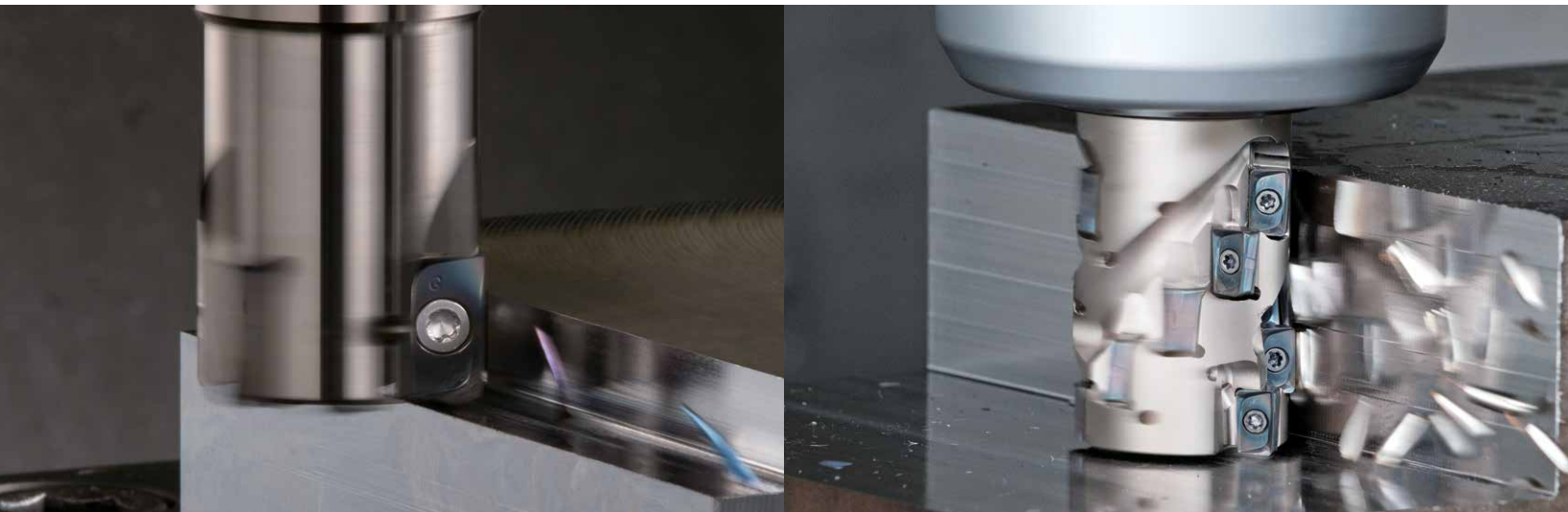




# M-FOUR (MEW)

90° Milling with Double-sided 4-edge Inserts



Low Cutting Forces with Chatter Resistance for Excellent Surface Finish

Economical 4-edge Insert

MEWH Helical End Mill Added

Improved Toolholder Durability and Insert Installation Accuracy

**NEW**

DLC Coating for Machining Aluminum  
Grade PDL025 Added to the Lineup



# M-FOUR (MEW)

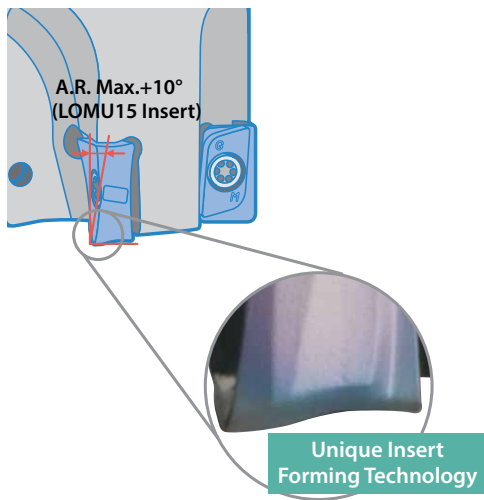
90° Milling with Double-sided 4-edge Insert

Low Cutting Forces with Chatter Resistance for Excellent Surface Finish

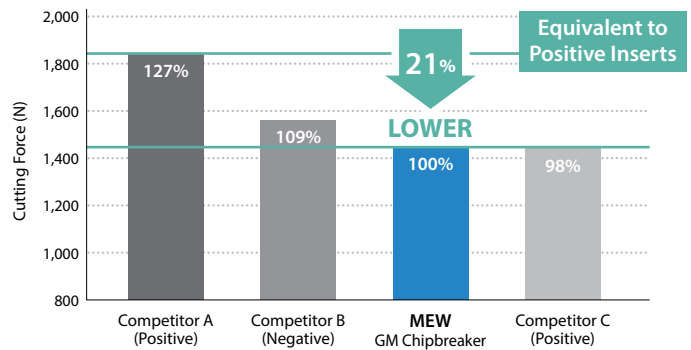
Wide Application Range with New DLC Coating PDL025 for Machining Aluminum

## 1 Low Cutting Forces Equivalent to Positive Inserts

Kyocera's unique insert forming technology reduces cutting forces equivalent to positive inserts



Cutting Force Comparison (In-house Evaluation)

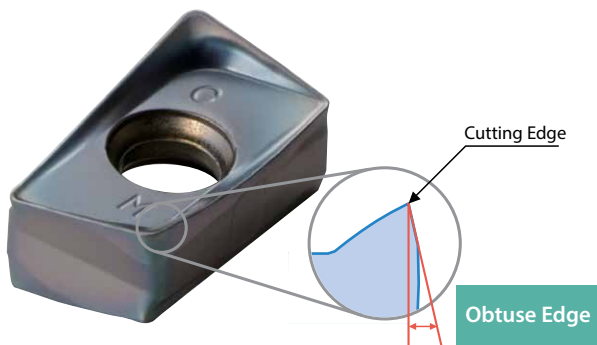


Cutting force is the resultant force of the principal force and the feed force.

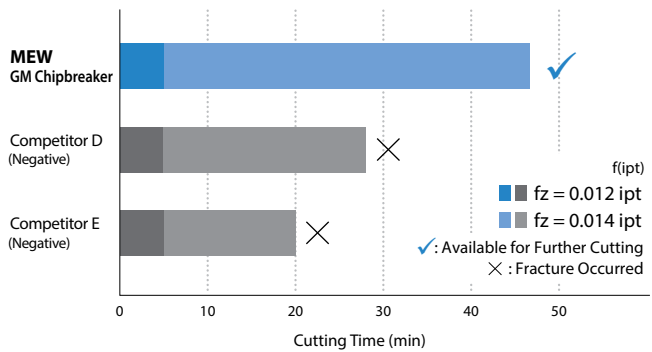
Cutting Conditions : Vc = 490 sfm, fz = 0.006 ipt, D.O.C. × ae = 0.118" × 0.591"  
Cutter Dia. Ø0.750" Workpiece : 1040

## 2 Excellent Fracture Resistance

Obtuse edge for increased cutting edge toughness and stable machining at high feed rates



Fracture Resistance Comparison (In-house Evaluation)

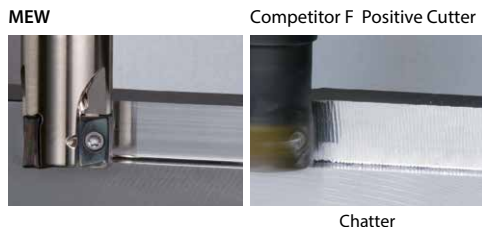


Cutting Conditions : Vc = 390 sfm, fz = 0.012 - 0.014 ipt, D.O.C. × ae = 0.118" × 0.394"  
Cutter Dia. Ø0.750" Workpiece : 4140H (28-32 HRC)

### 3 Improved Surface Finish & Minimized Vibration

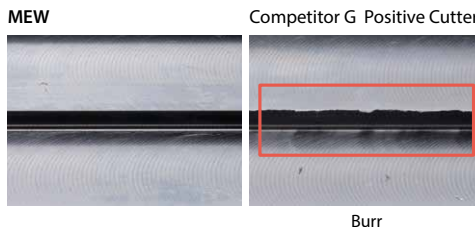
Sharp cutting and superior burr and vibration resistance due to helical cutting edge and optimum axial rake design

Surface of Shoulder Wall (In-house Evaluation)



Cutting Conditions : Vc = 790 sfm, fz = 0.005 ipt, D.O.C. x ae = 0.158" x 0.197"  
Cutter Dia. 00.750, Dry Workpiece : A65

Burr Comparison with Positive Cutters (In-house Evaluation)

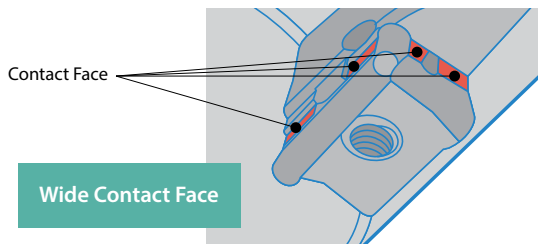


Cutting Conditions : Vc = 820 sfm, fz = 0.004 ipt, D.O.C. x ae = 0.158" x 0.197"  
Cutter Dia. 00.750, Dry Workpiece : 1049

Actual Rake Angle (In-house Evaluation)

MEW GM Chipbreaker	+20°
Competitor H (Negative)	+17°
Competitor I (Positive)	+17°

### 4 Improved Toolholder Durability and Insert Installation Accuracy

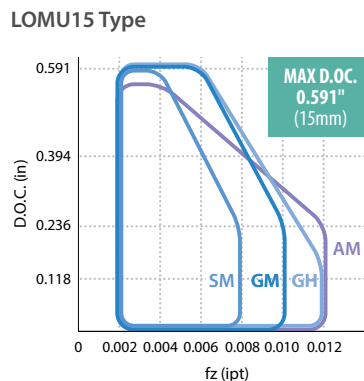
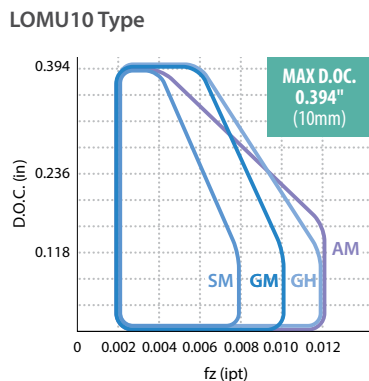


### 5 Various Chipbreakers for a Wide Range of Applications

4 types of chipbreakers for a wide range of applications along with a large lineup of corner R (rε) for the GM chipbreaker

Chipbreaker	Application	Shape
GM	General Purpose	
SM	Low Cutting Force	
GH	Heavy Milling	
<b>NEW</b> AM	Non-ferrous Metals / Aluminum	

Chipbreaker Recommended Applications (Shouldering)



Chips (GM Chipbreaker)



