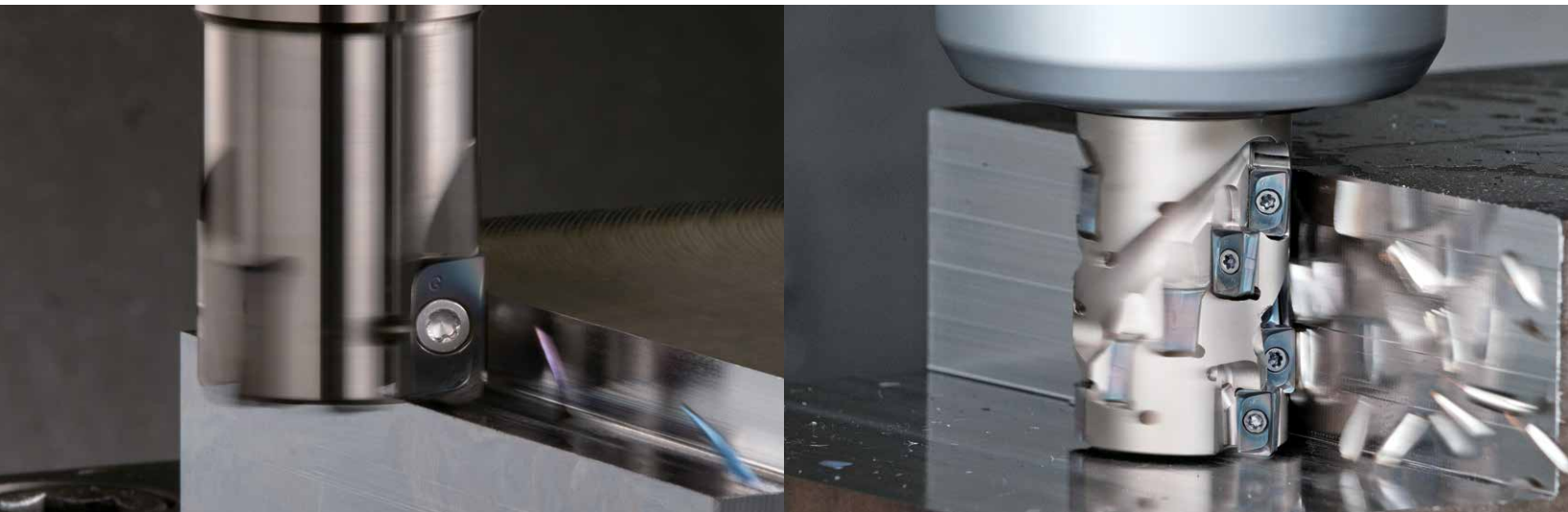




# M-FOUR (MEW)

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



# M-FOUR (MEW)

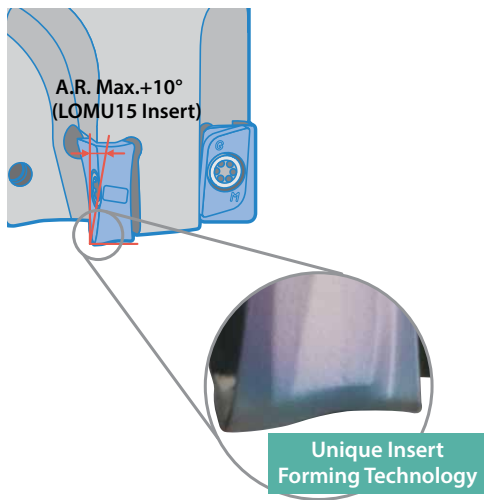
90° Milling with Double-sided 4-edge Insert

Low Cutting Forces with Chatter Resistance for Excellent Surface Finish

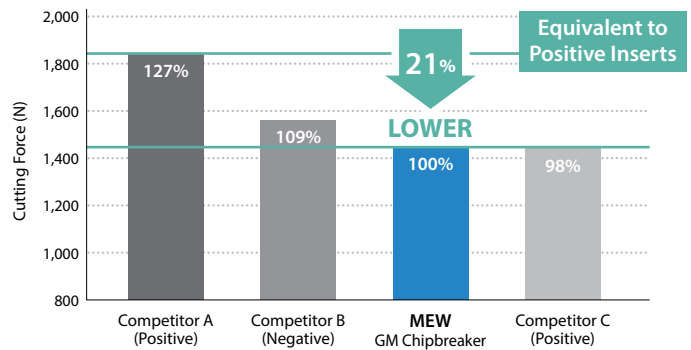
Wide Application Range with New DLC Coating PDL025 for Machining Aluminum

## 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)

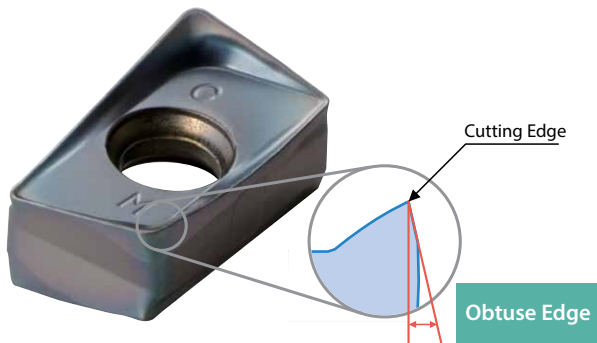


Cutting force is the resultant force of the principal force and the feed force.

