4
MR4AL030	R 1.5	6	50	4
MR4AL040	R 2	8	50	4
MR4AL050-6	R 2.5	10	50	6
MR4AL060-6	R 3	12	50	6
MR4AL080	R 4	16	60	8
MR4AL100	R 5	20	75	10
MR4AL120	R 6	24	75	12
MR4AL160	R 8	32	100	16
MR4AL200	R 10	40	100	20

High Speed Cutting
& High Hard Cutting

d1 (mm)	d1(mm) tolerance
R0.5	±0.01
R0.75	±0.01
R1.0	±0.01
R1.5	±0.01
R2.0	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.015
R6	±0.015
R8	±0.02
R10	±0.02

Shank(mm) (h6)	d2(mm) tolerance
Ø 4	0 -0.008
Ø 6	0 -0.008
Ø 8	0 -0.009
Ø 10	0 -0.011
Ø 12	0 -0.011
Ø 16	0 -0.011
Ø 20	0 -0.013



Micro Diameter

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l ₁	Taper Angle 斜頸 α	Taper Neck 斜頸長 l ₂	O. A. L. 全長 l ₃	Shank Dia. 柄徑 d2
MBN2AL0103-6	R 0.5	2	3°	32	75	6
MBN2AL0105-6	R 0.5	2	5°	32	75	6
MBN2AL0203-6	R 1.0	4	3°	27	100	6
MBN2AL0205-6	R 1.0	4	5°	27	100	6
MBN2AL0315-6	R 1.5	6	1.5°	35	100	6
MBN2AL0303-6	R 1.5	6	3°	35	100	6
MBN2AL0415-6	R 2.0	8	1.5°	28	100	6
MBN2AL0403-6	R 2.0	8	3°	28	100	6
MBN2AL0603	R 3.0	12	3°	32	100	8
MBN2AL0605	R 3.0	12	5°	35	100	10
MBN2AL0603B	R 3.0	12	3°	32	150	8
MBN2AL0605B	R 3.0	12	5°	35	150	10
MBN2AL0803	R 4.0	16	3°	36	100	10
MBN2AL0805	R 4.0	16	5°	39	100	12
MBN2AL0803B	R 4.0	16	3°	36	150	10
MBN2AL0805B	R 4.0	16	5°	39	150	12
MBN2AL1003	R 5.0	20	3°	40	100	12
MBN2AL1003B	R 5.0	20	3°	40	150	12
MBN2AL1205	R 6.0	24	5°	47	100	16
MRN2AL1205B	R 6.0	24	5°	47	150	16



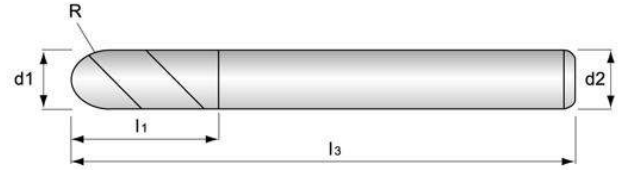
High Speed Cutting
& High Hard Cutting

d1 (mm)	d1 (mm) tolerance
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.01
R6	±0.015

Shank (mm) (h6)	d2 (mm) tolerance
Ø 6	0 -0.008
Ø 8	0 -0.008
Ø 10	0 -0.009
Ø 12	0 -0.011
Ø 16	0 -0.011



極細微粒碳化鎢 2刃球型立銑刀(鋁合金專用)
Micro Grain Carbide, 2-flute, Ball End Mills (for Aluminum Alloys Processing)



Micro Diameter

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l1	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
UR010	R 0.5	2	50	4
UR015	R 0.75	3	50	4
UR020	R 1.0	4	50	4
UR030	R 1.5	6	50	4
UR040	R 2.0	8	50	4
UR040-6	R 2.0	8	50	6
UR050	R 2.5	10	50	6
UR060	R 3.0	12	50	6
UR080	R 4.0	16	60	8
UR100	R 5.0	20	75	10
UR120	R 6.0	24	75	12
UR160	R 8.0	32	100	16
UR200	R 10.0	32	100	20