# MEWH

## 90° Helical End Mill with Double-sided 4-edge Insert

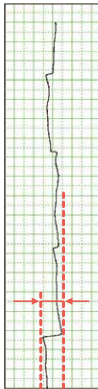
Excellent Surface Finish and Stable Machining due to Innovative Toolholder Design  
Economical 4-edge Inserts

### 1 Improved Surface Finish & Minimized Vibration

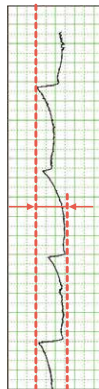
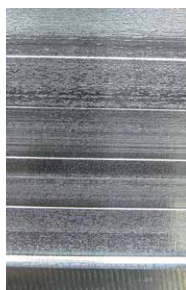
Better surface quality than competitor

Surface Finish Comparison (In-house Evaluation)

MEWH



Competitor J



Smooth Surface Finish

Cutting Conditions : Vc = 390 sfm, fz = 0.004 ipt, D.O.C. x ae = 1.772" x 0.197", Dry  
1500-W150-10-5-3T LOMU100408ER-GM (PR1525)  
Workpiece : 4137

### 2 Excellent Chip Evacuation

Chips are constantly evacuated in the opposite direction of the cutter feed without clogging

Chipbreaker	Workpiece	fz = 0.15 mm/t	fz = 0.2 mm/t
GM	SCM435		
GM	SS400		
SM			



Cutting Conditions : Vc = 390 sfm, D.O.C. x ae = 0.787" x 0.591", Dry

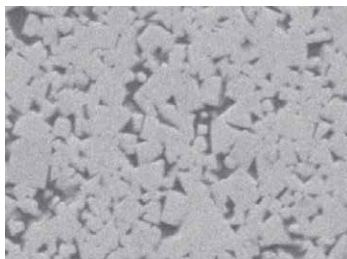
# PR1535 MEGACOAT NANO

Fracture resistant with a tough substrate and high heat-resistant coating for stable machining of general steel, mold steel, and difficult-to-cut materials

## 1 23% Improved Fracture Toughness

An increase in cobalt content yields a substrate with greater toughness. Fracture toughness values are improved by 23% over previous grades.

### High Toughness Carbide Base Material

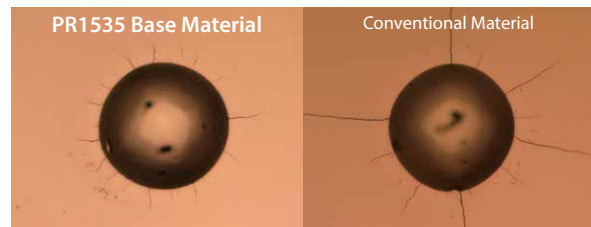


↑  
23%  
Fracture  
Toughness

## 2 Stability Improvement

The coarse grain structure and uniform particle size correspond to improved heat resistance, with conductivity values decreased by 11%. The uniform structure also reduces crack propagation.

### Cracking Comparison by Diamond Indenter (In-house Evaluation)

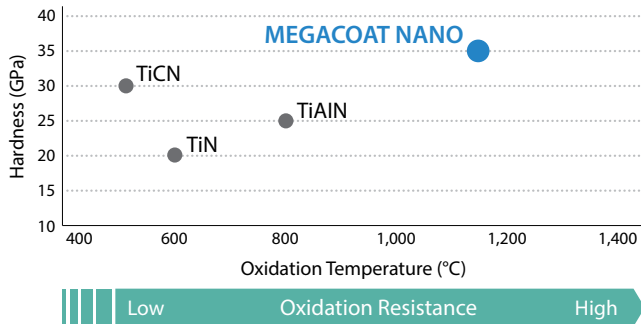


↑  
Shock  
Resistance

**Short Cracks**  
(High Impact Improvement)

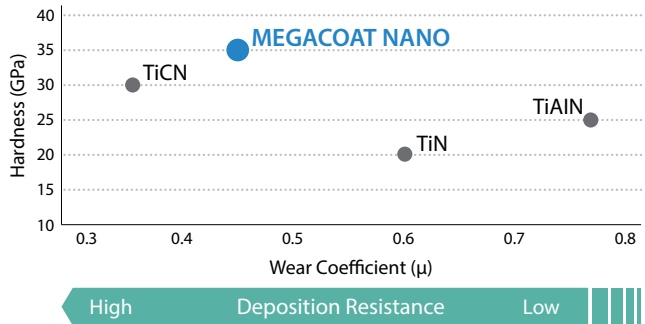
**Long Cracks**

### Coating Properties (Abrasion Resistance)



Achieves long tool life with the combination of a tough substrate and a special Nano coating layer

### Coating Properties (Deposition Resistance)

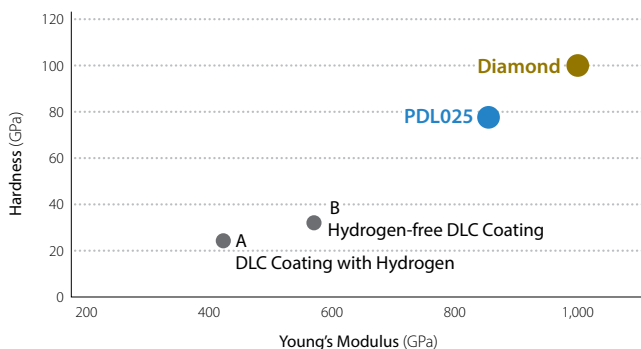


Stable machining with excellent wear resistance

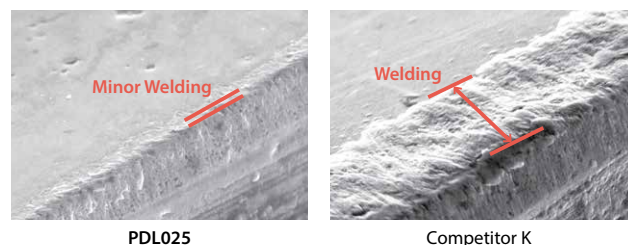
# NEW PDL025 DLC Coated Carbide

High Quality and Long Tool Life for Machining Aluminum  
High Hardness with Kyocera's Proprietary Hydrogen-free DLC Coating

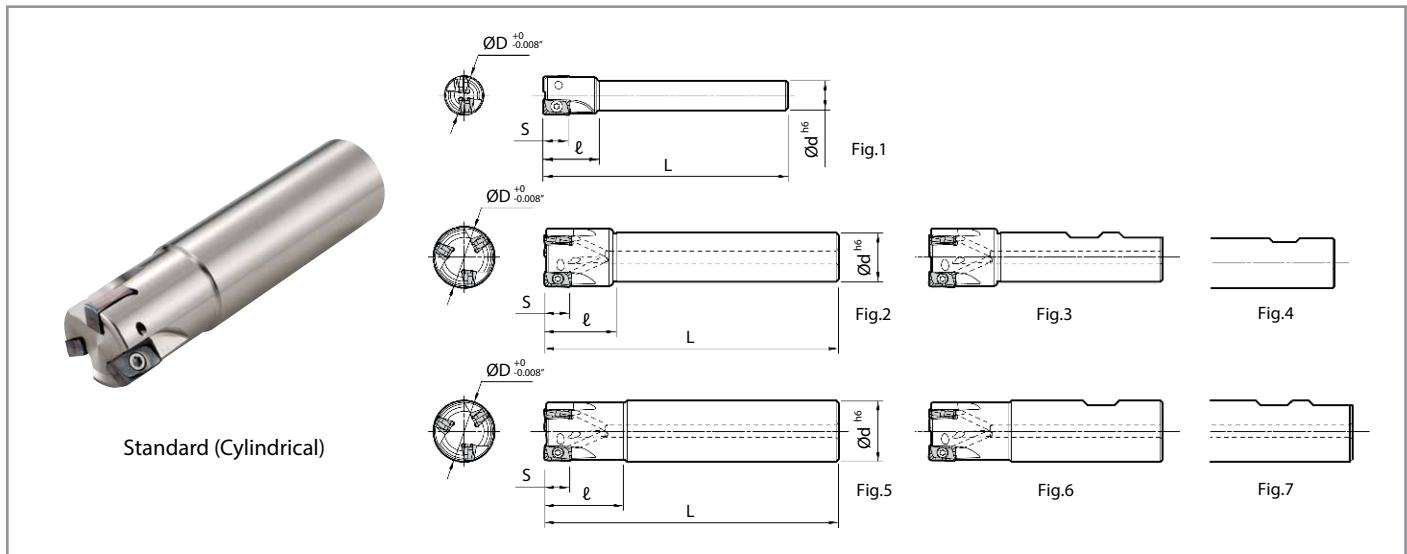
### Coating Properties



### Welding Resistance Comparison (In-house Evaluation)



Cutting Conditions : Vc = 2,630 sfm, fz = 0.004 ipt, D.O.C. × ae = 0.118" × 0.197", Dry  
Cutter Dia. 01.000" Workpiece : 5052 Cutting Length : 187 ft

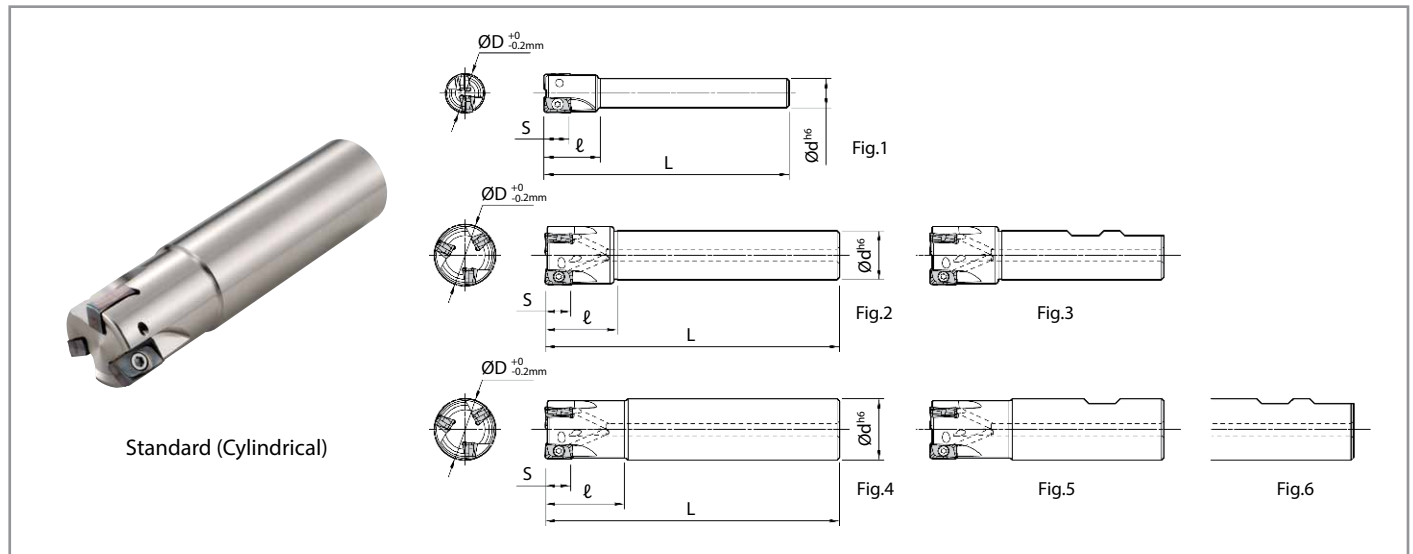


Toolholder Dimensions (Inch Size)