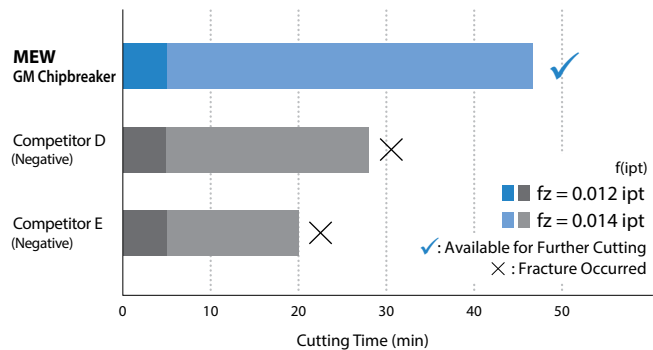
Cutting Conditions : Vc = 490 sfm, fz = 0.006 ipt, D.O.C. × ae = 0.118" × 0.591"  
Cutter Dia. Ø0.750" Workpiece : 1040

## 2 Excellent Fracture Resistance

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



Fracture Resistance Comparison (In-house Evaluation)

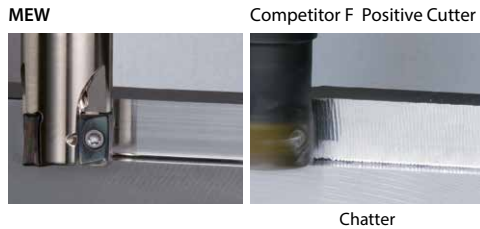


Cutting Conditions : Vc = 390 sfm, fz = 0.012 - 0.014 ipt, D.O.C. × ae = 0.118" × 0.394"  
Cutter Dia. Ø0.750" Workpiece : 4140H (28-32 HRC)

### 3 Improved Surface Finish & Minimized Vibration

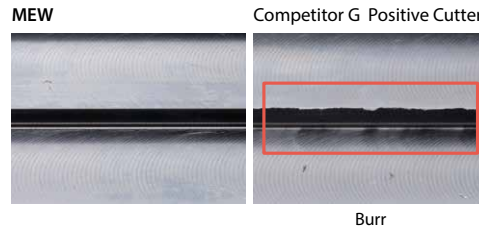
Sharp cutting and superior burr and vibration resistance due to helical cutting edge and optimum axial rake design

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)

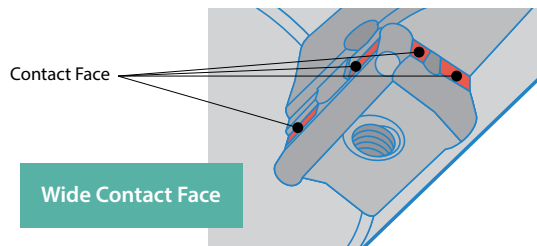


Cutting Conditions : Vc = 820 sfm, fz = 0.004 ipt, D.O.C. x ae = 0.158" x 0.197"  
Cutter Dia. 00.750, Dry Workpiece : 1049

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

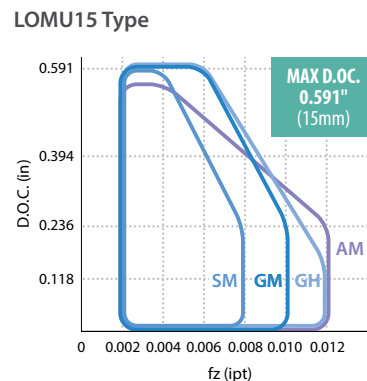
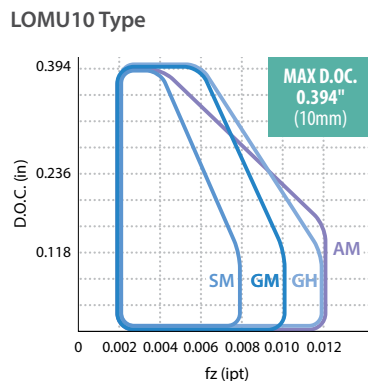


### 5 Various Chipbreakers for a Wide Range of Applications

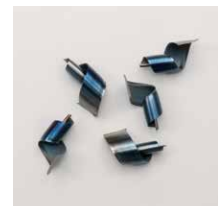
4 types of chipbreakers for a wide range of applications along with a large lineup of corner R (rε) for the GM chipbreaker

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

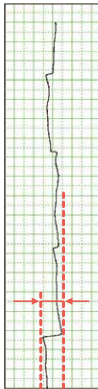
Excellent Surface Finish and Stable Machining due to Innovative Toolholder Design  
Economical 4-edge Inserts

### 1 Improved Surface Finish & Minimized Vibration

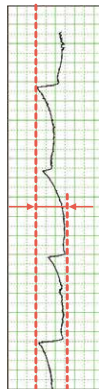
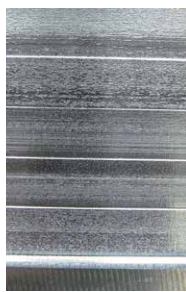
#### Better surface quality than competitor

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  
MEWH1500-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 = 0.006 ipt	fz = 0.008 ipt
GM	4137		
GM	A36		
SM			



