

# JABIL CUTTING TOOLS

**Made for Professionals  
by Professionals**

As demand for quality precision tools pave the way for more advanced innovations, Jabil Cutting Tools offer specialized carbide cutting tools for the discerning professional. We offer quality at a competitive price supported by best-in-class service, capabilities, expertise and scale.



**MOLD/DIE STEEL SERIES**

	ITEM	Flutes	Helix	Mill Dia.		Page
				(Min)	(Max)	
	Carbide End Mills - Square Type 2 Flutes - Miniature	2	30-35	0.2	0.9	7
	Carbide End Mills - Square Type 2 Flutes	2	30-35	1	20	8
	Carbide End Mills - Square Type 4 Flutes	4	35	1	20	9
	Carbide End Mills - Square 2 Flutes - Decimal Diameter	2	35	1.1	5.9	10~11
	Carbide End Mills - Square 4 Flutes - Decimal Diameter	4	35	6.1	7.9	12
	Carbide End Mills - Square Type 2 Flutes - Long Shank	2	35	2	20	13
	Carbide End Mills - Square Type 4 Flutes - Long Shank	4	35	2	20	13
	Carbide End Mills - Square Type 2 Flutes - Long Shank & Long Cutting Length	2	35	2	20	14
	Carbide End Mills - Square Type 4 Flutes - Long Shank & Long Cutting Length	4	35	2	20	14
	Carbide End Mills - Square Type 2 Flutes - Long Neck	2	35	1	4	15~16
	Carbide End Mills - Square Type 2 Flutes - Taper Series	2	35	1	6	17~18
	Carbide End Mills - Square Type 3 Flutes - AR Trench	3	45	3	20	19
	Carbide End Mills - Square Type 4 Flutes - AR Trench	4	45	1	20	19
	Carbide End Mills - Square Type 4 Flutes - R Trench	2	45	1	20	20
	Carbide End Mills - Ball Nose Type 2 Flutes - Miniature	2	30	0.2	0.9	20

	ITEM	Flutes	Helix	Mill Dia.		Page
				(Min)	(Max)	
	Carbide End Mills - Ball Nose Type 2 Flutes	2	30	1	20	21
	Carbide End Mills - Ball Nose Type 4 Flutes	4	30	2	16	22
	Carbide End Mills - Ball Nose Type 2 Flutes - Long Shank	2	30	1	20	23
	Carbide End Mills - Ball Nose Type 4 Flutes - Long Shank	4	30	2	16	24
	Carbide End Mills - Ball Nose Type 2 Flutes - Extra Long Shank	2	30	2	20	24
	Carbide End Mills - Ball Nose Type 2 Flutes - Long Neck	2	30	0.2	8	25~26
	Carbide End Mills - Ball Nose Type 2 Flutes - Taper Series	2	30	2.24	6.64	26
	Carbide End Mills - Corner Radius Type 2 Flutes	2	35	1	12	27
	Carbide End Mills - Corner Radius Type 4 Flutes	4	35	1	12	28~29
	Carbide End Mills - Corner Radius Type 4 Flutes - Short Cutting Length	4	35	3	12	30
	Carbide End Mills - Square Type 2 Flutes - Miniature (High Hardness)	2	35	0.2	0.9	31
	Carbide End Mills - Square Type 2 Flutes (High Hardness)	2	35	1	12	32
	Carbide End Mills - Square Type 4 Flutes (High Hardness)	4	35	1	12	33
	Carbide End Mills - Square Type 2 Flutes - Long Neck (High Hardness)	2	35	0.5	4	34~35
	Carbide End Mills - Square Type 6/8 Flutes (High Hardness)	6-8	45	6	25	36



ITEM	Flutes	Helix	Mill Dia.		Page
			(Min)	(Max)	
Carbide End Mills - Ball Nose Type 2 Flutes - Miniature (High Hardness)	2	30	0.2	0.9	36
Carbide End Mills - Ball Nose Type 2 Flutes (High Hardness)	2	30	1	12	37
Carbide End Mills - Ball Nose Type 4 Flutes (High Hardness)	4	30	2	12	38
Carbide End Mills - Ball Nose Type 2 Flutes - Long Shank (High Hardness)	2	30	1	12	38
Carbide End Mills - Ball Nose Type 2 Flutes - Long Neck (High Hardness)	2	30	0.4	4.8	39
Carbide End Mills - Corner Radius Type 2 Flutes (High Hardness)	2	35	1	12	40
Carbide End Mills - Corner Radius Type 4 Flutes (High Hardness)	4	35	1	12	41
Carbide End Mills - Corner Radius Type 4 Flutes - Long Neck (High Hardness)	4	35	2	12	42

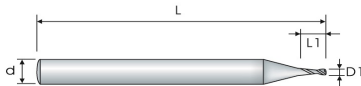


# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes

Miniature



Mill Dia. (D1) Up to	Tolerance (mm)
0.9	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	D1	L1	M	L	d	F	Helix°
	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MSC-0020-004B21	0.2	0.4	0.4	38	3	2	35°
MSC-0025-005B21	0.25	0.5	0.5	38	3	2	35°
MSC-0030-006B21	0.3	0.6	0.6	38	3	2	35°
MSC-0035-007B21	0.35	0.7	0.7	38	3	2	35°
MSC-0040-008B21	0.4	0.8	0.8	38	3	2	35°
MSC-0040-020C22	0.4	0.6	2	45	4	2	30°
MSC-0040-040C22	0.4	0.6	4	45	4	2	30°
MSC-0050-010B21	0.5	1	1	38	3	2	35°
MSC-0060-012B21	0.6	1.2	1.2	38	3	2	35°
MSC-0060-020C22	0.6	0.9	2	45	4	2	30°
MSC-0070-014B21	0.7	1.4	1.4	38	3	2	35°
MSC-0080-016B21	0.8	1.6	1.6	38	3	2	35°
MSC-0080-040C22	0.8	1.2	4	45	4	2	30°
MSC-0090-018B21	0.9	1.8	1.8	38	3	2	35°
MSC-0020-004C21	0.2	0.4	0.4	50	4	2	35°
MSC-0030-006C21	0.3	0.6	0.6	50	4	2	35°
MSC-0040-008C21	0.4	0.8	0.8	50	4	2	35°
MSC-0050-010C21	0.5	1	1	50	4	2	35°
MSC-0060-012C21	0.6	1.2	1.2	50	4	2	35°
MSC-0070-014C21	0.7	1.4	1.4	50	4	2	35°
MSC-0080-016C21	0.8	1.6	1.6	50	4	2	35°
MSC-0080-012C22	0.8	1.2	4	50	4	2	30°
MSC-0090-018C21	0.9	1.8	1.8	50	4	2	35°

### End Mill For General Steels And Metals

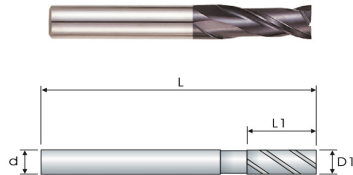
● Excellent ○ Good

Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
HB225~325	HRC~50	HRC~55	HRC~60						
●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes



Mill Dia.(D1) Up to	Tolerance [mm]
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	M	L	d	F	Helix°
	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MSC-0100-030C21	1	3	3	50	4	2	35°
MSC-0150-030C21	1.5	3	3	50	4	2	35°
MSC-0200-060C21	2	6	6	50	4	2	35°
MSC-0250-060C21	2.5	6	6	50	4	2	35°
MSC-0300-090C21	3	9	9	50	4	2	35°
MSC-0350-090C21	3.5	9	9	50	4	2	35°
MSC-0400-120C21	4	12	12	50	4	2	35°
MSC-0200-060E21	2	6	6	50	6	2	35°
MSC-0250-060E21	2.5	6	6	50	6	2	35°
MSC-0300-090E21	3	9	9	50	6	2	35°
MSC-0350-090E21	3.5	9	9	50	6	2	35°
MSC-0400-120E21	4	12	12	50	6	2	35°
MSC-0450-120E21	4.5	12	12	50	6	2	35°
MSC-0500-150E21	5	15	15	50	6	2	35°
MSC-0550-150E21	5.5	15	15	50	6	2	35°
MSC-0600-180E21	6	18	18	50	6	2	35°
MSC-0650-200G21	6.5	20	20	60	8	2	35°
MSC-0700-200G21	7	20	20	60	8	2	35°
MSC-0750-200G21	7.5	20	20	60	8	2	35°
MSC-0800-240G21	8	24	24	60	8	2	35°
MSC-0800-200G22	8	20	20	60	8	2	30°
MSC-0850-240H21	8.5	24	24	75	10	2	35°
MSC-0900-270H21	9	27	27	75	10	2	35°
MSC-0950-270H21	9.5	27	27	75	10	2	35°
MSC-1000-300H21	10	30	30	75	10	2	35°
MSC-1050-300I21	10.5	30	30	75	12	2	35°
MSC-1100-300I21	11	30	30	75	12	2	35°
MSC-1150-300I21	11.5	30	30	75	12	2	35°
MSC-1200-300I21	12	30	30	75	12	2	35°
MSC-1500-400J21	15	40	40	100	16	2	35°
MSC-1600-400J21	16	40	40	100	16	2	35°
MSC-2000-450K21	20	45	45	100	20	2	35°