High Speed Cutting
& High Hard Cutting

d1 (mm)	d1(mm) tolerance
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.01
R6	±0.015
R8	±0.02
R10	±0.02

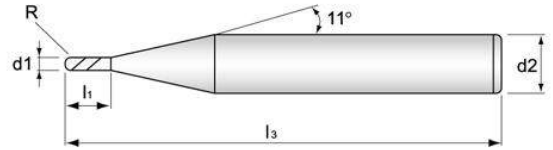
Shank(mm) (h6)	d2(mm) tolerance
Ø 6	⁰ _{-0.008}
Ø 8	⁰ _{-0.008}
Ø 10	⁰ _{-0.009}
Ø 12	⁰ _{-0.011}
Ø 16	⁰ _{-0.011}
Ø 20	⁰ _{-0.013}



極細微粒碳化鎢 微小徑 2刃球型立銑刀
Micro Grain Carbide, Micro Diameter Miniature, 2 - flute, Ball End Mills



High Speed Cutting
& High Hard Cutting

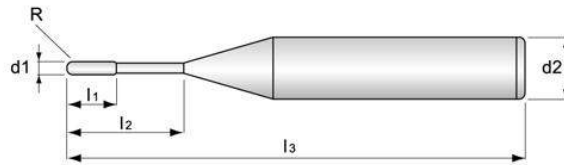


Micro Diameter

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l1	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
MR2002-3	R 0.10	0.4	50	3
MR2003-3	R 0.15	0.6	50	3
MR2004-3	R 0.20	0.8	50	3
MR2005-3	R 0.25	1.0	50	3
MR2006-3	R 0.30	1.2	50	3
MR2007-3	R 0.35	1.4	50	3
MR2008-3	R 0.40	1.6	50	3
MR2009-3	R 0.45	1.8	50	3
MR2002	R 0.10	0.4	50	4
MR2003	R 0.15	0.6	50	4
MR2004	R 0.20	0.8	50	4
MR2005	R 0.25	1.0	50	4
MR2006	R 0.30	1.2	50	4
MR2007	R 0.35	1.4	50	4
MR2008	R 0.40	1.6	50	4
MR2009	R 0.45	1.8	50	4
MR2012	R 0.60	2.4	50	4
MR2014	R 0.70	2.8	50	4
MR2016	R 0.80	3.2	50	4
MR2018	R 0.90	3.6	50	4

d1 (mm)	d1 (mm) tolerance
R0.1	±0.01
R0.15	±0.01
R0.2	±0.01
R.025	±0.01
R0.3	±0.01
R0.35	±0.01
R0.4	±0.01
R0.5	±0.01
R0.75	±0.01
R1.0	±0.01
R1.5	±0.01
R2.0	±0.01