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

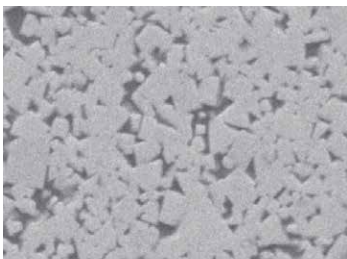
# PR1535 MEGACOAT NANO

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

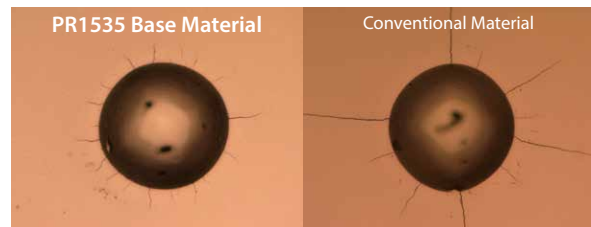


↑  
23%  
Fracture  
Toughness

## 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)

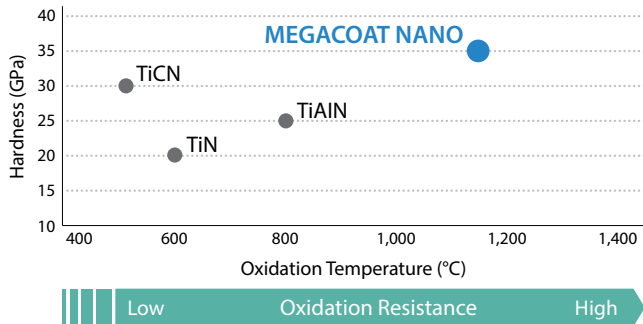


**Short Cracks**  
(High Impact Improvement)

**Long Cracks**

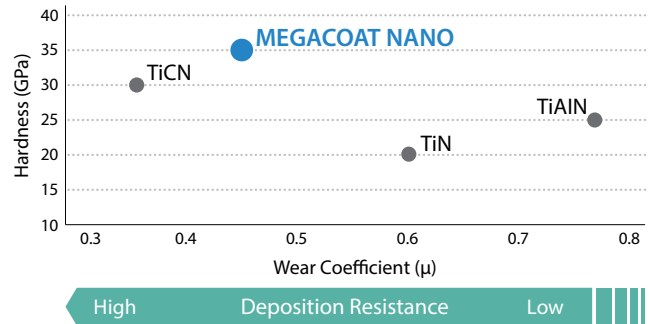
↑  
Shock  
Resistance

### 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)

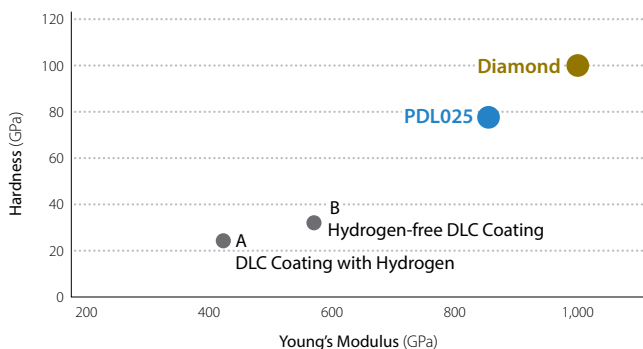


Stable machining with excellent wear resistance

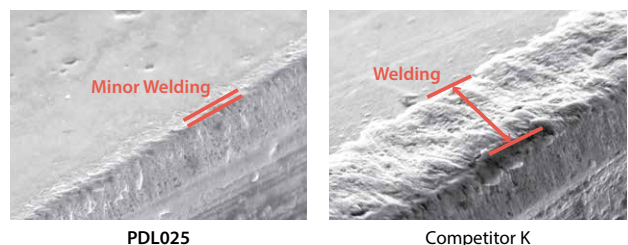
# NEW PDL025 DLC Coated Carbide

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

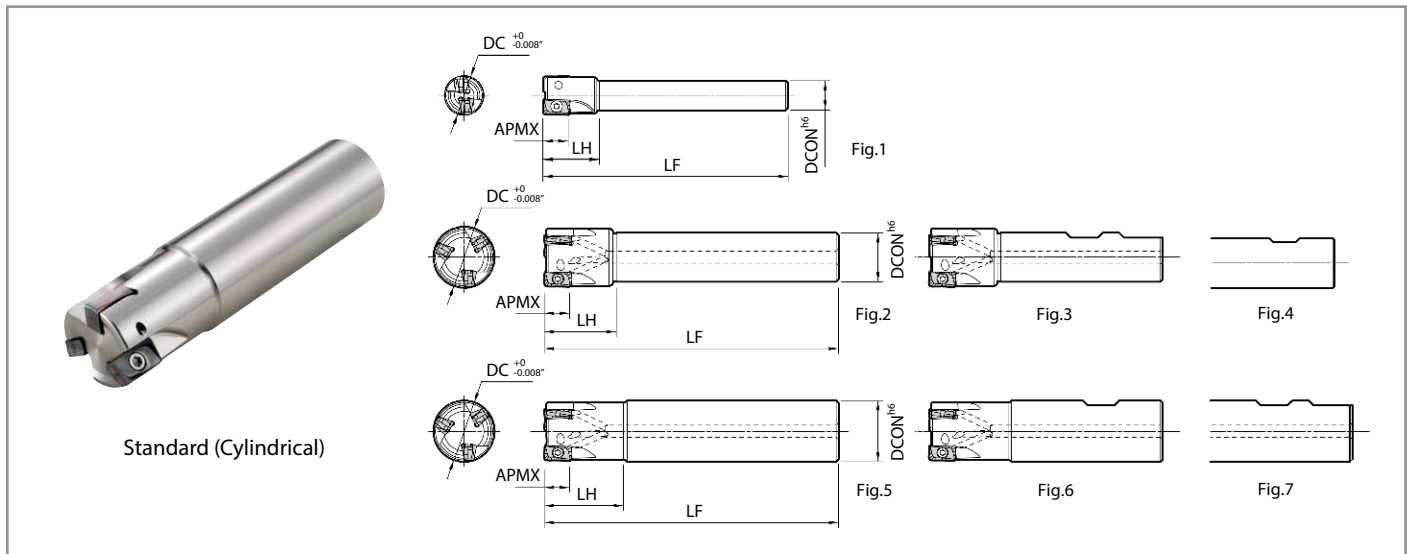
### Coating Properties



### 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



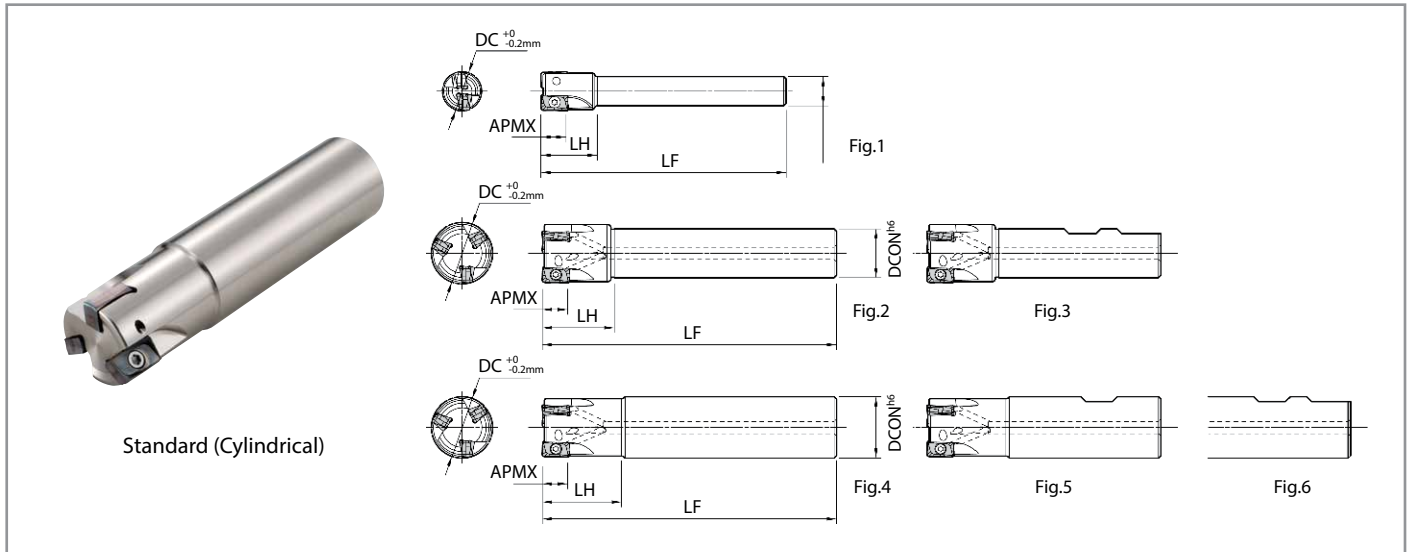