### End Mill For General Steels And Metals

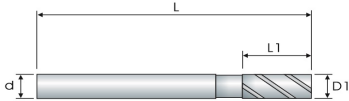
● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 4 Flutes



Mill Dia.(D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	M	L	d	F	Helix°
	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MSC-0100-030C41	1	3	3	50	4	4	35°
MSC-0150-030C41	1.5	3	3	50	4	4	35°
MSC-0200-060C41	2	6	6	50	4	4	35°
MSC-0250-060C41	2.5	6	6	50	4	4	35°
MSC-0300-090C41	3	9	9	50	4	4	35°
MSC-0350-090C41	3.5	9	9	50	4	4	35°
MSC-0400-120C41	4	12	12	50	4	4	35°
MSC-0200-060E41	2	6	6	50	6	4	35°
MSC-0250-060E41	2.5	6	6	50	6	4	35°
MSC-0300-090E41	3	9	9	50	6	4	35°
MSC-0350-090E41	3.5	9	9	50	6	4	35°
MSC-0400-120E41	4	12	12	50	6	4	35°
MSC-0450-120E41	4.5	12	12	50	6	4	35°
MSC-0500-150E41	5	15	15	50	6	4	35°
MSC-0550-150E41	5.5	15	15	50	6	4	35°
MSC-0600-180E41	6	18	18	50	6	4	35°
MSC-0650-180G41	6.5	18	18	60	8	4	35°
MSC-0700-200G41	7	20	20	60	8	4	35°
MSC-0750-200G41	7.5	20	20	60	8	4	35°
MSC-0800-240G41	8	24	24	60	8	4	35°
MSC-0850-240H41	8.5	24	24	75	10	4	35°
MSC-0900-270H41	9	27	27	75	10	4	35°
MSC-0950-270H41	9.5	27	27	75	10	4	35°
MSC-1000-300H41	10	30	30	75	10	4	35°
MSC-1050-300I41	10.5	30	30	75	12	4	35°
MSC-1100-330I41	11	33	33	75	12	4	35°
MSC-1150-330I41	11.5	33	33	75	12	4	35°
MSC-1200-360I41	12	36	36	75	12	4	35°
MSC-1600-450J41	16	45	45	100	16	4	35°
MSC-2000-450K41	20	45	45	100	20	4	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

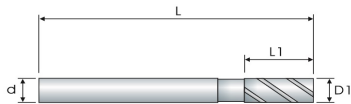
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes

Decimal Diameter



Mill Dia. (D1)	Tolerance [mm]
Up to 6	+0/-0.02
8	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSC-0110-030C21	1.1	3	50	4	2	35°
MSC-0120-030C21	1.2	3	50	4	2	35°
MSC-0130-040C21	1.3	4	50	4	2	35°
MSC-0140-040C21	1.4	4	50	4	2	35°
MSC-0160-040C21	1.6	4	50	4	2	35°
MSC-0170-050C21	1.7	5	50	4	2	35°
MSC-0180-050C21	1.8	5	50	4	2	35°
MSC-0190-050C21	1.9	5	50	4	2	35°
MSC-0210-060C21	2.1	6	50	4	2	35°
MSC-0220-060C21	2.2	6	50	4	2	35°
MSC-0230-060C21	2.3	6	50	4	2	35°
MSC-0240-060C21	2.4	6	50	4	2	35°
MSC-0260-070C21	2.6	7	50	4	2	35°
MSC-0270-070C21	2.7	7	50	4	2	35°
MSC-0280-070C21	2.8	7	50	4	2	35°
MSC-0290-080C21	2.9	8	50	4	2	35°
MSC-0310-080C21	3.1	8	50	4	2	35°
MSC-0320-080C21	3.2	8	50	4	2	35°
MSC-0330-090C21	3.3	9	50	4	2	35°
MSC-0340-090C21	3.4	9	50	4	2	35°
MSC-0360-090C21	3.6	9	50	4	2	35°
MSC-0370-100C21	3.7	10	50	4	2	35°
MSC-0380-100C21	3.8	10	50	4	2	35°
MSC-0390-100C21	3.9	10	50	4	2	35°
MSC-0410-120E21	4.1	12	50	6	2	35°
MSC-0420-120E21	4.2	12	50	6	2	35°
MSC-0430-120E21	4.3	12	50	6	2	35°
MSC-0440-130E21	4.4	13	50	6	2	35°
MSC-0460-130E21	4.6	13	50	6	2	35°
MSC-0470-130E21	4.7	13	50	6	2	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○



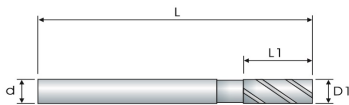
# CARBIDE END MILLS

## M SERIES

(CONTINUATION)

### Square Type 2 Flutes

Decimal Diameter



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
8	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSC-0480-130E21	4.8	13	50	6	2	35°
MSC-0490-130E21	4.9	13	50	6	2	35°
MSC-0510-130E21	5.1	13	50	6	2	35°
MSC-0520-130E21	5.2	13	50	6	2	35°
MSC-0540-130E21	5.3	13	50	6	2	35°
MSC-0540-130E21	5.4	13	50	6	2	35°
MSC-0560-140E21	5.6	14	50	6	2	35°
MSC-0570-140E21	5.7	14	50	6	2	35°
MSC-0580-140E21	5.8	14	50	6	2	35°
MSC-0590-140E21	5.9	14	50	6	2	35°
MSC-0610-150G21	6.1	15	60	8	2	35°
MSC-0620-150G21	6.2	15	60	8	2	35°
MSC-0630-150G21	6.3	15	60	8	2	35°
MSC-0640-150G21	6.4	15	60	8	2	35°
MSC-0660-160G21	6.6	16	60	8	2	35°
MSC-0670-160G21	6.7	16	60	8	2	35°
MSC-0680-160G21	6.8	16	60	8	2	35°
MSC-0690-180G21	6.9	16	60	8	2	35°
MSC-0710-180G21	7.1	18	60	8	2	35°
MSC-0720-180G21	7.2	18	60	8	2	35°
MSC-0730-180G21	7.3	18	60	8	2	35°
MSC-0740-180G21	7.4	18	60	8	2	35°
MSC-0760-180G21	7.6	18	60	8	2	35°
MSC-0770-180G21	7.7	18	60	8	2	35°
MSC-0780-180G21	7.8	18	60	8	2	35°
MSC-0790-180G21	7.9	18	60	8	2	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

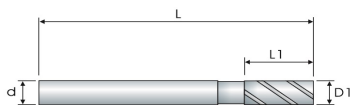
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 4 Flutes

Decimal Diameter



Mill Dia.(D1)	Tolerance (mm)
Up to 6	+0/-0.02
8	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSC-0610-150G41	6.1	15	60	8	4	35°
MSC-0620-150G41	6.2	15	60	8	4	35°
MSC-0630-150G41	6.3	15	60	8	4	35°
MSC-0640-150G41	6.4	15	60	8	4	35°
MSC-0660-160G41	6.6	16	60	8	4	35°
MSC-0670-160G41	6.7	16	60	8	4	35°
MSC-0680-160G41	6.8	16	60	8	4	35°
MSC-0690-180G41	6.9	18	60	8	4	35°
MSC-0710-180G41	7.1	18	60	8	4	35°
MSC-0720-180G41	7.2	18	60	8	4	35°
MSC-0730-180G41	7.3	18	60	8	4	35°
MSC-0740-180G41	7.4	18	60	8	4	35°
MSC-0760-180G41	7.6	18	60	8	4	35°
MSC-0770-180G41	7.7	18	60	8	4	35°
MSC-0780-180G41	7.8	18	60	8	4	35°
MSC-0790-180G41	7.9	18	60	8	4	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

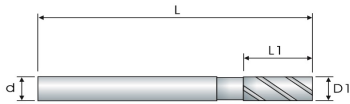
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes

Long Shank



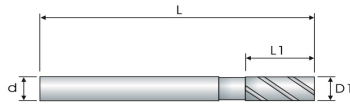
Mill Dia.(D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSL-0200-060E21	2	6	60	6	2	35°
MSL-0300-090E21	3	9	60	6	2	35°
MSL-0400-120E21	4	12	60	6	2	35°
MSL-0500-150E21	5	15	75	6	2	35°
MSL-0600-180E21	6	18	75	6	2	35°
MSL-0800-240G21	8	24	100	8	2	35°
MSL-1000-300H21	10	30	100	10	2	35°
MSL-1200-300I21	12	30	100	12	2	35°
MSL-1600-450J21	16	45	150	16	2	35°
MSL-2000-500K21	20	50	150	20	2	35°