Shank	Part Number	Stock	No. of Inserts	Dimensions (in)					Rake Angle (°)		Coolant Hole	Drawing	Max. RPM*	
				ØD	Ød	L	ℓ	S	A.R. (Max)	R.R.				
Weldon	Standard Shank	MEW 0625-W500-10-2T	●	2	0.625	0.500	2.75	0.969	0.393	+7°	-22°	x	Fig.4	43,900
		0625-W625-10-2T	●	2	0.625	0.625	3.00	1.046			-22°		Fig.6	43,900
		0750-W625-10-2T	●	2	0.750	0.625	3.25	1.145			-20°		Fig.3	42,000
		0750-W750-10-2T	●	2	0.750	0.750	3.25	1.170			-20°		Fig.6	42,000
		0750-W750-10-3T	●	3	0.750	0.750	3.25	1.170			-20°		Fig.6	42,000
		0750-W750-4-10-3T	●	3	0.750	0.750	4.00	1.921			-20°		Fig.6	42,000
		1000-W750-10-3T	●	3	1.000	0.750	3.25	1.219			-20°		Fig.3	37,200
		1000-W100-10-2T	●	2	1.000	1.000	3.75	1.413			-20°	✓	Fig.7	37,200
		1000-W100-10-3T	●	3	1.000	1.000	3.75	1.413			-20°		Fig.7	37,200
		1000-W100-475-10-3T	●	3	1.000	1.000	4.75	1.413			-20°		Fig.7	37,200
		1250-W100-10-4T	●	4	1.250	1.000	3.75	1.469			-20°		Fig.3	34,000
		1250-W125-10-3T	●	3	1.250	1.250	4.00	1.663			-20°		Fig.7	34,000
		1250-W125-10-4T	●	4	1.250	1.250	4.00	1.663			-20°		Fig.7	34,000
		1500-W125-10-5T	●	5	1.500	1.250	4.125	2.070			-19°		Fig.3	30,700
		NEW	Long Overhang	MEW 1000-W100-45-10-3T	●	3	1.000	1.000			4.50	2.163	0.393	+7°
Cylindrical	Long Shank	MEW 0625-S625-6-10-2T	●	2	0.625	0.625	6.00	1.500	0.393	+7°	-22°		Fig.5	43,900
		0750-S750-7-10-2T	●	2	0.750	0.750	7.00	1.586			-22°		Fig.5	42,000
		1000-S100-7-10-3T	●	3	1.000	1.000	7.00	1.980			-20°		Fig.5	37,200
		1000-S100-8-10-2T	●	2	1.000	1.000	8.00	1.980			-20°	✓	Fig.5	37,200
		NEW 1000-S100-8-10-3T	●	3	1.000	1.000	8.00	1.980			-20°		Fig.5	37,200
		NEW 1250-S125-8-15-3T	●	3	1.250	1.250	8.00	1.980			-22°		Fig.5	30,100
		NEW 1500-S125-8-15-4T	●	4	1.500	1.250	8.00	2.069			-21°		Fig.2	25,600
Weldon	Standard Shank	MEW 1000-W750-15-2T	●	2	1.000	0.750	3.25	1.219	0.590	+10°	-22°		Fig.3	34,700
		1000-W100-15-2T	●	2	1.000	1.000	3.75	1.413			-22°		Fig.7	34,700
		1250-W100-15-2T	●	2	1.250	1.000	3.75	1.469			-22°		Fig.3	30,100
		1250-W125-15-2T	●	2	1.250	1.250	4.00	1.663			-22°	✓	Fig.7	30,100
		1250-W125-15-3T	●	3	1.250	1.250	4.00	1.663			-22°		Fig.7	30,100
		1500-W125-15-3T	●	3	1.500	1.250	4.125	2.069			-21°		Fig.3	25,600
		1500-W125-15-4T	●	4	1.500	1.250	4.125	2.069			-21°		Fig.3	25,600

● : U.S. Stock

Max. RPM\*  
When running the cutter at the maximum revolution, the insert or toolholder may be damaged by centrifugal force.



Toolholder Dimensions (Metric Size)

Shank	Part Number	Stock	No. of Inserts	Dimensions (mm)					Rake Angle (°)		Coolant Hole	Drawing	Max. RPM*				
				ØD	Ød	L	ℓ	S	A.R. (Max)	R.R.							
Cylindrical	Standard Shank	MEW 16-S12-10-2T	○	2	16	12	100	23	10	+7°	-22°	x	Fig.1	43,750			
		16-S16-10-2T	○	2	16	16	100	26			-22°	Fig.4	43,750				
		18-S16-10-2T	○	2	18	16	100	25			-21°	Fig.2	43,000				
		20-S16-10-2T	○	2	20	16	110	26			-20°	Fig.2	41,000				
		20-S20-10-2T	○	2	20	20	110	30			-20°	Fig.4	41,000				
		20-S20-10-3T	○	3	20	20	110	30			-20°	Fig.4	41,000				
		22-S20-10-3T	○	3	22	20	110	26			-20°	Fig.2	39,600				
		25-S20-10-3T	○	3	25	20	120	29			-20°	Fig.2	37,500				
		25-S25-10-2T	○	2	25	25	120	32			-20°	Fig.4	37,500				
		25-S25-10-3T	○	3	25	25	120	32			-20°	Fig.4	37,500				
		28-S25-10-3T	○	3	28	25	120	29			-20°	Fig.2	35,800				
		30-S25-10-4T	○	4	30	25	130	32			-20°	Fig.2	34,800				
		32-S25-10-4T	○	4	32	25	130	32			-20°	Fig.2	33,900				
		32-S32-10-3T	○	3	32	32	130	40			-20°	Fig.4	33,900				
		32-S32-10-4T	○	4	32	32	130	40			-20°	Fig.4	33,900				
		40-S32-10-5T	○	5	40	32	150	50			-19°	Fig.2	30,000				
		50-S32-10-5T	○	5	50	32	120	40			-19°	Fig.2	22,500				
		Long Shank	MEW 20-S20-10-150-2T	○	2	20	20	150			40	10	+7°	-20°	✓	Fig.4	41,000
			25-S25-10-170-2T	○	2	25	25	170			50	10	+7°	-20°	✓	Fig.4	37,500
		Standard Shank	MEW 25-S20-15-2T	○	2	25	20	120			29	15	+10°	-22°	✓	Fig.2	35,000
25-S25-15-2T	○		2	25	25	120	32	-22°	Fig.4	35,000							
32-S25-15-2T	○		2	32	25	130	32	-22°	Fig.2	30,000							
32-S32-15-2T	○		2	32	32	130	40	-22°	Fig.4	30,000							
32-S32-15-3T	○		3	32	32	130	40	-22°	Fig.4	30,000							
40-S32-15-3T	○		3	40	32	150	50	-21°	Fig.2	25,000							
40-S32-15-4T	○		4	40	32	150	50	-21°	Fig.2	25,000							
50-S32-15-4T	○		4	50	32	120	40	-21°	Fig.2	17,000							
Weldon	Standard Shank	MEW 16-W16-10-2T	□	2	16	16	75	25	10	+7°	-22°	✓	Fig.5	43,750			
		20-W20-10-2T	□	2	20	20	77	25			-20°		Fig.5	41,000			
		20-W20-10-3T	□	3	20	20	77	25			-20°		Fig.5	41,000			
		25-W25-10-2T	□	2	25	25	90	32			-20°		Fig.6	37,500			
		25-W25-10-3T	□	3	25	25	90	32			-20°		Fig.6	37,500			
		32-W32-10-4T	□	4	32	32	102	40			-20°		Fig.6	33,900			
		40-W32-10-5T	□	5	40	32	111	50			-19°		Fig.3	30,000			
		MEW 25-W25-15-2T	□	2	25	25	90	32			-22°		Fig.6	35,000			
		32-W32-15-3T	□	3	32	32	102	40			-22°		Fig.6	30,000			
		40-W32-15-4T	□	4	40	32	111	50			-21°		Fig.3	25,000			

○ : World Express (Shipping: 7-10 Business Days) □ : Made to Order / Quoted Item

Max. RPM\*  
When running the cutter at the maximum revolution, the insert or toolholder may be damaged by centrifugal force.

Spare Parts and Applicable Inserts **P9**

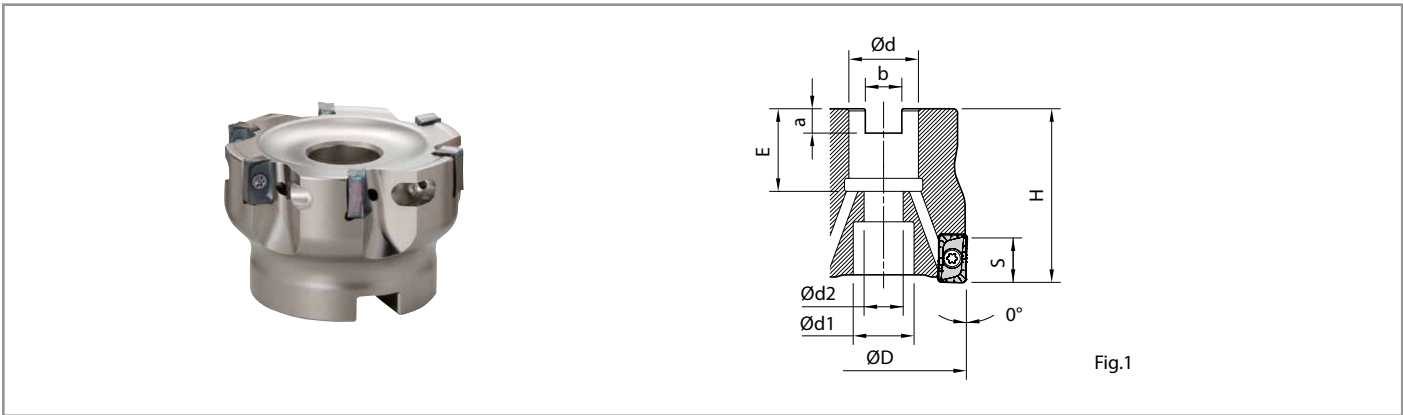


Fig.1

Toolholder Dimensions (Inch Size)

Part Number	Stock	No. of Inserts	Dimensions (in)									Rake Angle (°)		Coolant Hole	Drawing	Weight (kg)	Max. RPM*
			ØD	Ød	Ød1	Ød2	H	E	a	b	S	A.R. (Max)	R.R.				
MEW 1500R-10-5T	●	5	1.50	0.750	0.669	0.433	1.575	0.826	0.188	0.312	0.393	+7°	-19°	✓	Fig.1	0.2	30,700
	●	5	2.00	0.750	0.669	0.433	1.575	0.826	0.188	0.312						0.4	22,300
	●	6	2.50	0.750	0.669	0.433	1.575	0.826	0.188	0.312						0.6	20,400
MEW 2000R-15-4T	●	4	2.00	0.750	0.669	0.433	1.575	0.826	0.188	0.312	0.590	+10°	-21°	✓	Fig.1	0.4	16,800
	●	5	2.00	0.750	0.669	0.433	1.575	0.826	0.188	0.312						0.4	16,800
	●	5	2.50	0.750	0.669	0.433	1.575	0.826	0.188	0.312						0.5	14,400
	●	6	3.00	1.000	0.866	0.551	1.969	1.063	0.236	0.381						1.0	12,250
<b>NEW</b> 4000R-15-8T	●	8	4.00	1.500	2.047	-	1.969	1.181	0.393	0.625	0.590	+10°	-20°		1.8	10,400	

Max. RPM\*  
When running the cutter at the maximum revolution, the insert or toolholder may be damaged by centrifugal force.