Standard (Cylindrical)

Toolholder Dimensions (Inch Size)

Shank	Part Number	Stock	No. of Inserts	Dimensions (in)					Rake Angle (°)		Coolant Hole	Drawing	Max. RPM*	
				DC	DCON	LF	LH	APMX	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	
		Weldon	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
		1000-S100-8-10-3T	●	3	1.000	1.000	8.00	1.980			-20°	Fig.5	37,200	
		1250-S125-8-15-3T	●	3	1.250	1.250	8.00	1.980			-22°	Fig.5	30,100	
		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°
1000-W100-15-2T	●			2	1.000	1.000	3.75	1.413	-22°	Fig.7	34,700			
1000-W100-475-15-2T	●			2	1.000	1.000	4.75	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			

● : Standard Item

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



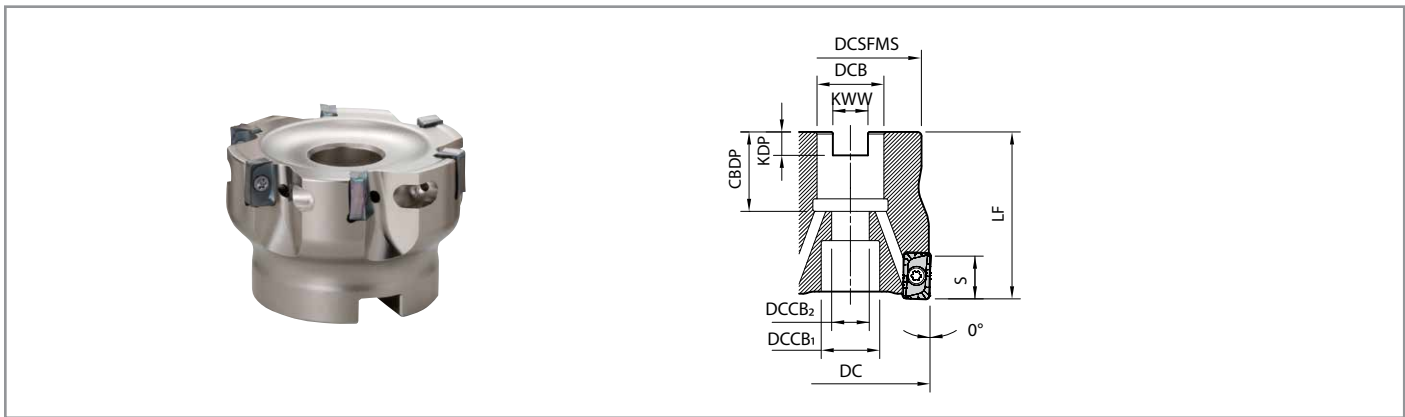
Toolholder Dimensions (Metric Size)