### Square Type 4 Flutes

Long Shank



Mill Dia.(D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSL-0200-060E41	2	6	60	6	4	35°
MSL-0300-090E41	3	9	60	6	4	35°
MSL-0400-120E41	4	12	60	6	4	35°
MSL-0500-150E41	5	15	75	6	4	35°
MSL-0600-180E41	6	18	75	6	4	35°
MSL-0800-240G41	8	24	100	8	4	35°
MSL-1000-300H41	10	30	100	10	4	35°
MSL-1200-300I41	12	30	100	12	4	35°
MSL-1600-450J41	16	45	150	16	4	35°
MSL-2000-450K41	20	45	150	20	4	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

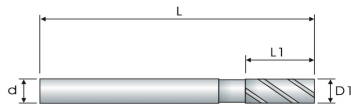
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes

Long Shank & Long Cutting Length



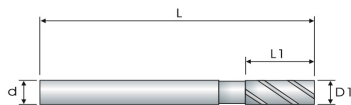
Mill Dia.(D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSL-0200-100E21	2	10	60	6	2	35°
MSL-0300-150E21	3	15	60	6	2	35°
MSL-0400-200E21	4	20	60	6	2	35°
MSL-0500-250E21	5	25	75	6	2	35°
MSL-0600-300E21	6	30	75	6	2	35°
MSL-0800-400G21	8	40	100	8	2	35°
MSL-1000-500H21	10	50	100	10	2	35°
MSL-1000-450H21	12	45	100	12	2	35°
MSL-1600-700J21	16	70	150	16	2	35°
MSL-2000-750K21	20	75	150	20	2	35°

### Square Type 4 Flutes

Long Shank & Long Cutting Length



Mill Dia.(D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSL-0200-100E41	2	10	60	6	4	35°
MSL-0300-150E41	3	15	60	6	4	35°
MSL-0400-200E41	4	20	60	6	4	35°
MSL-0500-250E41	5	25	75	6	4	35°
MSL-0600-300E41	6	30	75	6	4	35°
MSL-0800-400G41	8	40	100	8	4	35°
MSL-1000-500H41	10	50	100	10	4	35°
MSL-1200-500I41	12	50	100	12	4	35°
MSL-1600-700J41	16	70	150	16	4	35°
MSL-2000-750K41	20	75	150	20	4	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

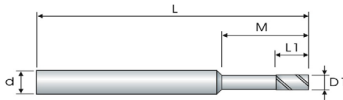
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes

Long Neck



Mill Dia. [D1] Up to	Tolerance [mm]
4	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	D1	L1	M	L	d	F	Helix°
	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MSL-0100-060C21	1	1.5	6	50	4	2	35°
MSL-0100-080C21	1	1.5	8	50	4	2	35°
MSL-0100-100C21	1	1.5	10	50	4	2	35°
MSL-0100-120C21	1	1.5	12	50	4	2	35°
MSL-0120-060C21	1.2	2	6	50	4	2	35°
MSL-0120-080C21	1.2	2	8	50	4	2	35°
MSL-0120-100C21	1.2	2	10	50	4	2	35°
MSL-0120-120C21	1.2	2	12	50	4	2	35°
MSL-0150-060C21	1.5	2.5	6	50	4	2	35°
MSL-0150-080C21	1.5	2.5	8	50	4	2	35°
MSL-0150-100C21	1.5	2.5	10	50	4	2	35°
MSL-0150-120C21	1.5	2.5	12	50	4	2	35°
MSL-0150-160C21	1.5	2.5	16	60	4	2	35°
MSL-0180-080C21	1.8	3	8	50	4	2	35°
MSL-0180-160C21	1.8	3	16	60	4	2	35°
MSL-0200-060C21	2	3	6	50	4	2	35°
MSL-0200-080C21	2	3	8	50	4	2	35°
MSL-0200-100C21	2	3	10	50	4	2	35°
MSL-0200-120C21	2	3	12	50	4	2	35°
MSL-0200-160C21	2	3	16	60	4	2	35°
MSL-0200-200C21	2	3	20	60	4	2	35°
MSL-0250-120C21	2.5	3.5	12	50	4	2	35°
MSL-0250-200C21	2.5	3.5	20	60	4	2	35°
MSL-0300-100E21	3	4.5	10	50	6	2	35°
MSL-0300-120E21	3	4.5	12	50	6	2	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
●	●	●				○		○	○	○



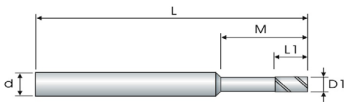
# CARBIDE END MILLS

## M SERIES

(CONTINUATION)

### Square Type 2 Flutes

Long Neck



Mill Dia.(D1) Up to	Tolerance (mm)
4	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	D1	L1	M	L	d	F	Helix°
	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MSL-0300-160E21	3	4.5	16	60	6	2	35°
MSL-0300-200E21	3	4.5	20	60	6	2	35°
MSL-0300-140E22	3	4	14	50	6	2	35°
MSL-0300-200E22	3	4	20	45	6	2	35°
MSL-0300-080E22	3	4	8	45	6	2	35°
MSL-0400-160E21	4	6	16	60	6	2	35°
MSL-0400-200E21	4	6	20	60	6	2	35°
MSL-0400-250E21	4	6	25	60	6	2	35°
MSL-0400-300E21	4	6	30	75	6	2	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

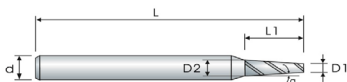
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes

Taper Series



■ Shank Dia. Tolerance: h6

Part number	D1	CA	L1	D2	L	d	F	Helix°
	Mill Dia.	Taper Angle	Flute Length	Mill Dia. 2	Overall Length	Shank Dia.	No. of Flute	
MSC-0100-107C21	1	0.5	4	1.07	50	4	2	35°
MSC-0100-114C21	1	1	4	1.14	50	4	2	35°
MSC-0100-121C21	1	1.5	4	1.21	50	4	2	35°
MSC-0100-128C21	1	2	4	1.28	50	4	2	35°
MSC-0100-142C21	1	3	4	1.42	50	4	2	35°
MSC-0100-170C21	1	5	4	1.7	50	4	2	35°
MSC-0150-159C21	1.5	0.5	5	1.59	50	4	2	35°
MSC-0150-167C21	1.5	1	5	1.67	50	4	2	35°
MSC-0150-176C21	1.5	1.5	5	1.76	50	4	2	35°
MSC-0150-185C21	1.5	2	5	1.85	50	4	2	35°
MSC-0150-203C21	1.5	3	5	2.03	50	4	2	35°
MSC-0150-237C21	1.5	5	5	2.37	50	4	2	35°
MSC-0200-210C21	2	0.5	6	2.1	50	4	2	35°
MSC-0200-221C21	2	1	6	2.21	50	4	2	35°
MSC-0200-231C21	2	1.5	6	2.31	50	4	2	35°
MSC-0200-242C21	2	2	6	2.42	50	4	2	35°
MSC-0200-263C21	2	3	6	2.63	50	4	2	35°
MSC-0200-305C21	2	5	6	3.05	50	4	2	35°
MSC-0250-264C21	2.5	0.5	8	2.64	50	4	2	35°
MSC-0250-278C21	2.5	1	8	2.78	50	4	2	35°
MSC-0250-292C21	2.5	1.5	8	2.92	50	4	2	35°
MSC-0250-306C21	2.5	2	8	3.06	50	4	2	35°
MSC-0250-334C21	2.5	3	8	3.34	50	4	2	35°
MSC-0250-390C21	2.5	5	8	3.9	50	4	2	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

(CONTINUATION)

### Square Type 2 Flutes

Taper Series



■ Shank Dia. Tolerance: h6

Part number	D1	CA	L1	D2	L	d	F	Helix°
	Mill Dia.	Taper Angle	Flute Length	Mill Dia. 2	Overall Length	Shank Dia.	No. of Flute	
MSC-0300-317E21	3	0.5	10	3.17	50	6	2	35°
MSC-0300-335E21	3	1	10	3.35	50	6	2	35°
MSC-0300-352E21	3	1.5	10	3.52	50	6	2	35°
MSC-0300-370E21	3	2	10	3.7	50	6	2	35°
MSC-0300-405E21	3	3	10	4.05	50	6	2	35°
MSC-0300-475E21	3	5	10	4.75	50	6	2	35°
MSC-0400-426E21	4	0.5	15	4.26	50	6	2	35°
MSC-0400-452E21	4	1	15	4.52	50	6	2	35°
MSC-0400-479E21	4	1.5	15	4.79	50	6	2	35°
MSC-0400-505E21	4	2	15	5.05	50	6	2	35°
MSC-0400-557E21	4	3	15	5.57	50	6	2	35°
MSC-0400-662G21	4	5	15	6.62	60	8	2	35°
MSC-0500-553G21	5	0.5	20	5.53	60	8	2	35°
MSC-0500-580G21	5	1	20	5.8	60	8	2	35°
MSC-0500-605G21	5	1.5	20	6.05	60	8	2	35°
MSC-0500-640G21	5	2	20	6.4	60	8	2	35°
MSC-0500-710G21	5	3	20	7.1	60	8	2	35°
MSC-0500-850H21	5	5	20	8.5	75	10	2	35°
MSC-0600-635G21	6	0.5	20	6.35	60	8	2	35°
MSC-0600-670G21	6	1	20	6.7	60	8	2	35°
MSC-0600-705G21	6	1.5	20	7.05	60	8	2	35°
MSC-0600-740G21	6	2	20	7.4	60	8	2	35°
MSC-0600-810H21	6	3	20	8.1	75	10	2	35°
MSC-0600-950H21	6	5	20	9.5	75	10	2	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 3 Flutes