Shank(mm) (h6)	d2(mm) tolerance
Ø 3	0 -0.006
Ø 4	0 -0.008



Micro Diameter

Type No. 型號	Diameter R徑 d1	Flute Length 刃長 l1	Effective Length 有效長 l2	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
HMR20402	R 0.2	0.6	2	50	4
HMR20404	R 0.2	0.6	4	50	4
HMR20502	R 0.25	0.8	2	50	4
HMR20504	R 0.25	0.8	4	50	4
HMR20506	R 0.25	0.8	6	50	4
HMR20602	R 0.3	1.0	2	50	4
HMR20604	R 0.3	1.0	4	50	4
HMR20606	R 0.3	1.0	6	50	4
HMR20608	R 0.3	1.0	8	50	4
HMR20804	R 0.4	1.2	4	50	4
HMR20806	R 0.4	1.2	6	50	4
HMR20808	R 0.4	1.2	8	50	4
HMR20810	R 0.4	1.2	10	50	4
HMR21004	R 0.5	1.2	4	50	4
HMR21006	R 0.5	1.2	6	50	4
HMR21008	R 0.5	1.2	8	50	4
HMR21010	R 0.5	1.2	10	50	4
HMR21012	R 0.5	1.2	12	50	4
HMR21504	R 0.75	1.7	4	50	4
HMR21506	R 0.75	1.7	6	50	4
HMR21508	R 0.75	1.7	8	50	4
HMR21510	R 0.75	1.7	10	50	4
HMR21512	R 0.75	1.7	12	50	4
HMR22006	R 1.0	2.2	6	50	4
HMR22008	R 1.0	2.2	8	50	4
HMR22010	R 1.0	2.2	10	50	4
HMR22012	R 1.0	2.2	12	50	4
HMR22014	R 1.0	2.2	14	50	4
HMR22016	R 1.0	2.2	16	50	4
HMR23008	R 1.5	3.2	8	50	4
HMR23010	R 1.5	3.2	10	50	4
HMR23012	R 1.5	3.2	12	50	4
HMR23014	R 1.5	3.2	14	50	4
HMR23016	R 1.5	3.2	16	75	4
HMR23020	R 1.5	3.2	20	75	4
HMR24012-6	R 2.0	4.2	12	75	6
HMR24014-6	R 2.0	4.2	14	75	6
HMR24016-6	R 2.0	4.2	16	75	6
HMR24020-6	R 2.0	4.2	20	75	6
HMR24025-6	R 2.0	4.2	25	75	6



High Speed Cutting
& High Hard Cutting

d1 (mm)	d1(mm) tolerance
R0.25	±0.01
R0.3	±0.01
R0.4	±0.01
R0.5	±0.01
R0.75	±0.01
R1.0	±0.01
R1.5	±0.01
R2.0	±0.01

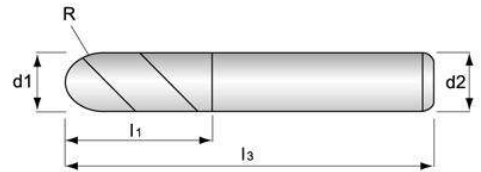
Shank(mm) (h6)	d2(mm) tolerance
Ø 4	0 -0.008
Ø 6	0 -0.008



極細微粒碳化鎢 2刃球型立銑刀
Micro Grain Carbide, 2-flute, Ball End Mills



High Speed Cutting
& High Hard Cutting



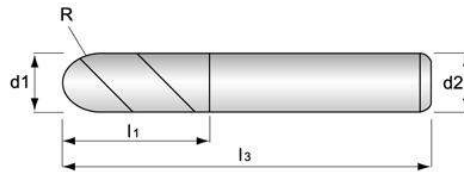
Micro Diameter

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l1	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
MR2010	R 0.5	2	50	4
MR2015	R 0.75	3	50	4
MR2020	R 1.0	4	50	4
MR2025	R 1.25	5	50	4
MR2030	R 1.5	6	50	4
MR2035	R 1.75	7	50	4
MR2040	R 2.0	8	50	4
MR2045-6	R 2.25	9	50	6
MR2050-6	R 2.5	10	50	6
MR2055-6	R 2.75	11	50	6
MR2060-6	R 3.0	12	50	6
MR2065	R 3.25	12	60	8
MR2070	R 3.5	12	60	8
MR2075	R 3.75	14	60	8
MR2080	R 4.0	16	60	8
MR2090	R 4.5	18	75	10
MR2100	R 5.0	20	75	10
MR2120	R 6.0	24	75	12
MR2160	R 8.0	32	100	16
MR2200	R 10.0	40	100	20

d1 (mm)	d1(mm) tolerance
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.01
R6	±0.015
R8	±0.02
R10	±0.02

Shank(mm) (h6)	d2(mm) tolerance
Ø 6	⁰ _{-0.008}
Ø 8	⁰ _{-0.008}
Ø 10	⁰ _{-0.009}
Ø 12	⁰ _{-0.011}
Ø 16	⁰ _{-0.011}
Ø 20	⁰ _{-0.013}

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l1	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
MR2010-3	R 0.5	2	50	3
MR2015-3	R 0.75	3	50	3
MR2020-3	R 1.0	4	50	3
MR2025-3	R 1.25	5	50	3
MR2030-3	R 1.5	6	50	3
MR2010-6	R 0.5	2	50	6
MR2015-6	R 0.75	3	50	6
MR2020-6	R 1.0	4	50	6
MR2030-6	R 1.5	6	50	6
MR2040-6	R 2.0	8	50	6