Shank	Part Number	Stock	No. of Inserts	Dimensions (mm)					Rake Angle (°)		Coolant Hole	Drawing	Max. RPM*				
				DC	DCON	LF	LH	APMX	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			
		MEW 16-S16-10-2T	●	2	16	16	100	26			-22°	Fig.4	43,750				
		MEW 18-S16-10-2T	●	2	18	16	100	25			-21°	Fig.2	43,000				
		MEW 20-S16-10-2T	●	2	20	16	110	26			-20°	Fig.2	41,000				
		MEW 20-S20-10-2T	●	2	20	20	110	30			-20°	Fig.4	41,000				
		MEW 20-S20-10-3T	●	3	20	20	110	30			-20°	Fig.4	41,000				
		MEW 22-S20-10-3T	●	3	22	20	110	26			-20°	Fig.2	39,600				
		MEW 25-S20-10-3T	●	3	25	20	120	29			-20°	Fig.2	37,500				
		MEW 25-S25-10-2T	●	2	25	25	120	32			-20°	Fig.4	37,500				
		MEW 25-S25-10-3T	●	3	25	25	120	32			-20°	Fig.4	37,500				
		MEW 28-S25-10-3T	●	3	28	25	120	29			-20°	Fig.2	35,800				
		MEW 30-S25-10-4T	●	4	30	25	130	32			-20°	Fig.2	34,800				
		MEW 32-S25-10-4T	●	4	32	25	130	32			-20°	Fig.2	33,900				
		MEW 32-S32-10-3T	●	3	32	32	130	40			-20°	Fig.4	33,900				
		MEW 32-S32-10-4T	●	4	32	32	130	40			-20°	Fig.4	33,900				
		MEW 40-S32-10-5T	●	5	40	32	150	50			-19°	Fig.2	30,000				
		MEW 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
			MEW 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
MEW 25-S25-15-2T	●		2	25	25	120	32	-22°	Fig.4	35,000							
MEW 32-S25-15-2T	●		2	32	25	130	32	-22°	Fig.2	30,000							
MEW 32-S32-15-2T	●		2	32	32	130	40	-22°	Fig.4	30,000							
MEW 32-S32-15-3T	●		3	32	32	130	40	-22°	Fig.4	30,000							
MEW 40-S32-15-3T	●		3	40	32	150	50	-21°	Fig.2	25,000							
MEW 40-S32-15-4T	●		4	40	32	150	50	-21°	Fig.2	25,000							
MEW 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			
		MEW 20-W20-10-2T	□	2	20	20	77	25			-20°	Fig.5	41,000				
		MEW 20-W20-10-3T	□	3	20	20	77	25			-20°	Fig.5	41,000				
		MEW 25-W25-10-2T	□	2	25	25	90	32			-20°	Fig.6	37,500				
		MEW 25-W25-10-3T	●	3	25	25	90	32			-20°	Fig.6	37,500				
		MEW 32-W32-10-4T	□	4	32	32	102	40			-20°	Fig.6	33,900				
		MEW 40-W32-10-5T	●	5	40	32	111	50			-19°	Fig.3	30,000				
		MEW 25-W25-15-2T	□	2	25	25	90	32			15	+10°	-22°	✓	Fig.6	35,000	
		MEW 32-W32-15-3T	□	3	32	32	102	40					-22°	Fig.6	30,000		
		MEW 40-W32-15-4T	□	4	40	32	111	50					-21°	Fig.3	25,000		

● : Standard Item □ : 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



Toolholder Dimensions (Inch Size)

Part Number	Stock	No. of Inserts	Dimensions (in)										Rake Angle (°)		Coolant Hole	Weight (kg)	Max. RPM*
			DC	DCSFMS	DCB	DCCB <sub>1</sub>	DCCB <sub>2</sub>	LF	CBDP	KDP	KWW	APMX	A.R. (Max)	R.R.			
MEW 1500R-10-5T	●	5	1.50	1.457	0.750	0.669	0.433	1.575	0.826	0.188	0.312	0.393	+7°	-19°	✓	0.2	30,700
	●	5	2.00	1.811	0.750	0.669	0.433	1.575	0.826	0.188	0.312					0.4	22,300
	●	6	2.50	1.969	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	1.811	0.750	0.669	0.433	1.575	0.826	0.188	0.312	0.590	+10°	-21°	✓	0.4	16,800
	●	5	2.00	1.811	0.750	0.669	0.433	1.575	0.826	0.188	0.312					0.4	16,800
	●	5	2.50	1.969	0.750	0.669	0.433	1.575	0.826	0.188	0.312					0.5	14,400
	●	6	3.00	2.362	1.000	0.866	0.551	1.969	1.063	0.236	0.381					1.0	12,250
	●	8	4.00	3.504	1.500	2.047	-	1.969	1.181	0.393	0.625					1.8	10,400