AR Trench



Mill Dia. [D1] Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSA-0100-030C31	1	3	50	4	3	45°
MSA-0200-060C31	2	6	50	4	3	45°
MSA-0300-090C31	3	9	50	4	3	45°
MSA-0400-120C31	4	12	50	4	3	45°
MSA-0500-150E31	5	15	50	6	3	45°
MSA-0600-180E31	6	18	50	6	3	45°
MSA-0800-240G31	8	24	60	8	3	45°
MSA-1000-300H31	10	30	75	10	3	45°
MSA-1200-360I31	12	36	75	12	3	45°
MSA-1600-450J31	16	45	100	16	3	45°
MSA-2000-450K31	20	45	100	20	3	45°

### Square Type 4 Flutes

AR Trench



Mill Dia. [D1] Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSA-0100-030C41	1	3	50	4	4	45°
MSA-0200-060C41	2	6	50	4	4	45°
MSA-0300-090C41	3	9	50	4	4	45°
MSA-0400-120C41	4	12	50	4	4	45°
MSA-0500-150E41	5	15	50	6	4	45°
MSA-0600-180E41	6	18	50	6	4	45°
MSA-0800-240G41	8	24	60	8	4	45°
MSA-1000-300H41	10	30	75	10	4	45°
MSA-1200-360I41	12	36	75	12	4	45°
MSA-1600-450J41	16	45	100	16	4	45°
MSA-2000-450K41	20	45	100	20	4	45°

### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
●	●	●				●		○	○	○

# CARBIDE END MILLS

## M SERIES

### Square Type 4 Flutes

R Trench



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSR-0100-025C41	1	2.5	50	4	4	45°
MSR-0200-050C41	2	5	50	4	4	45°
MSR-0300-075C41	3	7.5	50	4	4	45°
MSR-0400-100C41	4	10	50	4	4	45°
MSR-0500-125E41	5	12.5	50	6	4	45°
MSR-0600-150E41	6	15	50	6	4	45°
MSR-0800-200G41	8	20	60	8	4	45°
MSR-1000-250H41	10	25	75	10	4	45°
MSR-1200-300I41	12	30	75	12	4	45°
MSR-1600-400J41	16	40	100	16	4	45°
MSR-2000-500K41	20	50	100	20	4	45°

### Ball Nose Type 2 Flutes

Miniature



Mill Dia. (D1) Up to	Tolerance (mm)
0.9	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBC-0020-004C21	0.1R	0.2	0.4	50	4	2	30°
MBC-0030-006C21	0.15R	0.3	0.6	50	4	2	30°
MBC-0040-008C21	0.2R	0.4	0.8	50	4	2	30°
MBC-0050-010C21	0.25R	0.5	1	50	4	2	30°
MBC-0060-012C21	0.3R	0.6	1.2	50	4	2	30°
MBC-0070-014C21	0.35R	0.7	1.4	50	4	2	30°
MBC-0080-016C21	0.4R	0.8	1.6	50	4	2	30°
MBC-0090-018C21	0.45R	0.9	1.8	50	4	2	30°

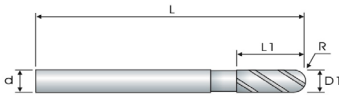
### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○



### Ball Nose Type 2 Flutes



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBC-0100-020C21	0.5R	1	2	50	4	2	30°
MBC-0120-024C21	0.6R	1.2	2.4	50	4	2	30°
MBC-0140-028C21	0.7R	1.4	2.8	50	4	2	30°
MBC-0150-030C21	0.75R	1.5	3	50	4	2	30°
MBC-0200-040C21	1R	2	4	50	4	2	30°
MBC-0250-050C21	1.25R	2.5	5	50	4	2	30°
MBC-0300-060C21	1.5R	3	6	50	4	2	30°
MBC-0350-070C21	1.75R	3.5	7	50	4	2	30°
MBC-0400-080C21	2R	4	8	50	4	2	30°
MBC-0200-040E21	1R	2	4	50	6	2	30°
MBC-0250-050E21	1.25R	2.5	5	50	6	2	30°
MBC-0300-060E21	1.5R	3	6	50	6	2	30°
MBC-0350-070E21	1.75R	3.5	7	50	6	2	30°
MBC-0400-080E21	2R	4	8	50	6	2	30°
MBC-0500-100E21	2.5R	5	10	50	6	2	30°
MBC-0600-120E21	3R	6	12	50	6	2	30°
MBC-0700-140G21	3.5R	7	14	60	8	2	30°
MBC-0800-160G21	4R	8	16	60	8	2	30°
MBC-1000-200H21	5R	10	20	75	10	2	30°
MBC-1200-240I21	6R	12	24	75	12	2	30°
MBC-1600-320J21	8R	16	32	100	16	2	30°
MBC-2000-400K21	10R	20	40	100	20	2	30°

### End Mill For General Steels And Metals

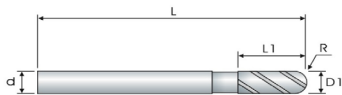
● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Ball Nose Type 4 Flutes



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
16	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBC-0200-040C41	1R	2	4	50	4	4	30°
MBC-0250-050C41	1.25R	2.5	5	50	4	4	30°
MBC-0300-060C41	1.5R	3	6	50	4	4	30°
MBC-0350-070C41	1.75R	3.5	7	50	4	4	30°
MBC-0400-080C41	2R	4	8	50	4	4	30°
MBC-0500-100E41	2.5R	5	10	50	6	4	30°
MBC-0600-120E41	3R	6	12	50	6	4	30°
MBC-0800-160G41	4R	8	16	60	8	4	30°
MBC-1000-200H41	5R	10	20	75	10	4	30°
MBC-1200-240I41	6R	12	24	75	12	4	30°
MBC-1600-320J41	8R	16	32	100	16	4	30°

### End Mill For General Steels And Metals

● Excellent ○ Good

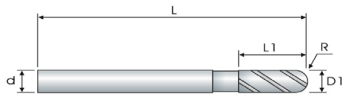
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Ball Nose Type 2 Flutes

Long Shank



Mill Dia.(D1) Up to	Tolerance [mm]
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBL-0100-020C21	0.5R	1	2	75	4	2	30°
MBL-0150-030C21	0.75R	1.5	3	75	4	2	30°
MBL-0200-040C21	1R	2	4	75	4	2	30°
MBL-0250-050C21	1.25R	2.5	5	75	4	2	30°
MBL-0300-060C21	1.5R	3	6	75	4	2	30°
MBL-0350-070C21	1.75R	3.5	7	75	4	2	30°
MBL-0400-080C21	2R	4	8	75	4	2	30°
MBL-0200-040E21	1R	2	4	75	6	2	30°
MBL-0250-050E21	1.25R	2.5	5	75	6	2	30°
MBL-0300-060E21	1.5R	3	6	75	6	2	30°
MBL-0350-070E21	1.75R	3.5	7	75	6	2	30°
MBL-0400-080E21	2R	4	8	75	6	2	30°
MBL-0500-100E21	2.5R	5	10	75	6	2	30°
MBL-0600-120E21	3R	6	12	75	6	2	30°
MBL-0800-160G21	4R	8	16	100	8	2	30°
MBL-1000-200H21	5R	10	20	100	10	2	30°
MBL-1200-240I21	6R	12	24	100	12	2	30°
MBL-1600-320J21	8R	16	32	150	16	2	30°
MBL-2000-400K21	10R	20	40	150	20	2	30°

### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

### Ball Nose Type 4 Flutes

Long Shank



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
16	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBL-0200-040C41	1R	2	4	75	4	4	30°
MBL-0250-050C41	1.25R	2.5	5	75	4	4	30°
MBL-0300-060C41	1.5R	3	6	75	4	4	30°
MBL-0350-070C41	1.75R	3.5	7	75	4	4	30°
MBL-0400-080C41	2R	4	8	75	4	4	30°
MBL-0600-120E41	3R	6	12	75	6	4	30°
MBL-0800-160G41	4R	8	16	100	8	4	30°
MBL-1000-200H41	5R	10	20	100	10	4	30°
MBL-1200-240I41	6R	12	24	100	12	4	30°
MBL-1600-320J41	8R	16	32	150	16	4	30°