● : U.S. Stock

Spare Parts and Applicable Inserts (Inch End Mills and Face Mills)

Part Number	Spare Parts					Applicable Inserts			
	Insert Screw	Wrench	Anti-Seize Compound	Arbor Bolt	Pre-Set Torque Wrench* <b>NEW</b>	General Purpose	Low Cutting Force	Tough Edge (Heavy Milling)	Non-ferrous Metals • Alumin <b>NEW</b>
MEW ...-10-_T	SB-306STRP	DTPM-8	P-37	-	PST-IP8	LOMU 1004..ER-GM	LOMU 100408ER-SM	LOMU 100408ER-GH	LOGT 100408FR-AM
MEW 1500R-10-5T	Recommended torque for insert screw 1.2Nm			HH3/8-1.25 (HH3/8-1.25H)					
MEW 2000R-10-5T									
MEW 2500R-10-6T									
MEW ...-15-_T	SB-4090TRP	DTPM-15	P-37	-	PST-IP15	LOMU 1505..ER-GM	LOMU 150508ER-SM	LOMU 150508ER-GH	LOGT 150508FR-AM
MEW 2000R-15-4T	Recommended torque for insert screw 3.5Nm			HH3/8-1.25 (HH3/8-1.25H)					
MEW 2500R-15-5T									
MEW 3000R-15-6T									
MEW 4000R-15-8T			-						

Coat Anti-seize Compound (P-37) thinly on portion of taper and thread prior to insert installation.

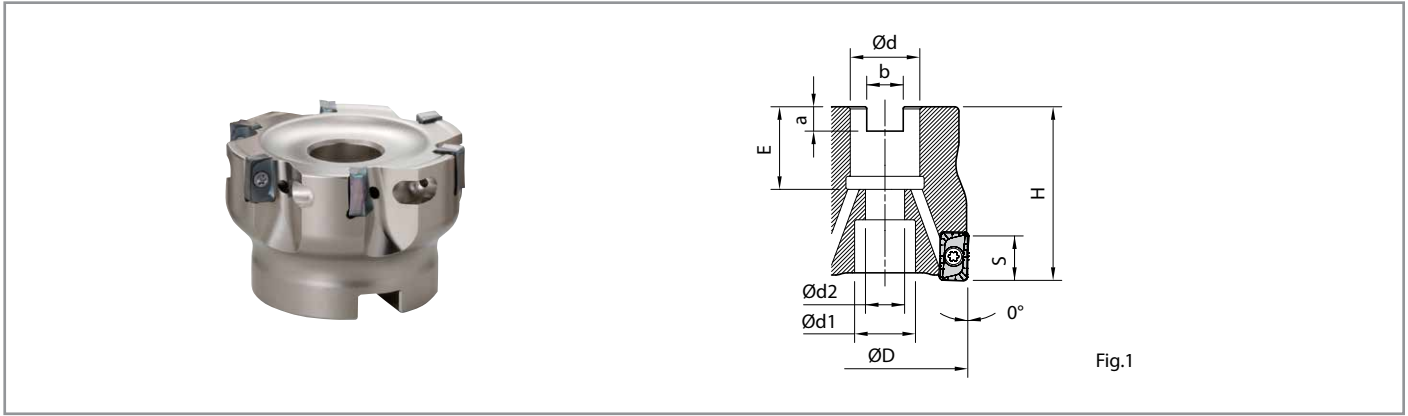
\*For prolonged insert and cutter life, it is recommended to use the pre-set torque wrench to ensure proper insert screw force.

Pre-Set Torque Wrench sold separately.

\*If through spindle coolant is required please order arbor bolt in ( ) separately.

Recommended Cutting Conditions **P17**





Toolholder Dimensions (Metric Size)

Part Number	Stock	No. of Inserts	Dimensions (mm)									Rake Angle (°)		Coolant Hole	Drawing	Weight (kg)	Max. RPM*
			ØD	Ød	Ød1	Ød2	H	E	a	b	S	A.R. (Max)	R.R.				
MEW 032R-10-4T-M	○	4	32	16	14	9	35	19	5.6	8.4	10	+7°	-20°	✓	Fig.1	0.1	33,900
040R-10-5T-M	○	5	40	16	14	9	40	19	5.6	8.4			-19°			0.2	30,000
050R-10-5T-M	○	5	50	22	18	11	40	21	6.3	10.4			-19°			0.4	22,500
063R-10-6T-M	○	6	63	22	18	11	40	21	6.3	10.4			-19°			0.5	20,500
MEW 040R-15-4T-M	○	4	40	16	14	9	40	19	5.6	8.4	15	+10°	-21°	✓	Fig.1	0.2	25,000
050R-15-4T-M	○	4	50	22	18	11	40	21	6.3	10.4			-21°			0.3	17,000
063R-15-5T-M	○	5	63	22	18	11	40	21	6.3	10.4			-21°			0.5	14,500
080R-15-6T-M	○	6	80	27	20	13	50	25	7	12.4			-20°			1.0	12,000
080R-15-6T	○	6	80	25.4	20	13	50	27	6	9.5			-20°			1.0	12,000

Max. RPM\*  
When running the cutter at the maximum revolution, the insert or toolholder may be damaged by centrifugal force.

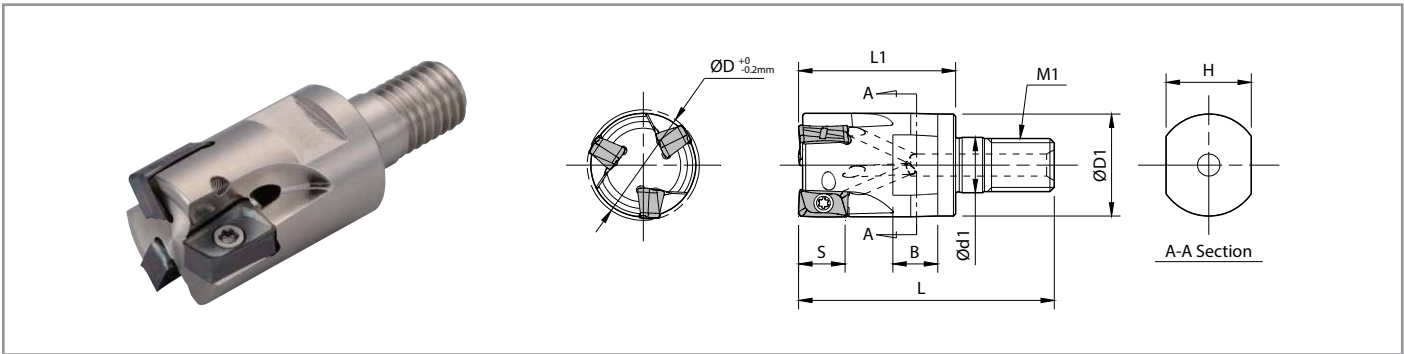
○ : World Express (Shipping: 7-10 Business Days)

Spare Parts and Applicable Inserts (Metric End Mills and Face Mills)

Part Number	Spare Parts					Applicable Inserts			
	Insert Screw	Wrench	Anti-Seize Compound	Arbor Bolt	Pre-Set Torque Wrench*	General Purpose	Low Cutting Force	Tough Edge (Heavy Milling)	Non-ferrous Metals • Alumin
MEW ...-10-_T	SB-3065TRP Recommended torque for insert screw 1.2Nm	DTPM-8	P-37	-	PST-IP8	LOMU 1004..ER-GM	LOMU 100408ER-SM	LOMU 100408ER-GH	LOGT 100408FR-AM
MEW 032R-10-4T-M				HH8×25 (HH8X25H)					
040R-10-5T-M				HH10×30 (HH10X30H)					
050R-10-5T-M									
MEW ...-15-_T	SB-4090TRP Recommended torque for insert screw 3.5Nm	DTPM-15	P-37	-	PST-IP15	LOMU 1505..ER-GM	LOMU 150508ER-SM	LOMU 150508ER-GH	LOGT 150508FR-AM
MEW 040R-15-4T-M				HH8×25 (HH8X25H)					
050R-15-4T-M				HH10×30 (HH10X30H)					
063R-15-5T-M				HH12×35 (HH12X35H)					

Coat Anti-seize Compound (P-37) thinly on portion of taper and thread prior to insert installation.  
 \*For prolonged insert and cutter life, it is recommended to use the pre-set torque wrench to ensure proper insert screw force.  
 Pre-Set Torque Wrench sold separately.  
 \*If through spindle coolant is required please order arbor bolt in ( ) separately.

Recommended Cutting Conditions **P17**







Toolholder Dimensions

Part Number	Stock	No. of Inserts	Dimensions (mm)									Rake Angle (°)		Coolant Hole	Applicable Inserts	Max. RPM*
			ØD	ØD1	Ød1	L	L1	M1	H	B	S	A.R. (Max)	R.R.			
MEW 16-M08-10-2T	○	2	16	14.7	8.5	43	25	M8×P1.25	12	8	10	+7°	-22°	✓	LOMU1004 LOGT1004	43,750
20-M10-10-2T	○	2	20	18.7	10.5	49	30	M10×P1.5	15	9			41,000			
20-M10-10-3T	○	3	20	18.7	10.5	49	30	M10×P1.5	15	9			41,000			
25-M12-10-3T	○	3	25	23	12.5	57	35	M12×P1.75	19	10			37,500			
32-M16-10-4T	○	4	32	30	17	63	40	M16×P2.0	24	12			33,900			
MEW 25-M12-15-2T	○	2	25	23	12.5	57	35	M12×P1.75	19	10	15	+10°	-22°	✓	LOMU1505 LOGT1505	35,000
32-M16-15-3T	○	3	32	30	17	63	40	M16×P2.0	24	12			30,000			

Max. RPM\*  
When running the cutter at the maximum revolution, the insert or toolholder may be damaged by centrifugal force.