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

● : Standard Item

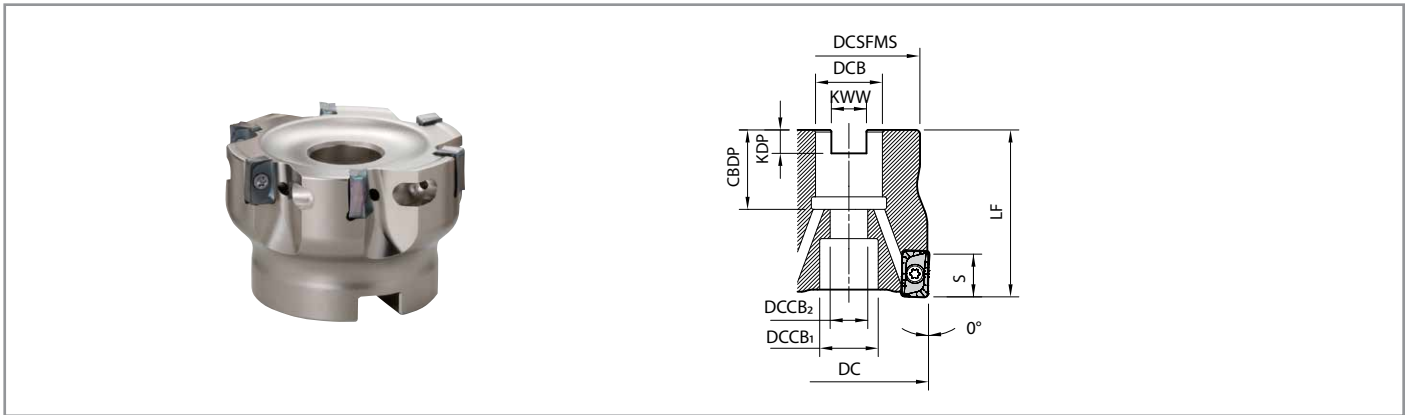
Spare Parts and Applicable Inserts (Inch End Mills and Face Mills)

Part Number	Spare Parts				Applicable Inserts			
	Insert Screw	Wrench	Anti-Seize Compound	Arbor Bolt				
MEW ...-10-_T	SB-306STRP	DTPM-8	P-37	-	LOMU1004..ER-GM	LOMU100408ER-SM	LOMU100408ER-GH	LOGT100408FR-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	-	LOMU1505..ER-GM	LOMU150508ER-SM	LOMU150508ER-GH	LOGT150508FR-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.  
\*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	Weight (kg)	Max. RPM*
			DC	DCSFMS	DCB	DCCB <sub>1</sub>	DCCB <sub>2</sub>	LF	CBDP	KDP	KWW	APMX	A.R. (Max)	R.R.			
MEW 032R-10-4T-M	●	4	32	30	16	14	9	35	19	5.6	8.4	10	+7°	-20°	✓	0.1	33,900
040R-10-5T-M	●	5	40	34	16	14	9	40	19	5.6	8.4			-19°		0.2	30,000
050R-10-5T-M	●	5	50	45	22	18	11	40	21	6.3	10.4			-19°		0.4	22,500
063R-10-6T-M	●	6	63	47	22	18	11	40	21	6.3	10.4			-19°		0.5	20,500
MEW 040R-15-4T-M	●	4	40	34	16	14	9	40	19	5.6	8.4	15	+10°	-21°	✓	0.2	25,000
050R-15-4T-M	●	4	50	45	22	18	11	40	21	6.3	10.4			-21°		0.3	17,000
063R-15-5T-M	●	5	63	47	22	18	11	40	21	6.3	10.4			-21°		0.5	14,500
080R-15-6T-M	●	6	80	60	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.

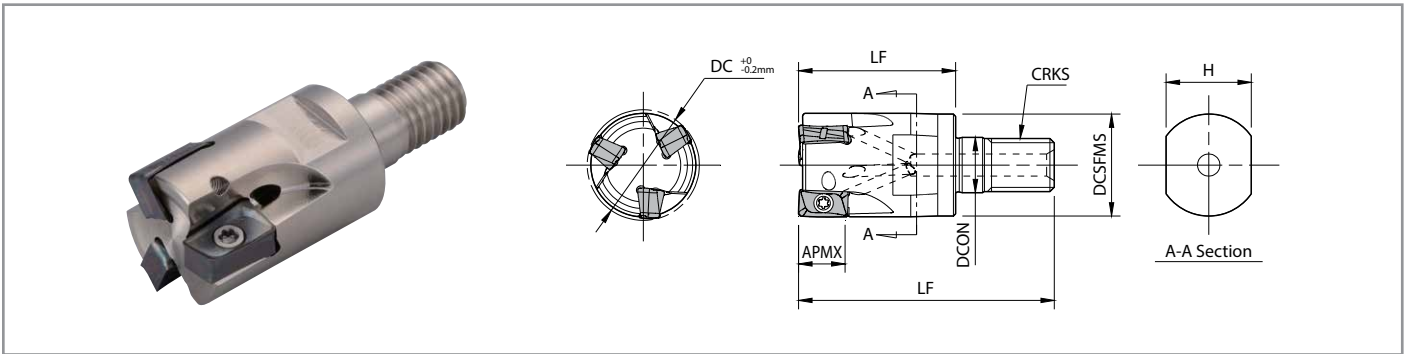
● : Standard Item

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				
MEW ...-10-_T								
MEW 032R-10-4T-M	SB-3065TRP	DTPM-8	P-37	-	LOMU1004..ER-GM	LOMU100408ER-SM	LOMU100408ER-GH	LOGT100408FR-AM
040R-10-5T-M	Recommended torque for insert screw 1.2Nm			HH8×25 (HH8X25H)				
050R-10-5T-M				HH10×30 (HH10X30H)				
063R-10-6T-M								
MEW ...-15-_T								
MEW 040R-15-4T-M	SB-4090TRP	DTPM-15	P-37	-	LOMU1505..ER-GM	LOMU150508ER-SM	LOMU150508ER-GH	LOGT150508FR-AM
050R-15-4T-M	Recommended torque for insert screw 3.5Nm			HH8×25 (HH8X25H)				
063R-15-5T-M				HH10×30 (HH10X30H)				
080R-15-6T(-M)				HH12×35 (HH12X35H)				