Micro Diameter

Type No. 型號	Diameter R	Flute Length 刃長 l ₁	O. A. L. 全長 l ₃	Shank Dia. 柄徑 d ₂
LR2010F	R 0.5	2	75	4
LR2015F	R 0.75	3	75	4
LR2020F	R 1	4	75	4
LR2030F	R 1.5	6	75	4
LR2040F	R 2	8	75	4
LR2030-3	R1.5	6	75	3
LR2010-75-6	R 0.5	2	75	6
LR2015-75-6	R 0.75	3	75	6
LR2020-75-6	R 1	4	75	6
LR2030-75-6	R 1.5	6	75	6
LR2040-75-6	R 2	8	75	6
LR2050-75-6	R 2.5	10	75	6
LR2060-75-6	R 3	12	75	6
LR2080-75	R 4	16	75	8
LR2030F-100	R1.5	6	100	4
LR2040F-100	R 2	8	100	4
LR2020-100-6	R1	4	100	6
LR2030-100-6	R1.5	6	100	6
LR2040-100-6	R 2	8	100	6
LR2050-100-6	R 2.5	10	100	6
LR2060-100-6	R 3	12	100	6
LR2080-100	R 4	16	100	8
LR2100-100	R 5	20	100	10
LR2120-100	R 6	24	100	12
XLR2060-6	R 3	12	150	6
XLR2080	R 4	16	150	8
XLR2100	R 5	20	150	10
XLR2120	R 6	24	150	12
XLR2160	R 8	32	150	16
XLR2200	R 10	40	150	20



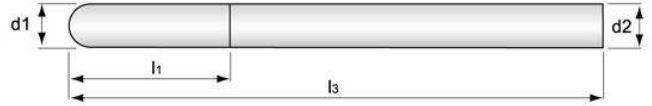
High Speed Cutting
& High Hard Cutting

d1 (mm)	d1 (mm) tolerance
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.01
R6	±0.015
R8	±0.02
R10	±0.02

Shank(mm) (h6)	d2(mm) tolerance
Ø 6	0 -0.008
Ø 8	0 -0.008
Ø 10	0 -0.009
Ø 12	0 -0.011
Ø 16	0 -0.011
Ø 20	0 -0.013



極細微粒碳化鎢 4刃球型立銑刀
Micro Grain Carbide, 4-flute, Ball End Mills



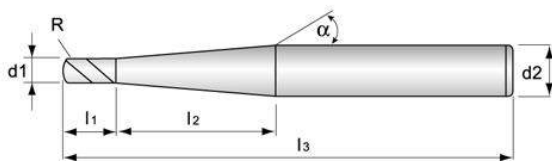
Micro Diameter

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l ₁	O. A. L. 全長 l ₃	Shank Dia. 柄徑 d2
MR4010	R 0.5	2	50	4
MR4015	R 0.75	3	50	4
MR4020	R 1	4	50	4
MR4030	R 1.5	6	50	4
MR4040	R 2	8	50	4
MR4050-6	R 2.5	10	50	6
MR4060-6	R 3	12	50	6
MR4080	R 4	16	60	8
MR4100	R 5	20	75	10
MR4120	R 6	24	75	12
MR4160	R 8	32	100	16
MR4200	R 10	40	100	20

High Speed Cutting
& High Hard Cutting

d1 (mm)	d1(mm) tolerance
R0.5	±0.01
R0.75	±0.01
R1.0	±0.01
R1.5	±0.01
R2.0	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.015
R6	±0.015
R8	±0.02
R10	±0.02

Shank(mm) (h6)	d2(mm) tolerance
Ø 4	⁰ _{-0.008}
Ø 6	⁰ _{-0.008}
Ø 8	⁰ _{-0.009}
Ø 10	⁰ _{-0.011}
Ø 12	⁰ _{-0.011}
Ø 16	⁰ _{-0.011}
Ø 20	⁰ _{-0.013}