○ : World Express (Shipping: 7-10 Business Days)

Spare Parts and Applicable Inserts (Modular End Mill)

Part Number	Spare Parts				Applicable Inserts			
	Insert Screw	Wrench	Anti-Seize Compound	Pre-Set Torque Wrench* <span style="color:red">NEW</span>	 General Purpose	 Low Cutting Force	 Tough Edge (Heavy Milling)	 Non-ferrous Metals - Aluminum <span style="color:red">NEW</span>
MEW 16-M08-10-2T	SB-3065TRP	DTPM-8	P-37	PST-IP8	LOMU 1004..ER-GM	LOMU 100408ER-SM	LOMU 100408ER-GH	LOGT 100408FR-AM
20-M10-10-2T	Recommended torque for insert screw 1.2Nm							
20-M10-10-3T								
25-M12-10-3T								
32-M16-10-4T								
MEW 25-M12-15-2T	SB-4090TRP	DTPM-15	P-37	PST-IP15	LOMU 1505..ER-GM	LOMU 150508ER-SM	LOMU 150508ER-GH	LOGT 150508FR-AM
32-M16-15-3T	Recommended torque for insert screw 3.5Nm							

Coat Anti-seize Compound (P-37) thinly on portion of taper and thread prior to insert installation.

\*For prolonged insert and cutter life, it is recommended to use the pre-set torque wrench to ensure proper insert screw force.

Pre-Set Torque Wrench sold separately.

Recommended Cutting Conditions P17

Modular End Mill Identification System

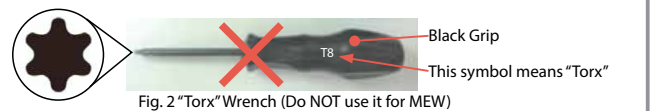


Wrenches and Clamp Screws are "Torx Plus" Styles

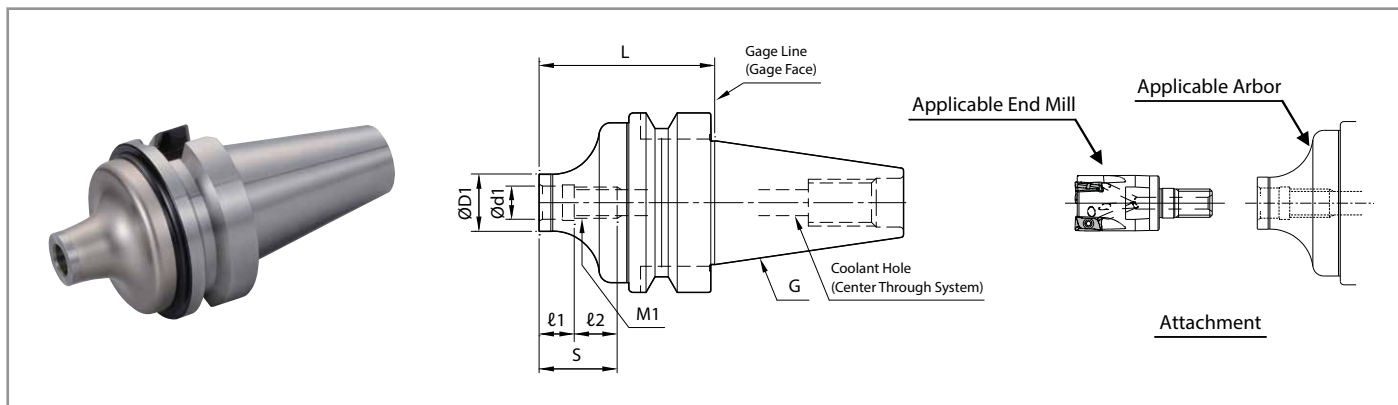
- 1) See Fig. 1 for "Torx Plus" Wrench. (Purple Grip)
- 2) See Fig. 2 for "Torx" Wrench. (Black Grip)

"Torx Plus" Wrench and "Torx" Wrench have different end shapes. Please use a "Torx Plus" Wrench.

If a "Torx" Wrench is used to tighten, the screw head might become damaged and then the screw cannot be removed.



# BT Arbor (for Exchangeable Head / Two Face Contact)



## Dimensions

Part Number	Stock	Dimensions (mm)							Coolant Hole	Arbor (Two-face Clamping) G	Applicable End Mill
		L	ØD1	Ød1	S	ℓ1	ℓ2	M1			
BT30K- M08-45	<input type="checkbox"/>	45	14.7	8.5	20	9	11	M8×P1.25	✓	BT30	MEW16-M08..
	<input type="checkbox"/>	45	18.7	10.5	21		12	M10×P1.5			MEW20-M10..
	<input type="checkbox"/>	45	23	12.5	24		15	M12×P1.75			MEW25-M12..
BT40K- M08-55	<input type="checkbox"/>	55	14.7	8.5	20	9	11	M8×P1.25	✓	BT40	MEW16-M08..
	<input type="checkbox"/>	60	18.7	10.5	21		12	M10×P1.5			MEW20-M10..
	<input type="checkbox"/>	55	23	12.5	24		15	M12×P1.75			MEW25-M12..
	<input type="checkbox"/>	65	30	17	25		16	M16×P2.0			MEW32-M16..

: Made to Order / Quoted Item

## Actual End Mill Depth

Arbor Part Number	Arbor Part Number	Applicable End Mill		Actual End Mill Depth (mm)		
		Part Number	Cutting Dia. (mm) øD	Dimension (mm) L1	M	L2
BT30K- M08-45	MEW16-M08..	ø16	25	31.8	6.8	
	MEW20-M10..	ø20	30	36.8	6.8	
	MEW25-M12..	ø25	35	42.8	7.8	
BT40K- M08-55	MEW16-M08..	ø16	25	31.7	6.7	
	MEW20-M10..	ø20	30	38.7	8.7	
	MEW25-M12..	ø25	35	44.6	9.6	
	MEW32-M16..	ø32	40	51.2	11.2	

## Arbor Identification System

**BT30 K - M08 - 45**

Arbor Size

Two-Face Clamping Spindle

Thread Size for Clamping

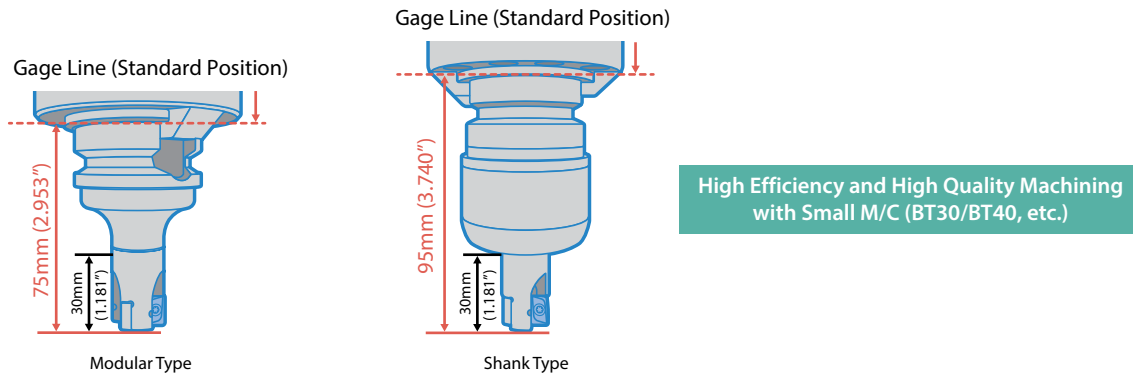
Length from the Gage

# Advantages of the Modular MEW

Comparing BT30 M/C (Dual Contact Clamping Spindle) + Cutting Dia. : Ø20mm with MEW End Mill

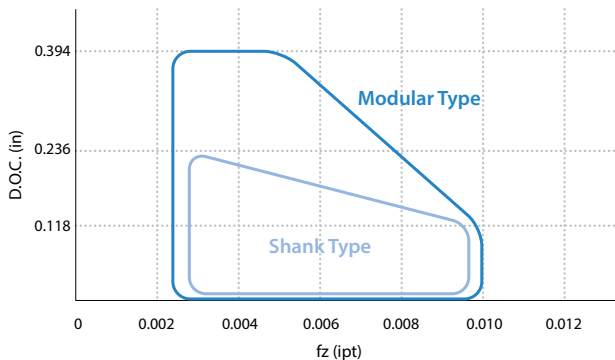
## 1 Low Gage Line Reduces Chattering

The distance from the cutting edge to the gage line is shorter with the same overhang length (30 mm / 1.181")



## 2 Applicable to a Wide Range of Applications

For a wide range of applications even in BT30 M/C

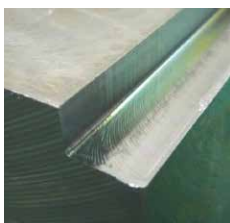


Cutting Conditions : Vc = 490 sfm, ae = 0.394", Shouldering, Dry  
Workpiece : 1055 BT30 M/C

Modular  
Head : MEW20-M10-10-3T, Arbor : BT30K-M10-45  
Insert : LOMU100408ER-GM (PR1525)

Shank  
Holder : MEW20-S20-10-3T, Arbor : BT30 Milling Chuck (Dual Contact Clamping)  
Insert : LOMU100408ER-GM (PR1525)

## 3 Smooth Surface Finish



Modular Type



Chattering

Shank Type

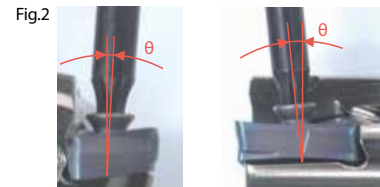
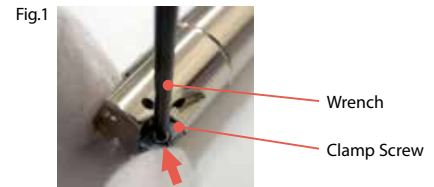
Cutting Conditions : Vc = 490 sfm, fz = 0.006 ipt, ae = 0.394", Shouldering, Dry  
Workpiece : 1055 BT30 M/C

Modular  
Head : MEW20-M10-10-3T, Arbor : BT30K-M10-45  
Insert : LOMU100408ER-GM (PR1525)

Shank  
Holder : MEW20-S20-10-3T, Arbor : BT30 Milling Chuck (Dual Contact Clamping)  
Insert : LOMU100408ER-GM (PR1525)

## How to Mount the Inserts

1. Be sure to remove dust and chips from the insert mounting pocket.
2. Apply anti-seize compound on portion of taper and thread of clamp screw.  
Attach the screw (magnetic head) to the front end of the wrench.  
While lightly pressing the insert against the pocket walls, put the screw into the hole of the insert and tighten. (See Fig. 1.)  
Tighten M3 screws (SB-3065TRP) slightly inclined from the insert surface. (See Fig. 2.)
3. When tightening the screw, make sure that the wrench is parallel to the screw.  
For recommended torque, see Table 1
4. After tightening the screw, make sure that there is no clearance between the insert seat surface and the pocket floor of the holder or between the insert side surfaces and the pocket walls of the holder. If there is any clearance, remove the insert and mount it again according to the above steps.