### Ball Nose Type 2 Flutes

Extra Long Shank



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBE-0200-040E21	1R	2	4	100	6	2	30°
MBE-0300-060E21	1.5R	3	6	100	6	2	30°
MBE-0350-070E21	1.75R	3.5	7	100	6	2	30°
MBE-0400-080E21	2R	4	8	100	6	2	30°
MBE-0500-100E21	2.5R	5	10	100	6	2	30°
MBE-0600-120R11	3R	6	12	100	6	2	30°
MBE-0800-160G21	4R	8	16	150	8	2	30°
MBE-1000-200H21	5R	10	20	150	10	2	30°
MBE-1200-240I21	6R	12	24	150	12	2	30°
MBE-1600-320J21	8R	16	32	200	16	2	30°
MBE-2000-400K21	10R	20	40	200	20	2	30°

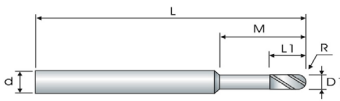
### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

### Ball Nose Type 2 Flutes

Long Neck



Mill Dia.[D1] Up to	Tolerance [mm]
4	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	M	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MBC-0020-010C22	0.1R	0.2	0.3	1	45	4	2	30°
MBC-0040-010C22	0.2R	0.4	0.4	1	45	4	2	30°
MBC-0060-020C22	0.3R	0.6	0.5	2	45	4	2	30°
MBC-0060-040C22	0.3R	0.6	0.5	4	45	4	2	30°
MBC-0060-060C22	0.3R	0.6	0.5	6	45	4	2	30°
MBC-0100-040C22	0.5R	1	2	4	45	4	2	30°
MBC-0100-060C21	0.5R	1	1.5	6	50	4	2	30°
MBC-0100-060C22	0.5R	1	2	6	45	4	2	30°
MBC-0100-080C22	0.5R	1	2	8	45	4	2	30°
MBC-0100-100C21	0.5R	1	1.5	10	50	4	2	30°
MBC-0150-040C22	0.75R	1.5	1.5	4	45	4	2	30°
MBC-0150-060C22	0.75R	1.5	1.5	6	45	4	2	30°
MBC-0150-080C22	0.75R	1.5	2	8	45	4	2	30°
MBC-0150-080C21	0.75R	1.5	2.5	8	50	4	2	30°
MBC-0150-160C21	0.75R	1.5	2.5	16	60	4	2	30°
MBC-0250-120C21	1.25R	2.5	3.5	12	50	4	2	30°
MBC-0250-200C21	1.25R	2.5	3.5	20	60	4	2	30°
MBC-0300-120E21	1.5R	3	4.5	12	60	6	2	30°
MBC-0300-150E22	1.5R	3	3	15	50	6	2	30°
MBC-0300-200E21	1.5R	3	4.5	20	60	6	2	30°
MBC-0200-060C22	1R	2	3	6	45	4	2	30°
MBC-0200-080R12	1R	2	2	8	50	4	2	30°
MBC-0200-080C21	1R	2	3	8	50	4	2	30°
MBC-0200-080R22	1R	2	3	8	45	4	2	30°
MBC-0200-080E22	1R	2	3	8	60	6	2	30°
MBC-0200-120R12	1R	2	2	12	50	4	2	30°
MBC-0200-120R22	1R	2	3	12	45	4	2	30°
MBC-0200-160C21	1R	2	3	16	60	4	2	30°
MBC-0200-200C21	1R	2	3	20	60	4	2	30°
MBC-0400-160E22	2R	4	4	16	50	6	2	30°

### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○



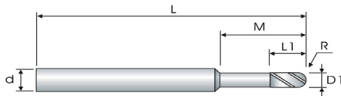
# CARBIDE END MILLS

## M SERIES

(CONTINUATION)

### Ball Nose Type 2 Flutes

Long Neck



Mill Dia.(D1)	Tolerance [mm]
Up to 4	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	M	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MBC-0400-200E22	2R	4	4	20	50	6	2	30°
MBC-0400-200E21	2R	4	6	20	60	6	2	30°
MBC-0400-300E21	2R	4	6	30	75	6	2	30°
MBC-0600-300E22	3R	6	12	30	70	6	2	30°
MBC-0600-240E22	3R	6	12	24	50	6	2	30°
MBC-0800-560G22	4R	8	16	56	100	8	2	30°
MBC-0800-240G22	4R	8	16	24	60	8	2	30°

### Ball Nose Type 2 Flutes

Taper Series



■ Shank Dia. Tolerance: h6

Part number	R	CA	L1	D2	L	d	F	Helix°
	Ball Radius	Taper Angle	Flute Length	Mill Dia. 2	Overall Length	Shank Dia.	No. of Flute	
MBC-0224-080C21	1R	1	8	2.24	50	4	2	30°
MBC-0275-080C21	1R	3	8	2.75	50	4	2	30°
MBC-0323-080C21	1R	5	8	3.23	50	4	2	30°
MBC-0281-100C21	1.25R	1	10	2.81	50	4	2	30°
MBC-0342-100C21	1.25R	3	10	3.42	50	4	2	30°
MBC-0404-100E21	1.25R	5	10	4.04	50	6	2	30°
MBC-0337-120C21	1.5R	1	12	3.37	50	4	2	30°
MBC-0410-120E21	1.5R	3	12	4.1	50	6	2	30°
MBC-0485-120E21	1.5R	5	12	4.85	50	6	2	30°
MBC-0449-160E21	2R	1	16	4.49	60	6	2	30°
MBC-0547-160E21	2R	3	16	5.47	60	6	2	30°
MBC-0664-160G21	2R	5	16	6.64	60	8	2	30°

#### End Mill For General Steels And Metals

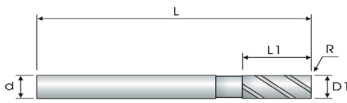
● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Corner Radius Type 2 Flutes



Mill Dia.(D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	R	L1	L	d	F	Helix°
	Mill Dia.	Corner R	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MC2-0100-025C21	1	0.2R	2.5	50	4	2	35°
MC2-0150-040C21	1.5	0.2R	4	50	4	2	35°
MC2-0200-050R11	2	0.2R	5	50	4	2	35°
MC2-0200-050R21	2	0.3R	5	50	4	2	35°
MC2-0200-050R31	2	0.5R	5	50	4	2	35°
MC2-0250-065R11	2.5	0.2R	6.5	50	4	2	35°
MC2-0250-065R21	2.5	0.5R	6.5	50	4	2	35°
MC2-0300-075R11	3	0.2R	7.5	50	4	2	35°
MC2-0300-075R21	3	0.3R	7.5	50	4	2	35°
MC2-0300-075R31	3	0.5R	7.5	50	4	2	35°
MC2-0400-100R11	4	0.2R	10	50	4	2	35°
MC2-0400-100R21	4	0.3R	10	50	4	2	35°
MC2-0400-100R31	4	0.5R	10	50	4	2	35°
MC2-0400-100R41	4	1R	10	50	4	2	35°
MC2-0500-125R11	5	0.5R	12.5	50	6	2	35°
MC2-0500-125R21	5	1R	12.5	50	6	2	35°
MC2-0600-150R11	6	0.5R	15	50	6	2	35°
MC2-0600-150R21	6	1R	15	50	6	2	35°
MC2-0800-200R11	8	0.5R	20	60	8	2	35°
MC2-0800-200R21	8	1R	20	60	8	2	35°
MC2-0800-200R31	8	1.5R	20	60	8	2	35°
MC2-0800-200R41	8	2R	20	60	8	2	35°
MC2-1000-250R11	10	0.5R	25	75	10	2	35°
MC2-1000-250R21	10	1R	25	75	10	2	35°
MC2-1000-250R31	10	1.5R	25	75	10	2	35°
MC2-1000-250R41	10	2.0R	25	75	10	2	35°
MC2-1200-300R11	12	0.5R	30	75	12	2	35°
MC2-1200-300R21	12	1R	30	75	12	2	35°
MC2-1200-300R31	12	1.5R	30	75	12	2	35°
MC2-1200-300R41	12	2R	30	75	12	2	35°

### End Mill For General Steels And Metals

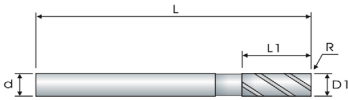
● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Corner Radius Type 4 Flutes