Coat Anti-seize Compound (P-37) thinly on portion of taper and thread prior to insert installation.  
\*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*
			DC	DCSFMS	DCON	OAL	LF	CRKS	H	APMX	A.R. (Max)	R.R.			
MEW 16-M08-10-2T	●	2	16	14.7	8.5	43	25	M8×P1.25	12	10	+7°	-22°	✓	LOMU1004 LOGT1004	43,750
20-M10-10-2T	●	2	20	18.7	10.5	49	30	M10×P1.5	15			41,000			
20-M10-10-3T	●	3	20	18.7	10.5	49	30	M10×P1.5	15			41,000			
25-M12-10-3T	●	3	25	23	12.5	57	35	M12×P1.75	19			37,500			
32-M16-10-4T	●	4	32	30	17	63	40	M16×P2.0	24			33,900			
MEW 25-M12-15-2T	●	2	25	23	12.5	57	35	M12×P1.75	19	15	+10°	-22°	✓	LOMU1505 LOGT1505	35,000
32-M16-15-3T	●	3	32	30	17	63	40	M16×P2.0	24			30,000			

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

● : Standard Item

Spare Parts and Applicable Inserts (Modular End Mill)

Part Number	Spare Parts			Applicable Inserts			
	Insert Screw	Wrench	Anti-Seize Compound	General Purpose	Low Cutting Force	Tough Edge (Heavy Milling)	Non-ferrous Metals • Alumin
MEW 16-M08-10-2T	SB-3065TRP Recommended torque for insert screw 1.2Nm	DTPM-8	P-37	LOMU 1004..ER-GM	LOMU 100408ER-SM	LOMU 100408ER-GH	LOGT 100408FR-AM
20-M10-10-2T							
20-M10-10-3T							
25-M12-10-3T							
32-M16-10-4T							
MEW 25-M12-15-2T	SB-4090TRP Recommended torque for insert screw 3.5Nm	DTPM-15	P-37	LOMU 1505..ER-GM	LOMU 150508ER-SM	LOMU 150508ER-GH	LOGT 150508FR-AM
32-M16-15-3T							

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

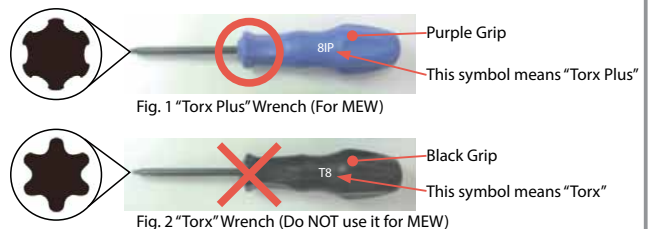
Recommended Cutting Conditions **P17**

Modular End Mill Identification System

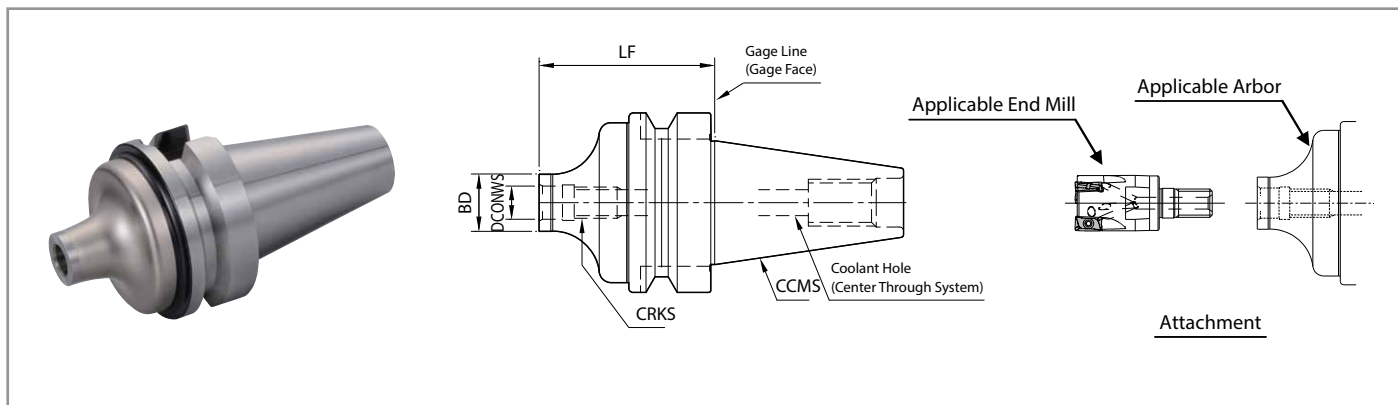


Wrenches and Clamp Screws are "Torx Plus" Styles

- 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)	Applicable End Mill
		LF	BD	DCONWS	CRKS			
<b>BT30K- M08-45</b>	<input type="checkbox"/>	45	14.7	8.5	M8×P1.25	✓	BT30	MEW16-M08..
	<input checked="" type="checkbox"/>	45	18.7	10.5	M10×P1.5			MEW20-M10..
	<input checked="" type="checkbox"/>	45	23	12.5	M12×P1.75			MEW25-M12..
<b>BT40K- M08-55</b>	<input type="checkbox"/>	55	14.7	8.5	M8×P1.25	✓	BT40	MEW16-M08..
	<input type="checkbox"/>	60	18.7	10.5	M10×P1.5			MEW20-M10..
	<input type="checkbox"/>	55	23	12.5	M12×P1.75			MEW25-M12..
	<input type="checkbox"/>	65	30	17	M16×P2.0			MEW32-M16..