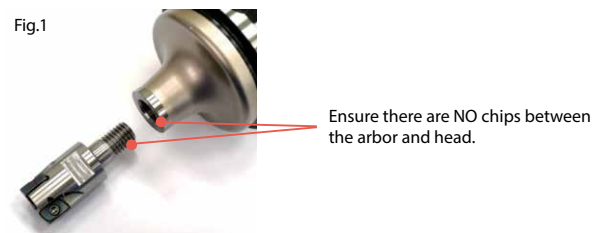
## How to Attach MEW Modul Head

1. When clamping the head on the arbor, make sure there is no dust or chips inside (Fig. 1).  
Do NOT put lubricant on the clamping portion.
2. Attach the head on the arbor and fix it using the wrench (Fig. 2).  
See Table 1 for Recommended Torque.  
Note) The wrench is NOT included with product.

Table 1. Recommended Head Torque

Thread Dia. Tolerance	Wrench Width Across Flat (mm)	Recommended Torque (Nm)
M8	12	23
M10	15	46
M12	19	80
M16	24	90

3. Confirm that the head is fixed firmly on the arbor (Fig. 3).

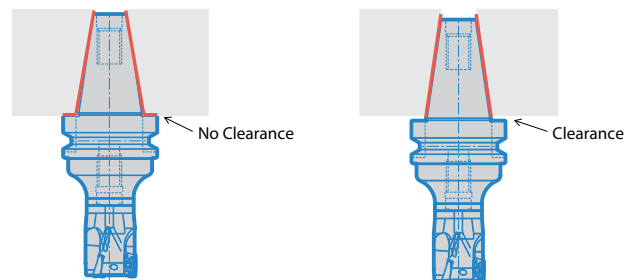


## Frequently Asked Questions

**Q.** Can the dual contact clamping arbor be mounted on a general BT spindle?

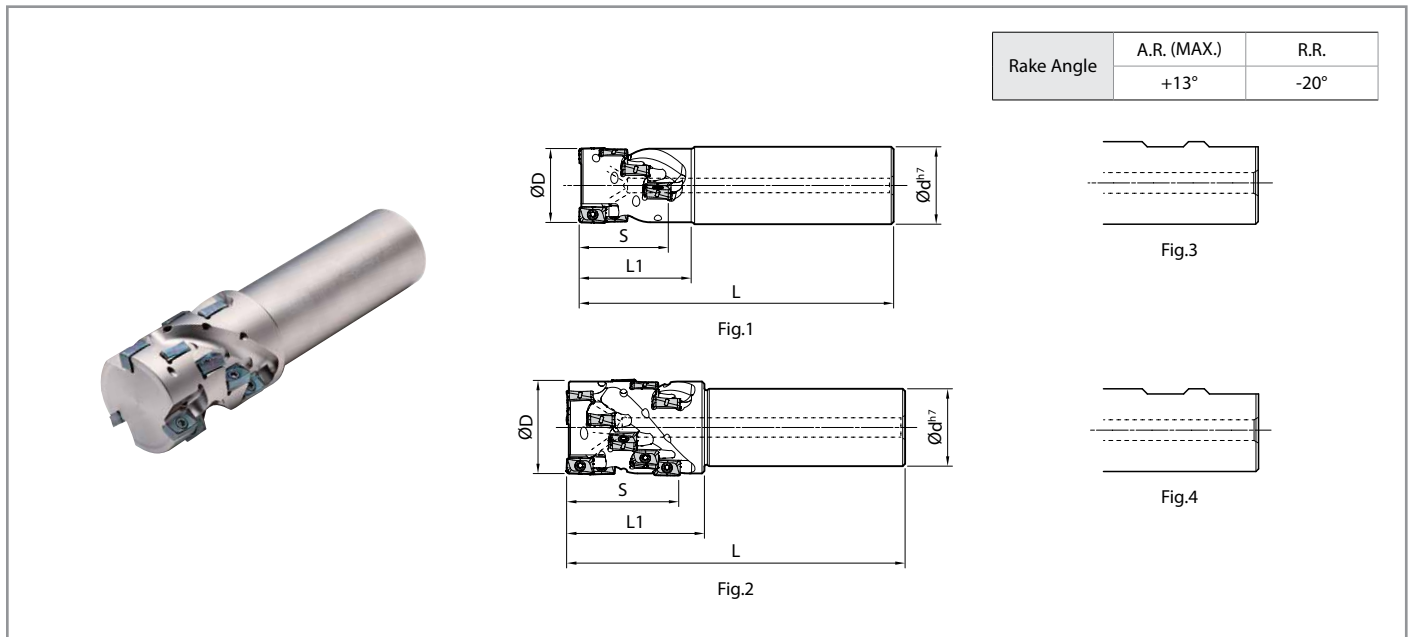
**A.** Yes. It can be used as a general BT arbor with a general BT spindle.

It can be used as a general BT arbor, though the advantage of the dual contact clamping will not apply.



Dual Contact Clamping Arbor Mounted on Dual Contact Clamping Spindle

Dual Contact Clamping Arbor Mounted on General Spindle



Toolholder Dimensions (Inch Size)

Shank	Part Number	Stock	No. of Flutes	No. of Stages	No. of Inserts	Dimensions (in)					Coolant Hole	Drawing	Spare Parts				Applicable Inserts	
						ØD	Ød	L	L1	S			Insert Screw	Wrench	Anti-Seize Compound	Pre-Set Torque Wrench*		NEW
Weldon	MEWH 1000-W100-10-3-2T	●	2	3	6	1.000	1.000	3.806	1.523	1.102	✓	Fig.3	SB-3065TRP	DTPM-8	P-37	PST-IP8	LOMU1004..	
	1250-W125-10-4-2T	●	2	4	8	1.250	1.250	4.161	1.878	1.456		Fig.3	Recommended torque for insert screw 1.2Nm					
	1500-W125-10-5-3T	●	3	5	15	1.500	1.250	4.610	2.244	1.811		Fig.4						
	1500-W150-10-5-3T	□	3	5	15	1.500	1.500	4.957	2.267	1.811	Fig.3							
	MEWH 1500-W125-15-4-2T	●	2	4	8	1.500	1.250	4.846	2.480	2.086	✓	Fig.4	SB-4090TRP	DTPM-15	P-37	PST-IP15	LOMU1505..	
	1500-W150-15-4-2T	■	2	4	8	1.500	1.500	5.193	2.504	2.086		Fig.3	Recommended torque for insert screw 3.5Nm					
2000-W150-15-4-3T	●	3	4	12	2.000	1.500	5.252	2.480	2.086	Fig.4								

Toolholder Dimensions (Metric Size)

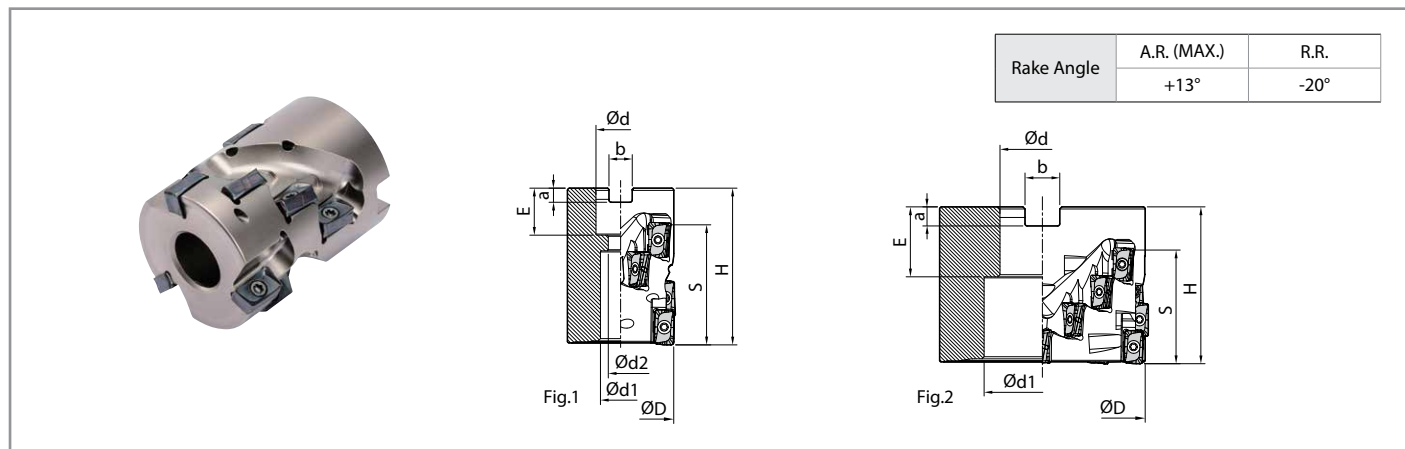
Shank	Part Number	Stock	No. of Flutes	No. of Stages	No. of Inserts	Dimensions (mm)					Coolant Hole	Drawing	Spare Parts				Applicable Inserts	
						ØD	Ød	L	L1	S			Insert Screw	Wrench	Anti-Seize Compound	Pre-Set Torque Wrench*		NEW
Cylindrical	MEWH 025-S25-10-3-2T	○	2	3	6	25	25	120	37	28	✓	Fig.1	SB-3065TRP	DTPM-8	P-37	PST-IP8	LOMU1004..	
	032-S32-10-4-2T	○	2	4	8	32	32	130	46	37		Fig.1	Recommended torque for insert screw 1.2Nm					
	040-S32-10-5-2T	○	2	5	10	40	32	140	57	46		Fig.2						
	040-S32-10-5-3T	○	3	5	15	40	32	140	57	46	Fig.2							
	MEWH 040-S32-15-4-2T	○	2	4	8	40	32	160	63	53	✓	Fig.2	SB-4090TRP	DTPM-15	P-37	PST-IP15	LOMU1505..	
	050-S42-15-4-2T	○	2	4	8	50	42	160	63	53		Fig.2	Recommended torque for insert screw 3.5Nm					
050-S42-15-4-3T	○	3	4	12	50	42	160	63	53	Fig.2								

Coat Anti-seize Compound (P-37) thinly on portion of taper and thread prior to insert installation.  
 \*For prolonged insert and cutter life, it is recommended to use the pre-set torque wrench to ensure proper insert screw force.  
 Pre-Set Torque Wrench sold separately.