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	R	L1	M	L	d	F	Helix°
	Mill Dia.	Corner R	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MC4-0100-025C41	1	0.2R	2.5	2.5	50	4	4	35°
MC4-0150-040C41	1.5	0.2R	4	4	50	4	4	35°
MC4-0200-050R11	2	0.2R	5	5	50	4	4	35°
MCC-0200-050R21	2	0.5R	5	5	50	4	4	35°
MC4-0250-065R11	2.5	0.2R	6.5	6.5	50	4	4	35°
MC4-0250-065R21	2.5	0.5R	6.5	6.5	50	4	4	35°
MC4-0300-075R11	3	0.3R	7.5	7.5	50	4	4	35°
MC4-0300-075R21	3	0.5R	7.5	7.5	50	4	4	35°
MC4-0400-100R11	4	0.2R	10	10	50	4	4	35°
MC4-0400-100R21	4	0.3R	10	10	50	4	4	35°
MC4-0400-100R31	4	0.5R	10	10	50	4	4	35°
MC4-0400-100R41	4	1R	10	10	50	4	4	35°
MC4-0500-125R11	5	0.3R	12.5	12.5	50	6	4	35°
MC4-0500-125R21	5	0.5R	12.5	12.5	50	6	4	35°
MC4-0500-125R31	5	1R	12.5	12.5	50	6	4	35°
MC4-0600-150R11	6	0.2R	15	15	50	6	4	35°
MC4-0600-150R21	6	0.3R	15	15	50	6	4	35°
MC4-0600-150R31	6	0.5R	15	15	50	6	4	35°
MC4-0600-150R41	6	1R	15	15	50	6	4	35°
MC4-0800-200R11	8	0.5R	20	20	60	8	4	35°
MC4-0800-200R21	8	1R	20	20	60	8	4	35°
MC4-0800-200R31	8	1.5R	20	20	60	8	4	35°
MC4-0800-200R31	8	2R	20	20	60	8	4	35°
MC4-1000-250R11	10	0.5R	25	25	75	10	4	35°
MC4-1000-250R21	10	1R	25	25	75	10	4	35°
MC4-1000-250R31	10	1.5R	25	25	75	10	4	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

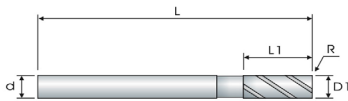
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

(CONTINUATION)

### Corner Radius Type 4 Flutes



Mill Dia.(D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	R	L1	M	L	d	F	Helix°
	Mill Dia.	Corner R	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MC4-1000-250R41	10	2R	25	25	75	10	4	35°
MC4-1200-300R11	12	0.5R	30	30	75	12	4	35°
MC4-1200-300R21	12	1R	30	30	75	12	4	35°
MC4-1200-300R31	12	1.5R	30	30	75	12	4	35°
MC4-1200-300R41	12	2R	30	30	75	12	4	35°
MC4-1200-300R51	12	3R	30	30	75	12	4	35°
MC4-0600-250E42	6	1R	13	25	50	6	4	35°
MC4-0800-400G42	8	0.5R	20	40	75	8	4	35°
MC4-0800-200G42	8	0.15R	20	-	63	8	4	

### End Mill For General Steels And Metals

● Excellent ○ Good

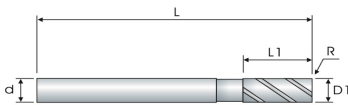
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○

# CARBIDE END MILLS

## M SERIES

### Corner Radius Type 4 Flutes

Short Cutting Length



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D	R	L1	L	d	F	Helix°
	Mill Dia.	Corner R	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MCC-0300-030R11	3	0.3R	3	75	6	4	35°
MCC-0300-030R21	3	0.5R	3	75	6	4	35°
MCC-0400-040R11	4	0.5R	4	75	6	4	35°
MCC-0400-040R21	4	1R	4	75	6	4	35°
MCC-0500-050R11	5	0.5R	5	75	6	4	35°
MCC-0500-050R21	5	1R	5	75	6	4	35°
MCC-0600-060R11	6	0.5R	6	75	6	4	35°
MCC-0600-060R21	6	1R	6	75	6	4	35°
MCC-0800-080R11	8	0.5R	8	100	8	4	35°
MCC-0800-080R21	8	1R	8	100	8	4	35°
MCC-0800-080R31	8	1.5R	8	100	8	4	35°
MCC-1000-100R11	10	0.5R	10	100	10	4	35°
MCC-1000-100R21	10	1R	10	100	10	4	35°
MCC-1000-100R31	10	1.5R	10	100	10	4	35°
MCC-1000-100R41	10	2R	10	100	10	4	35°
MCC-1200-120R11	12	0.5R	12	100	12	4	35°
MCC-1200-120R21	12	1R	12	100	12	4	35°
MCC-1200-120R31	12	1.5R	12	100	12	4	35°
MCC-1200-120R41	12	2R	12	100	12	4	35°

### End Mill For General Steels And Metals

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
●	●	●				○		○	○	○



# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes

Miniature (High Hardness)



Mill Dia.(D1) Up to	Tolerance (mm)
0.9	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSH-0020-004B21	0.2	0.4	38	3	2	35°
MSH-0025-005B21	0.25	0.5	38	3	2	35°
MSH-0030-006B21	0.3	0.6	38	3	2	35°
MSH-0035-007B21	0.35	0.7	38	3	2	35°
MSH-0040-008B21	0.4	0.8	38	3	2	35°
MSH-0050-010B21	0.5	1	38	3	2	35°
MSH-0060-012B21	0.6	1.2	38	3	2	35°
MSH-0070-014B21	0.7	1.4	38	3	2	35°
MSH-0080-016B21	0.8	1.6	38	3	2	35°
MSH-0090-018B21	0.9	1.8	38	3	2	35°
MSH-0020-004C21	0.2	0.4	50	4	2	35°
MSH-0030-006C21	0.3	0.6	50	4	2	35°
MSH-0040-008C21	0.4	0.8	50	4	2	35°
MSH-0050-010C21	0.5	1	50	4	2	35°
MSH-0060-012C21	0.6	1.2	50	4	2	35°
MSH-0070-014C21	0.7	1.4	50	4	2	35°
MSH-0080-016C21	0.8	1.6	50	4	2	35°
MSH-0090-018C21	0.9	1.8	50	4	2	35°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						

# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes (High Hardness)



Mill Dia. [D1] Up to	Tolerance [mm]
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSH-0100-025C21	1	2.5	50	4	2	35°
MSH-0150-030C21	1.5	3	50	4	2	35°
MSH-0200-050C21	2	5	50	4	2	35°
MSH-0250-060C21	2.5	6	50	4	2	35°
MSH-0300-075C21	3	7.5	50	4	2	35°
MSH-0350-080C21	3.5	8	50	4	2	35°
MSH-0400-100C21	4	10	50	4	2	35°
MSH-0300-075E21	3	7.5	50	6	2	35°
MSH-0350-080E21	3.5	8	50	6	2	35°
MSH-0400-100E21	4	10	50	6	2	35°
MSH-0450-110E21	4.5	11	50	6	2	35°
MSH-0500-130E21	5	13	50	6	2	35°
MSH-0550-130E21	5.5	13	50	6	2	35°
MSH-0600-160E21	6	16	50	6	2	35°
MSH-0650-160G21	6.5	16	60	8	2	35°
MSH-0700-200G21	7	20	60	8	2	35°
MSH-0750-200G21	7.5	20	60	8	2	35°
MSH-0800-200G21	8	20	60	8	2	35°
MSH-0900-250H21	9	25	75	10	2	35°
MSH-1000-250H21	10	25	75	10	2	35°
MSH-1100-250I21	11	25	75	12	2	35°
MSH-1200-300I21	12	30	75	12	2	35°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

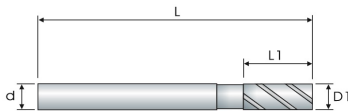
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						

# CARBIDE END MILLS

## M SERIES

### Square Type 4 Flutes

(High Hardness)



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSH-0100-025C41	1	2.5	50	4	4	35°
MSH-0150-030C41	1.5	3	50	4	4	35°
MSH-0200-050C41	2	5	50	4	4	35°
MSH-0250-060C41	2.5	6	50	4	4	35°
MSH-0300-075C41	3	7.5	50	4	4	35°
MSH-0350-080C41	3.5	8	50	4	4	35°
MSH-0400-100C41	4	10	50	4	4	35°
MSH-0300-075E41	3	7.5	50	6	4	35°
MSH-0350-080E41	3.5	8	50	6	4	35°
MSH-0400-100E41	4	10	50	6	4	35°
MSH-0450-110E41	4.5	11	50	6	4	35°
MSH-0500-130E41	5	13	50	6	4	35°
MSH-0550-130E41	5.5	13	50	6	4	35°
MSH-0600-160E41	6	16	50	6	4	35°
MSH-0650-160G41	6.5	16	60	8	4	35°
MSH-0700-200G41	7	20	60	8	4	35°
MSH-0750-200G41	7.5	20	60	8	4	35°
MSH-0800-200G41	8	20	60	8	4	35°
MSH-0900-250H41	9	25	75	10	4	35°
MSH-1000-250H41	10	25	75	10	4	35°
MSH-1100-250I41	11	25	75	12	4	35°
MSH-1200-300I41	12	30	75	12	4	35°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

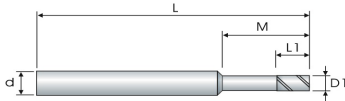
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						

# CARBIDE END MILLS

## M SERIES

### Square Type 2 Flutes

Long Neck (High Hardness)