Micro Diameter

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l ₁	Taper Angle 斜頸 α	Taper Neck 斜頸長 l ₂	O. A. L. 全長 l ₃	Shank Dia. 柄徑 d2
MBN20103-6	R 0.5	2	3°	32	75	6
MBN20105-6	R 0.5	2	5°	32	75	6
MBN20203-6	R 1.0	4	3°	27	100	6
MBN20205-6	R 1.0	4	5°	27	100	6
MBN20315-6	R 1.5	6	1.5°	35	100	6
MBN20303-6	R 1.5	6	3°	35	100	6
MBN20415-6	R 2.0	8	1.5°	28	100	6
MBN20403-6	R 2.0	8	3°	28	100	6
MBN20603	R 3.0	12	3°	32	100	8
MBN20605	R 3.0	12	5°	35	100	10
MBN20603	R 3.0	12	3°	32	150	8
MBN20605	R 3.0	12	5°	35	150	10
MBN20803	R 4.0	16	3°	36	100	10
MBN20805	R 4.0	16	5°	39	100	12
MBN20803	R 4.0	16	3°	36	150	10
MBN20805	R 4.0	16	5°	39	150	12
MBN21003	R 5.0	20	3°	40	100	12
MBN21003	R 5.0	20	3°	40	150	12
MBN21205	R 6.0	24	5°	47	100	16
MRN21205	R 6.0	24	5°	47	150	16



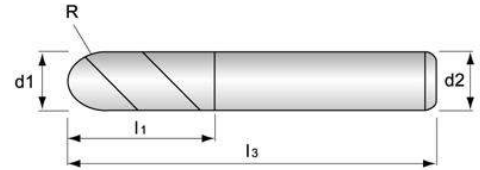
High Speed Cutting
& High Hard Cutting

d1 (mm)	d1(mm) tolerance
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.01
R6	±0.015

Shank(mm) (h6)	d2(mm) tolerance
Ø 6	0 -0.008
Ø 8	0 -0.008
Ø 10	0 -0.009
Ø 12	0 -0.011
Ø 16	0 -0.011



極細微粒碳化鎢 2刃球型立銑刀 (高速高硬度專用刀)
Micro Grain Carbide, 2-flute, Ball End Mills (Sword for High-speed and High-hardness)



Micro Diameter

Type No. 型號	Diameter 刃徑 d1	Flute Length 刃長 l1	O. A. L. 全長 l3	Shank Dia. 柄徑 d2
MR2010G	R 0.5	2	50	4
MR2015G	R 0.75	3	50	4
MR2020G	R 1.0	4	50	4
MR2025G	R 1.25	5	50	4
MR2030G	R 1.5	6	50	4
MR2035G	R 1.75	7	50	4
MR2040G	R 2.0	8	50	4
MR2045G	R 2.25	9	50	6
MR2050G	R 2.5	10	50	6
MR2055G	R 2.75	11	50	6
MR2060G	R 3.0	12	50	6
MR2065G	R 3.25	12	60	8
MR2070G	R 3.5	12	60	8
MR2075G	R 3.75	14	60	8
MR2080G	R 4.0	16	60	8
MR2090G	R 4.5	18	75	10
MR2100G	R 5.0	20	75	10
MR2120G	R 6.0	24	75	12
MR2160G	R 8.0	32	100	16
MR2200G	R 10.0	40	100	20

High Speed Cutting
& High Hard Cutting

d1 (mm)	d1(mm) tolerance
R1	±0.01
R1.5	±0.01
R2	±0.01
R2.5	±0.01
R3	±0.01
R4	±0.01
R5	±0.01
R6	±0.015
R8	±0.02
R10	±0.02

Shank(mm) (h6)	d2(mm) tolerance
Ø 4	0 -0.008
Ø 6	0 -0.008
Ø 8	0 -0.008
Ø 10	0 -0.009
Ø 12	0 -0.011
Ø 16	0 -0.011
Ø 20	0 -0.013