Aluminum machining is not recommended (AM chipbreaker is not available for MEWH)

● : U.S. Stock □ : Made to Order / Quoted Item  
 ○ : World Express (Shipping: 7-10 Business Days)

Recommended Cutting Conditions **P17**



Toolholder Dimensions (Inch Size)

Part Number	Stock	No. of Flutes	No. of Stages	No. of Inserts	Dimensions (in)										Drawing	Spare Parts					
					ØD	Ød	Ød1	Ød2	H	E	a	b	S	Insert Screw		Wrench	Anti-Seize Compound	Arbor Bolt	Pre-Set Torque Wrench*	Applicable Inserts	
																					NEW
MEWH 1500R-10-4-3T	☐	3	4	12	1.50	0.75	0.669	0.433	2.087	0.750	0.187	0.312	1.456	Fig.1	SB-3065TRP	DTPM-15	MP-1	HH3/8-1.25	PST-IP8	LOMU1004..	
2000R-10-5-3T	☐	3	5	15	2.00	0.75	0.669	0.433	2.520	0.750	0.187	0.312	1.811	Fig.1	Recommended torque for insert screw 1.2Nm			HH3/8-1.25			
MEWH 2000R-15-4-3T	●	3	4	12	2.00	0.75	0.669	0.433	2.756	0.750	0.187	0.312	2.086	Fig.1	SB-4090TRP	DTPM-15	MP-1	HH3/8-1.25	PST-IP15	LOMU1505..	
2500R-15-3-3T	☐	3	3	9	2.50	1.00	0.866	0.551	2.283	1.063	0.236	0.381	1.614	Fig.1	Recommended torque for insert screw 3.5Nm			HH1/2-1.25			
3000R-15-4-4T	☐	4	4	16	3.00	1.00	0.866	0.551	2.756	1.063	0.236	0.381	2.086	Fig.1				HH1/2-1.25			
4000R-15-4-5T	☐	5		20	4.00	1.50	2.047	-	2.913	1.142	0.393	0.625	2.086	Fig.2			-				

Toolholder Dimensions (Metric Size)

Part Number	Stock	No. of Flutes	No. of Stages	No. of Inserts	Dimensions (mm)										Drawing	Spare Parts					
					ØD	Ød	Ød1	Ød2	H	E	a	b	S	Insert Screw		Wrench	Anti-Seize Compound	Arbor Bolt	Pre-Set Torque Wrench*	Applicable Inserts	
																					NEW
MEWH 040R-10-4-3T-M	○	3	4	12	40	16	15	9	53	19	5.6	8.4	37	Fig.1	SB-3065TRP	DTPM-8	P-37	HH8X25	PST-IP8	LOMU1004..	
050R-10-5-3T-M	○	3	5	15	50	22	18	11	64	21	6.3	10.4	46	Fig.1	Recommended torque for insert screw 1.2Nm			HH10X30			
MEWH 050R-15-4-3T-M	○	3	4	12	50	22	18	11	70	21	6.3	10.4	53	Fig.1	SB-4090TRP	DTPM-15	P-37	HH10X30	PST-IP15	LOMU1505..	
063R-15-3-3T-M	○	3	3	9	63	27	20	13	58	24	7	12.4	41	Fig.1	Recommended torque for insert screw 3.5Nm			HH12X35			
080R-15-4-4T-M	○	4	4	16	80	32	26	18	70	28	8	14.4	53	Fig.1				HH16X45			
100R-15-4-5T-M	○	5	4	20	100	40	55	18	74	33	9	16.4	53	Fig.2			HH16X45				

Coat Anti-seize Compound (P-37) thinly on portion of taper and thread prior to insert installation.

\*For prolonged insert and cutter life, it is recommended to use the pre-set torque wrench to ensure proper insert screw force.

Pre-Set Torque Wrench sold separately.

Aluminum machining is not recommended (AM chipbreaker is not available for MEWH)

● : U.S. Stock ☐ : Made to Order / Quoted Item

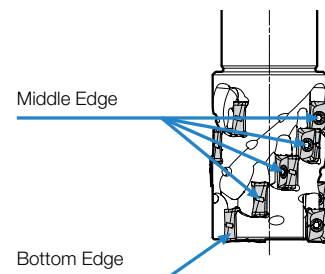
○ : World Express (Shipping: 7-10 Business Days)

Recommended Cutting Conditions **P17**





Applicable Insert Placement Guide for MEWH

Insert Location	Toolholder Part Number											
	MEWH...10...						MEWH...15...					
	Corner R(℞) (mm)						Corner R(℞) (mm)					
Bottom Edge	0.4	0.8	1.2	1.6	2.0	0.4	0.8	1.0	1.2	1.6	2.0	
*Middle Edge	0.4 / 0.8	0.4 / 0.8	0.4 / 0.8	0.4	0.4	0.4 - 1.6	0.4 - 1.6	0.4 - 1.6	0.4 - 1.6	0.4 - 1.6	0.4 - 1.6	

\*For Middle Edges, it is not recommended to use an insert with a larger corner R (℞) than shown in the table, because it will make finished surface uneven.









# Applicable Inserts

Usage Classification	P	Carbon Steel / Alloy Steel		☆	★								Applicable Toolholder		
		Mold Steel		☆	★										
		Austenitic Stainless Steel		★	☆										
★ : Roughing / 1st Choice ☆ : Roughing / 2nd Choice ■ : Finishing / 1st Choice □ : Finishing / 2nd Choice (Hardness < 45HRC)	M	Martensitic Stainless Steel		☆			★								
		Precipitation Hardened Stainless Steel		★											
		K		Gray Cast Iron					★						
	Nodular Cast Iron							★							
	N		Non-ferrous Metals / Aluminum							★	☆				
	S		Ni-base Heat Resistant Alloy		☆				★						
	Titanium Alloy		★					☆							
	H		Hardened Materials								□				
	Insert	Part Number	Dimension (in)						MEGACOAT NANO				CVD Coated Carbide	DLC Coated Carbide	Carbide
			A	T	Ød	W	Z	rε	PR1535	PR1525	PR1510		CA6535	PDL025	GW25
 General Purpose	LOMU 100404ER-GM 100408ER-GM 100412ER-GM 100416ER-GM 100420ER-GM	0.260	0.157	0.134	0.429	0.083	0.016	●	●	●	●			MEW...-10.. MEWH...-10..	
						0.067	0.031	●	●	●	●				
						0.051	0.047	●	●	●	○				
						0.039	0.063	●	●	●	●				
						0.039	0.079	●	●	●	○				
	LOMU 150504ER-GM 150508ER-GM 150510ER-GM 150512ER-GM 150516ER-GM 150520ER-GM	0.362	0.220	0.189	0.618	0.087	0.016	●	●	○	●				MEW...-15.. MEWH...-15..
						0.071	0.031	●	●	●	●				
						0.063	0.039	●	●	●	○				
						0.055	0.047	●	●	●	○				
						0.039	0.063	●	●	●	●				
 Low Cutting Force	LOMU 100408ER-SM	0.260	0.157	0.134	0.429	0.067	0.031	●	●	●	○		MEW...-10.. MEWH...-10..		
	LOMU 150508ER-SM	0.362	0.220	0.189	0.618	0.071	0.031	●	●	●	○		MEW...-15.. MEWH...-15..		
 Tough Edge (Heavy Milling)	LOMU 100408ER-GH	0.260	0.157	0.134	0.429	0.067	0.031	●	●	●	○		MEW...-10.. MEWH...-10..		
	LOMU 150508ER-GH	0.362	0.220	0.189	0.618	0.071	0.031	●	●	●	○		MEW...-15.. MEWH...-15..		
 NEW Non-ferrous Metals / Aluminum (2-edge Insert)	LOGT 100408FR-AM	0.268	0.157	0.142	0.437	0.110	0.031					●	●	MEW...-10..	
	LOGT 150508FR-AM	0.350	0.220	0.193	0.626	0.110	0.031					●	●	MEW...-15..	

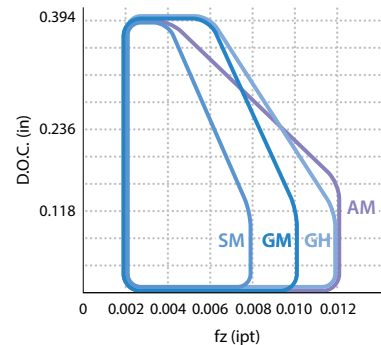
● : U.S. Stock ○ : World Express (Shipping: 7-10 Business Days)

## LOMU...ER-GM Insert Appearance

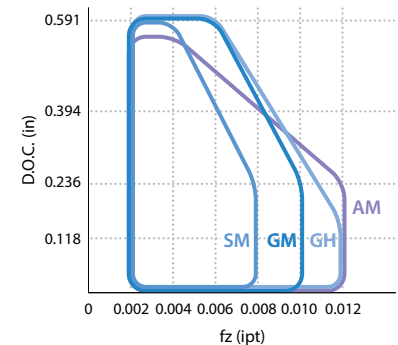
LOMU100404ER-GM LOMU150504ER-GM  04 Marking on Insert	LOMU100408ER-GM LOMU150508ER-GM  08 Has No Dimension Marking
LOMU150510ER-GM  10 Marking on Insert	LOMU100412ER-GM LOMU150512ER-GM  12 Marking on Insert
LOMU100416ER-GM LOMU150516ER-GM  16 Marking on Insert	LOMU100420ER-GM LOMU150520ER-GM  20 Marking on Insert