Mill Dia.(D1) Up to	Tolerance (mm)
4	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	D1	L1	M	L	d	F	Helix°
	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MSH-0050-020C21	0.5	0.75	2	50	4	2	35°
MSH-0050-040C21	0.5	0.75	4	50	4	2	35°
MSH-0050-060C21	0.5	0.75	6	50	4	2	35°
MSH-0060-020C21	0.6	0.9	2	50	4	2	35°
MSH-0060-040C21	0.6	0.9	4	50	4	2	35°
MSH-0060-060C21	0.6	0.9	6	50	4	2	35°
MSH-0070-040C21	0.7	1.1	4	50	4	2	35°
MSH-0070-060C21	0.7	1.1	6	50	4	2	35°
MSH-0080-040C21	0.8	1.2	4	50	4	2	35°
MSH-0080-060C21	0.8	1.2	6	50	4	2	35°
MSH-0080-080C21	0.8	1.2	8	50	4	2	35°
MSH-0100-060C21	1	1.5	6	50	4	2	35°
MSH-0100-080C21	1	1.5	8	50	4	2	35°
MSH-0100-100C21	1	1.5	10	50	4	2	35°
MSH-0100-120C21	1	1.5	12	50	4	2	35°
MSH-0100-160C21	1	1.5	16	60	4	2	35°
MSH-0150-060C21	1.5	2.3	6	50	4	2	35°
MSH-0150-080C21	1.5	2.3	8	50	4	2	35°
MSH-0150-100C21	1.5	2.3	10	50	4	2	35°
MSH-0150-120C21	1.5	2.3	12	50	4	2	35°
MSH-0150-160C21	1.5	2.3	16	60	4	2	35°
MSH-0150-200C21	1.5	2.3	20	60	4	2	35°
MSH-0200-060C21	2	3	6	50	4	2	35°
MSH-0200-080C21	2	3	8	50	4	2	35°
MSH-0200-100C21	2	3	10	50	4	2	35°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
			●	●						

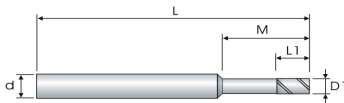
# CARBIDE END MILLS

## M SERIES

(CONTINUATION)

### Square Type 2 Flutes

Long Neck (High Hardness)



Mill Dia. [D1]	Tolerance [mm]
Up to 4	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	D1	L1	M	L	d	F	Helix°
	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MSH-0200-120C21	2	3	12	50	4	2	35°
MSH-0200-160C21	2	3	16	60	4	2	35°
MSH-0200-200C21	2	3	20	60	4	2	35°
MSH-0250-080C21	2.5	4	8	50	4	2	35°
MSH-0250-100C21	2.5	4	10	50	4	2	35°
MSH-0250-120C21	2.5	4	12	50	4	2	35°
MSH-0250-160C21	2.5	4	16	60	4	2	35°
MSH-0250-200C21	2.5	4	20	60	4	2	35°
MSH-0300-080E21	3	4.5	8	50	6	2	35°
MSH-0300-100E21	3	4.5	10	50	6	2	35°
MSH-0300-120E21	3	4.5	12	50	6	2	35°
MSH-0300-160E21	3	4.5	16	60	6	2	35°
MSH-0300-200E21	3	4.5	20	60	6	2	35°
MSH-0300-250E21	3	4.5	25	60	6	2	35°
MSH-0400-120E21	4	6	12	50	6	2	35°
MSH-0400-160E21	4	6	16	60	6	2	35°
MSH-0400-200E21	4	6	20	60	6	2	35°
MSH-0400-250E21	4	6	25	60	6	2	35°
MSH-0400-300E21	4	6	30	75	6	2	35°
MSH-0400-350E21	4	6	35	75	6	2	35°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						

# CARBIDE END MILLS

## M SERIES

### Square Type 6/8 Flutes

(High Hardness)



Mill Dia.(D1) Up to	Tolerance [mm]
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03
25	+0/-0.04

■ Shank Dia. Tolerance: h6

Part number	D1	L1	L	d	F	Helix°
	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MSC-0600-150E61	6	15	50	6	6	45°
MSC-0800-200G61	8	20	60	8	6	45°
MSC-1000-250H61	10	25	75	10	6	45°
MSC-1200-300I61	12	30	75	12	6	45°
MSC-1600-450J61	16	45	100	16	6	45°
MSC-2000-450K81	20	45	100	20	8	45°
MSC-2500-450N81	25	45	100	25	8	45°

### Ball Nose Type 2 Flutes

Miniature (High Hardness)



Mill Dia.(D1) Up to	Tolerance [mm]
0.9	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBH-0020-004C21	0.1R	0.2	0.4	50	4	2	30°
MBH-0030-006C21	0.15R	0.3	0.6	50	4	2	30°
MBH-0040-008C21	0.2R	0.4	0.8	50	4	2	30°
MBH-0050-010C21	0.25R	0.5	1	50	4	2	30°
MBH-0060-012C21	0.3R	0.6	1.2	50	4	2	30°
MBH-0070-014C21	0.35R	0.7	1.4	50	4	2	30°
MBH-0080-016C21	0.4R	0.8	1.6	50	4	2	30°
MBH-0090-018C21	0.45R	0.9	1.8	50	4	2	30°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

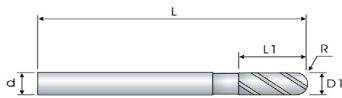
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						



# CARBIDE END MILLS

## M SERIES

### Ball Nose Type 2 Flutes (High Hardness)



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBC-0100-015C21	0.5R	1	1.5	50	4	2	30°
MBC-0120-020C21	0.6R	1.2	2	50	4	2	30°
MBC-0140-020C21	0.7R	1.4	2	50	4	2	30°
MBC-0150-025C21	0.75R	1.5	2.5	50	4	2	30°
MBC-0200-030C21	1R	2	3	50	4	2	30°
MBC-0250-040C21	1.25R	2.5	4	50	4	2	30°
MBC-0300-050C21	1.5R	3	5	50	4	2	30°
MBC-0350-055C21	1.75R	3.5	5.5	50	4	2	30°
MBC-0400-060C21	2R	4	6	50	4	2	30°
MBC-0100-015E21	0.5R	1	1.5	50	6	2	30°
MBC-0120-020E21	0.6R	1.2	2	50	6	2	30°
MBC-0140-020E21	0.7R	1.4	2	50	6	2	30°
MBC-0150-025E21	0.75R	1.5	2.5	50	6	2	30°
MBC-0200-030E21	1R	2	3	50	6	2	30°
MBC-0250-040E21	1.25R	2.5	4	50	6	2	30°
MBC-0300-050E21	1.5R	3	5	50	6	2	30°
MBC-0400-060E21	2R	4	6	50	6	2	30°
MBC-0500-080E21	2.5R	5	8	50	6	2	30°
MBC-0600-090E21	3R	6	9	50	6	2	30°
MBC-0700-110G21	3.5R	7	11	60	8	2	30°
MBC-0800-120G21	4R	8	12	60	8	2	30°
MBC-1000-150H21	5R	10	15	75	10	2	30°
MBC-1200-180I21	6R	12	18	75	12	2	30°

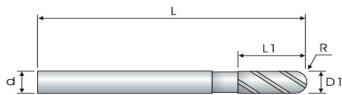
### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						

### Ball Nose Type 4 Flutes

(High Hardness)



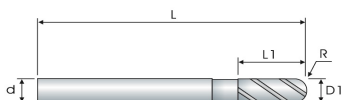
Mill Dia. (D1) Up to	Tolerance [mm]
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBC-0200-030C41	1R	2	3	50	4	4	30°
MBC-0250-040C41	1.25R	2.5	4	50	4	4	30°
MBC-0300-050C41	1.5R	3	5	50	4	4	30°
MBC-0350-055C41	1.75R	3.5	5.5	50	4	4	30°
MBC-0400-060C41	2R	4	6	50	4	4	30°
MBC-0500-080E41	2.5R	5	8	50	6	4	30°
MBC-0600-090E41	3R	6	9	50	6	4	30°
MBC-0800-120G41	4R	8	12	60	8	4	30°
MBC-1000-150H41	5R	10	15	75	10	4	30°
MBC-1200-180I41	6R	12	18	75	12	4	30°

### Ball Nose Type 2 Flutes

Long Shank (High Hardness)



Mill Dia. (D1) Up to	Tolerance [mm]
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MBL-0100-015E21	0.5R	1	1.5	75	6	2	30°
MBL-0200-030E21	1R	2	3	75	6	2	30°
MBL-0300-050E21	1.5R	3	5	75	6	2	30°
MBL-0400-060E21	2R	4	6	75	6	2	30°
MBL-0500-080E21	2.5R	5	8	75	6	2	30°
MBL-0600-090E21	3R	6	9	75	6	2	30°
MBL-0800-120G21	4R	8	12	100	8	2	30°
MBL-1000-150H21	5R	10	15	100	10	2	30°
MBL-1200-180I21	6R	12	18	100	12	2	30°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

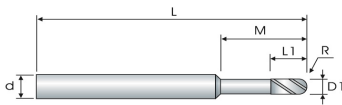
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						

# CARBIDE END MILLS

## M SERIES

### Ball Nose Type 2 Flutes

Long Neck (High Hardness)



Mill Dia.(D1) Up to	Tolerance (mm)
6	+0/-0.02

■ Shank Dia. Tolerance: h6

Part number	R	D1	L1	M	L	d	F	Helix°
	Ball Radius	Mill Dia.	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MBH-0040-040C21	0.2R	0.4	0.3	4	50	4	2	30°
MBH-0050-060C21	0.25R	0.5	0.4	6	50	4	2	30°
MBH-0060-020C21	0.3R	0.6	0.5	2	50	4	2	30°
MBH-0060-040C21	0.3R	0.6	0.5	4	50	4	2	30°
MBH-0060-060C21	0.3R	0.6	0.5	6	50	4	2	30°
MBH-0080-040C21	0.4R	0.8	0.6	4	50	4	2	30°
MBH-0080-080C21	0.4R	0.8	0.6	8	50	4	2	30°
MBH-0100-040C21	0.5R	1	0.8	4	50	4	2	30°
MBH-0100-060C21	0.5R	1	0.8	6	50	4	2	30°
MBH-0100-080C21	0.5R	1	0.8	8	50	4	2	30°
MBH-0100-100C21	0.5R	1	0.8	10	50	4	2	30°
MBH-0150-040C21	0.75R	1.5	1.2	4	50	4	2	30°
MBH-0150-080C21	0.75R	1.5	1.2	8	50	4	2	30°
MBH-0150-160C21	0.75R	1.5	1.2	16	60	4	2	30°
MBH-0200-060C21	1R	2	1.6	6	50	4	2	30°
MBH-0200-080C21	1R	2	1.6	8	50	4	2	30°
MBH-0200-100C21	1R	2	1.6	10	50	4	2	30°
MBH-0200-120C21	1R	2	1.6	12	50	4	2	30°
MBH-0200-160C21	1R	2	1.6	16	60	4	2	30°
MBH-0200-200C21	1R	2	1.6	20	60	4	2	30°
MBH-0300-100E21	1.5R	3	2.4	10	50	6	2	30°
MBH-0300-120E21	1.5R	3	2.4	12	50	6	2	30°
MBH-0300-160E21	1.5R	3	2.4	16	60	6	2	30°
MBH-0300-200E21	1.5R	3	2.4	20	60	6	2	30°
MBH-0400-100E21	2R	4	3.2	10	50	6	2	30°
MBH-0400-120E21	2R	4	3.2	12	50	6	2	30°
MBH-0400-160E21	2R	4	3.2	16	60	6	2	30°
MBH-0400-200E21	2R	4	3.2	20	60	6	2	30°
MBH-0400-300E21	2R	4	3.2	30	75	6	2	30°
MBH-0600-250E21	3R	6	4.8	25	60	6	2	30°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

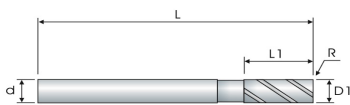
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						

# CARBIDE END MILLS

## M SERIES

### Corner Radius Type 2 Flutes

(High Hardness)



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	R	L1	L	d	F	Helix°
	Mill Dia.	Corner R	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MC2-0100-020C21	1	0.2R	2	50	4	2	35°
MC2-0150-030C21	1.5	0.2R	3	50	4	2	35°
MC2-0200-040R11	2	0.2R	4	50	4	2	35°
MC2-0200-040R21	2	0.3R	4	50	4	2	35°
MC2-0200-040R31	2	0.5R	4	50	4	2	35°
MC2-0250-050R11	2.5	0.2R	5	50	4	2	35°
MC2-0250-050R21	2.5	0.5R	5	50	4	2	35°
MC2-0300-060R11	3	0.3R	6	50	4	2	35°
MC2-0300-060R21	3	0.5R	6	50	4	2	35°
MC2-0400-080R11	4	0.3R	8	50	4	2	35°
MC2-0400-080R21	4	0.5R	8	50	4	2	35°
MC2-0400-080R31	4	1R	8	50	4	2	35°
MC2-0500-100R11	5	0.5R	10	50	6	2	35°
MC2-0500-100R21	5	1R	10	50	6	2	35°
MC2-0600-120R11	6	0.5R	12	50	6	2	35°
MC2-0600-120R21	6	1R	12	50	6	2	35°
MC2-0800-160R11	8	0.5R	16	60	8	2	35°
MC2-0800-160R21	8	1R	16	60	8	2	35°
MC2-0800-160R31	8	1.5R	16	60	8	2	35°
MC2-0800-160R41	8	2R	16	60	8	2	35°
MC2-1000-200R11	10	0.5R	20	75	10	2	35°
MC2-1000-200R21	10	1R	20	75	10	2	35°
MC2-1000-200R31	10	1.5R	20	75	10	2	35°
MC2-1000-200R41	10	2R	20	75	10	2	35°
MC2-1200-240R11	12	0.5R	24	75	12	2	35°
MC2-1200-240R21	12	1R	24	75	12	2	35°
MC2-1200-240R31	12	1.5R	24	75	12	2	35°
MC2-1200-240R41	12	2R	24	75	12	2	35°

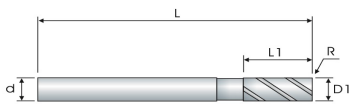
### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRc~50	HRc~55	HRc~60						
			●	●						

### Corner Radius Type 4 Flutes

(High Hardness)



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	R	L1	L	d	F	Helix°
	Mill Dia.	Corner Radius	Flute Length	Overall Length	Shank Dia.	No. of Flute	
MC4-0100-020C41	1	0.2R	2	50	4	4	35°
MC4-0150-030R11	1.5	0.2R	3	50	4	4	35°
MC4-0150-030R21	1.5	0.5R	3	50	4	4	35°
MC4-0200-040R11	2	0.2R	4	50	4	4	35°
MC4-0200-040R21	2	0.5R	4	50	4	4	35°
MC4-0300-060R11	3	0.3R	6	50	4	4	35°
MC4-0300-060R21	3	0.5R	6	50	4	4	35°
MC4-0300-060R31	3	1R	6	50	4	4	35°
MC4-0400-080R11	4	0.3R	8	50	4	4	35°
MC4-0400-080R21	4	0.5R	8	50	4	4	35°
MC4-0400-080R31	4	1R	8	50	4	4	35°
MC4-0500-100R11	5	0.3R	10	50	6	4	35°
MC4-0500-100R21	5	0.5R	10	50	6	4	35°
MC4-0500-100R31	5	1R	10	50	6	4	35°
MC4-0600-120R11	6	0.5R	12	50	6	4	35°
MC4-0600-120R21	6	1R	12	50	6	4	35°
MC4-0800-160R11	8	0.5R	16	60	8	4	35°
MC4-0800-160R21	8	1R	16	60	8	4	35°
MC4-0800-160R31	8	1.5R	16	60	8	4	35°
MC4-1000-200R11	10	0.5R	20	75	10	4	35°
MC4-1000-200R21	10	1R	20	75	10	4	35°
MC4-1000-200R31	10	1.5R	20	75	10	4	35°
MC4-1000-200R41	10	2R	20	75	10	4	35°
MC4-1200-240R11	12	0.5R	24	75	12	4	35°
MC4-1200-240R21	12	1R	24	75	12	4	35°
MC4-1200-240R31	12	1.5R	24	75	12	4	35°
MC4-1200-240R41	12	2R	24	75	12	4	35°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

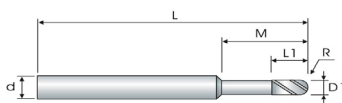
Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						

# CARBIDE END MILLS

## M SERIES

### Corner Radius Type 4 Flutes

Long Neck (High Hardness)



Mill Dia. (D1) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025

■ Shank Dia. Tolerance: h6

Part number	D1	R	L1	M	d	F	F	Helix°
	Mill Dia.	Corner Radius	Flute Length	Length under Shank	Overall Length	Shank Dia.	No. of Flute	
MCL-0200-060E41	2	0.2R	4	6	50	6	4	35°
MCL-0200-080E41	2	0.2R	4	8	50	6	4	35°
MCL-0300-120R11	3	0.2R	6	12	50	6	4	35°
MCL-0300-120R21	3	0.5R	6	12	50	6	4	35°
MCL-0400-160R11	4	0.2R	8	16	60	6	4	35°
MCL-0400-160R21	4	0.5R	8	16	60	6	4	35°
MCL-0600-250R11	6	0.2R	13	25	60	6	4	35°
MCL-0600-250R21	6	0.5R	13	25	60	6	4	35°
MCL-0600-250R31	6	1R	13	25	60	6	4	35°
MCL-0800-320R11	8	0.5R	19	32	75	8	4	35°
MCL-0800-320R21	8	1R	19	32	75	8	4	35°
MCL-1000-400H41	10	1R	22	40	100	10	4	35°
MCL-1200-500I41	12	1R	25	50	100	12	4	35°

### End Mill For General Steels And Metals(High Hardness)

● Excellent ○ Good

Carbon Steels	Alloy Steels	Hardened Steels		High Hardened Steels	Copper	Cast iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC~50	HRC~55	HRC~60						
			●	●						