## Applicable Chipbreaker Range (Shouldering)

LOMU10 Insert



LOMU15 Insert



Cutting Conditions : Vc = 490 sfm, ae = ØD/2 Workpiece : 1049



# Recommended Cutting Conditions ★ 1st Recommendation ☆ 2nd Recommendation

Chipbreaker	Workpiece	fz:mm/t			Recommended Insert Grade (Vc: m/min)					
		Toolholder Descriptions			MEGACOAT NANO			CVD Coated Carbide	DLC Coated Carbide	Carbide
		MEW0625-MEW0750 MEW16 - MEW18	MEW1000-MEW1500 MEW1500R-MEW3000R MEW20 - MEW40 MEW040R - MEW080R	MEW1000W-40000 MEWH025 - MEWH050 (Helical End Mill)	PR1535	PR1525	PR1510	CA6535	PDL025	GW25
G M	Carbon Steel	0.002 - <b>0.004</b> - 0.008	0.003 - <b>0.006</b> - 0.010	0.002 - <b>0.004</b> - 0.008	☆ 390 - <b>590</b> - 820	★ 390 - <b>590</b> - 820	-	-	-	-
	Alloy Steel	0.002 - <b>0.004</b> - 0.006	0.003 - <b>0.006</b> - 0.008	0.002 - <b>0.004</b> - 0.006	☆ 330 - <b>520</b> - 720	★ 330 - <b>520</b> - 720	-	-	-	-
	Mold Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.008	0.002 - <b>0.003</b> - 0.005	☆ 260 - <b>460</b> - 590	★ 260 - <b>460</b> - 590	-	-	-	-
	Austenitic Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.006	0.002 - <b>0.003</b> - 0.005	☆ 330 - <b>520</b> - 660	☆ 330 - <b>520</b> - 660	-	-	-	-
	Martensitic Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.008	0.002 - <b>0.003</b> - 0.004	☆ 490 - <b>660</b> - 820	-	-	★ 590 - <b>790</b> - 980	-	-
	Precipitation Hardened Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.008	0.002 - <b>0.003</b> - 0.004	★ 300 - <b>390</b> - 490	-	-	-	-	-
	Gray Cast Iron	0.002 - <b>0.004</b> - 0.007	0.003 - <b>0.007</b> - 0.010	0.002 - <b>0.004</b> - 0.007	-	-	★ 390 - <b>590</b> - 820	-	-	-
	Nodular Cast Iron	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.006</b> - 0.008	0.002 - <b>0.003</b> - 0.005	-	-	★ 330 - <b>490</b> - 660	-	-	-
	Ni-base Heat-Resistant Alloy	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.006	0.002 - <b>0.003</b> - 0.004	☆ 70 - <b>100</b> - 160	-	-	★ 70 - <b>100</b> - 160	-	-
	Titanium Alloy	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.006</b> - 0.008	0.002 - <b>0.003</b> - 0.005	☆ 130 - <b>200</b> - 260	-	☆ 100 - <b>160</b> - 230	-	-	-
S M	Carbon Steel	0.002 - <b>0.004</b> - 0.007	0.003 - <b>0.006</b> - 0.008	0.002 - <b>0.004</b> - 0.007	☆ 390 - <b>590</b> - 820	★ 390 - <b>590</b> - 820	-	-	-	-
	Alloy Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.007	0.002 - <b>0.003</b> - 0.005	☆ 330 - <b>520</b> - 720	★ 330 - <b>520</b> - 720	-	-	-	-
	Mold Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.004</b> - 0.006	0.002 - <b>0.003</b> - 0.005	☆ 260 - <b>460</b> - 590	★ 260 - <b>460</b> - 590	-	-	-	-
	Austenitic Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.004</b> - 0.006	0.002 - <b>0.003</b> - 0.005	★ 330 - <b>520</b> - 660	☆ 330 - <b>520</b> - 660	-	-	-	-
	Martensitic Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.004</b> - 0.006	0.002 - <b>0.003</b> - 0.004	☆ 490 - <b>660</b> - 820	-	-	★ 590 - <b>790</b> - 980	-	-
	Precipitation Hardened Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.004</b> - 0.006	0.002 - <b>0.003</b> - 0.004	☆ 300 - <b>390</b> - 490	-	-	-	-	-
	Ni-base Heat-Resistant Alloy	0.002 - <b>0.003</b> - 0.004	0.003 - <b>0.004</b> - 0.005	0.002 - <b>0.003</b> - 0.004	☆ 70 - <b>100</b> - 160	-	-	★ 70 - <b>100</b> - 160	-	-
	Titanium Alloy	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.006	0.002 - <b>0.003</b> - 0.005	★ 130 - <b>200</b> - 260	-	☆ 100 - <b>160</b> - 230	-	-	-
G H	Carbon Steel	0.002 - <b>0.004</b> - 0.008	0.003 - <b>0.008</b> - 0.012	0.002 - <b>0.004</b> - 0.008	☆ 390 - <b>590</b> - 820	★ 390 - <b>590</b> - 820	-	-	-	-
	Alloy Steel	0.002 - <b>0.004</b> - 0.006	0.003 - <b>0.008</b> - 0.010	0.002 - <b>0.004</b> - 0.006	☆ 330 - <b>520</b> - 720	★ 330 - <b>520</b> - 720	-	-	-	-
	Mold Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.006</b> - 0.009	0.002 - <b>0.003</b> - 0.005	☆ 260 - <b>460</b> - 590	★ 260 - <b>460</b> - 590	-	-	-	-
	Austenitic Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.006	0.002 - <b>0.003</b> - 0.005	☆ 330 - <b>520</b> - 660	☆ 330 - <b>520</b> - 660	-	-	-	-
	Martensitic Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.008	0.002 - <b>0.003</b> - 0.004	☆ 490 - <b>660</b> - 820	-	-	☆ 590 - <b>790</b> - 980	-	-
	Precipitation Hardened Stainless Steel	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.008	0.002 - <b>0.003</b> - 0.004	☆ 300 - <b>390</b> - 490	-	-	-	-	-
	Gray Cast Iron	0.002 - <b>0.004</b> - 0.008	0.003 - <b>0.009</b> - 0.012	0.002 - <b>0.004</b> - 0.008	-	-	☆ 390 - <b>590</b> - 820	-	-	-
	Nodular Cast Iron	0.002 - <b>0.003</b> - 0.006	0.003 - <b>0.007</b> - 0.010	0.002 - <b>0.003</b> - 0.006	-	-	☆ 330 - <b>490</b> - 660	-	-	-
	Ni-base Heat-Resistant Alloy	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.005</b> - 0.006	0.002 - <b>0.003</b> - 0.004	☆ 70 - <b>100</b> - 160	-	-	☆ 70 - <b>100</b> - 160	-	-
	Titanium Alloy	0.002 - <b>0.003</b> - 0.005	0.003 - <b>0.006</b> - 0.008	0.002 - <b>0.003</b> - 0.005	☆ 130 - <b>200</b> - 260	-	☆ 100 - <b>160</b> - 230	-	-	-
A M	Aluminum (Si < 13%)	0.002 - <b>0.005</b> - 0.008	0.0105 - <b>0.007</b> - 0.012	NOT Recommended	-	-	-	-	★ 660 - 2,950	☆ 660 - 980
	Aluminum (Si > 13%)	0.002 - <b>0.003</b> - 0.005	0.002 - <b>0.005</b> - 0.008		-	-	-	-	-	-

Bold numbers in the table indicate the most recommended value of feed (f). Adjust cutting speed and feed rate according to the actual machining conditions.

Coolant is recommended for Ni-base heat-resistant alloy and titanium alloy with MEW.

Coolant is recommended for stainless steel, Ni-base heat-resistant alloy, and titanium alloy with MEWH.

# MEW Cutting Performance

## LOMU1004 Insert

Part Number	Shouldering (Cutting Width $ae = \varnothing D/2$ )	Slotting
MEW0625...-10 MEW0750...-10 MEW16...-10 MEW18...-10		
MEW1000...-10 MEW1500...-10 MEW20...-10 MEW50...-10		
MEW20-S20-10-150-2T MEW25-S25-10-170-2T (Long Shank)		
MEW032R...-10 MEW063R...-10		

## LOMU1505 Insert

Part Number	Shouldering (Cutting Width $ae = \varnothing D/2$ )	Slotting
MEW1000...-15 MEW1500...-15 MEW25...-15 MEW50...-15		
MEW2000...-15 MEW3000...-15 MEW040R...-15 MEW080R...-15		

Cutting Conditions :  $V_c = 590$  sfm, GM Chipbreaker Workpiece : 1049  
Overhang Length

1. End Mill : Overhang length is "E" in the product dimensions table
2. Face Mill : Overhang length is "H" in the product dimensions table + minimum arbor overhang

# MEWH Cutting Performance

## LOMU1004 Insert

Cutting Dia.	Part Number	2 Flute (D.O.C. $\times$ ae)	Part Number	3 Flute (D.O.C. $\times$ ae)
$\varnothing 1.000''$ $\varnothing 25\text{mm}$	MEWH1000 -W100-10-3-2T		-	-
	MEWH025 -S25-10-3-2T			
$\varnothing 1.250''$ $\varnothing 32\text{mm}$	MEWH1250 -W125-10-4-2T		-	-
	MEWH032 -S32-10-4-2T			
$\varnothing 1.500''$ $\varnothing 40\text{mm}$	MEWH1500 -W125-10-5-2T MEWH040 -S32-10-5-2T		MEWH040 -S32-10-5-3T	

## LOMU1505 Insert

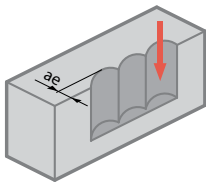
Cutting Dia.	Part Number	2 Flute (D.O.C. $\times$ ae)	Part Number	3 Flute (D.O.C. $\times$ ae)
$\varnothing 1.500''$ $\varnothing 40\text{mm}$	MEWH1500 -W125-15-4-2T		-	-
	MEWH040 -S32-15-4-2T			
$\varnothing 2.000''$ $\varnothing 50\text{mm}$	MEWH2000 -W150-15-4-2T		MEWH2000 -W150-15-4-3T	
	MEWH050 -S42-15-4-2T		MEWH050 -S42-15-4-3T	

Cutting Conditions :  $V_c = 490$  sfm,  $f_z = 0.003 - 0.005$  ipt, GM Chipbreaker Workpiece : 4137

Overhang Length

End Mill : Overhang length is "L1" in the product dimension table

# Plunging



## Available for Plunging

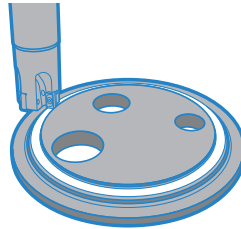
Insert Part Number	Maximum Width of Cut (ae)
LOMU10 LOGT10	0.197"
LOMU15 LOGT15	0.276"

NOT available for ramping and helical milling, because interference between workpiece and insert may occur.

## Case Studies (MEW)

### Construction Equipment Part A36

Vc = 820 sfm  
 fz = 0.006 ipt (Vf = 53.150 ipm)  
 D.O.C. x ae = 0.158" x 0.787"  
 Wet  
 MEW1250-W100-10-4T (4 Flutes)  
 LOMU100408ER-GM (PR1525)



Chip Removal Rate

**PR1525**

**108 cc/min**

Machining Efficiency

**1.5x**

Competitor L  
(Positive Cutter)

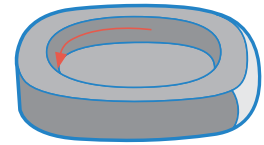
**72 cc/min**

MEW showed stable milling without chattering at higher feed rates, improving the cutting efficiency by 150%. Burrs are prevented and excellent surface finish is achieved.

(User Evaluation)

### Mold Part H13 (45HRC)

Vc = 330 sfm  
 fz = 0.004 ipt (Vf = 15.748 ipm)  
 D.O.C. x ae = 0.138" x 1.181"  
 Dry  
 MEW1250-W100-10-4T (4 Flutes)  
 LOMU100408ER-GH (PR1525)



Chip Removal Rate

**PR1525**

**42 cc/min (Further Milling Possible)**

Machining Efficiency

**2x**

Competitor M  
(Positive Cutter)

**21 cc/min**

(Unable to Continue Cutting)

MEW doubled cutting efficiency while MEW inserts also have double the number of edges (4-edge) for drastic cost reduction.

(User Evaluation)



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