● : Standard Item    □ : Made to Order / Quoted Item

## Actual End Mill Depth

Arbor Part Number	Applicable End Mill			Actual End Mill Depth (mm)
	Part Number	Cutting Dia. (mm)	Dimension (mm)	
		DC	LF	
<b>BT30K- M08-45</b>	MEW16-M08..	Ø16	25	31.8
	MEW20-M10..	Ø20	30	36.8
	MEW25-M12..	Ø25	35	42.8
<b>BT40K- M08-55</b>	MEW16-M08..	Ø16	25	31.7
	MEW20-M10..	Ø20	30	38.7
	MEW25-M12..	Ø25	35	44.6
	MEW32-M16..	Ø32	40	51.2

## Arbor Identification System

**BT30**   **K**   -   **M08**   -   **45**

Arbor Size

Two-Face Clamping Spindle

Thread Size for Clamping

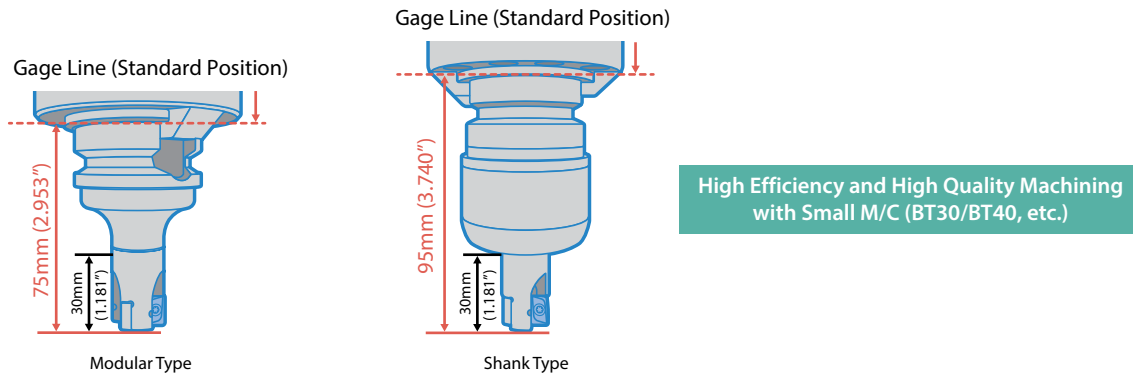
Length from the Gage

# Advantages of the Modular MEW

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

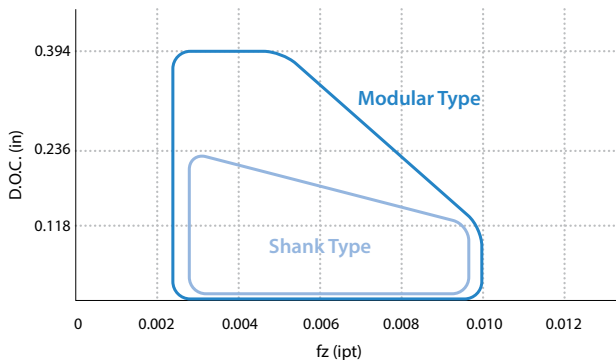
## 1 Low Gage Line Reduces Chattering

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

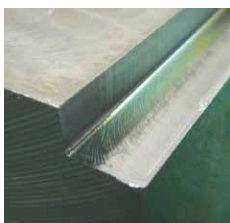


Cutting Conditions : Vc = 490 sfm, ae = 0.394", Shouldering, Dry  
Workpiece : 1055 BT30 M/C

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

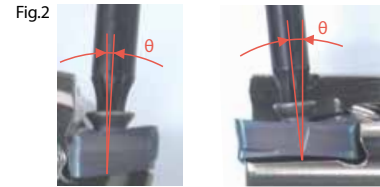
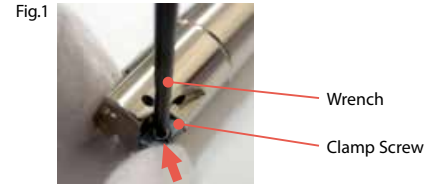
Cutting Conditions : Vc = 490 sfm, fz = 0.006 ipt, ae = 0.394", Shouldering, Dry  
Workpiece : 1055 BT30 M/C

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.



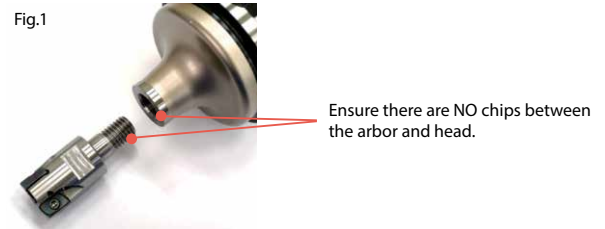
## How to Attach MEW Modul Head

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).

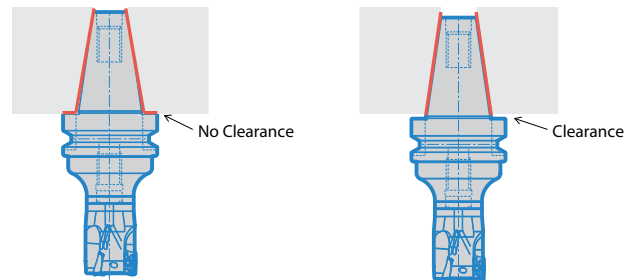


## Frequently Asked Questions

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

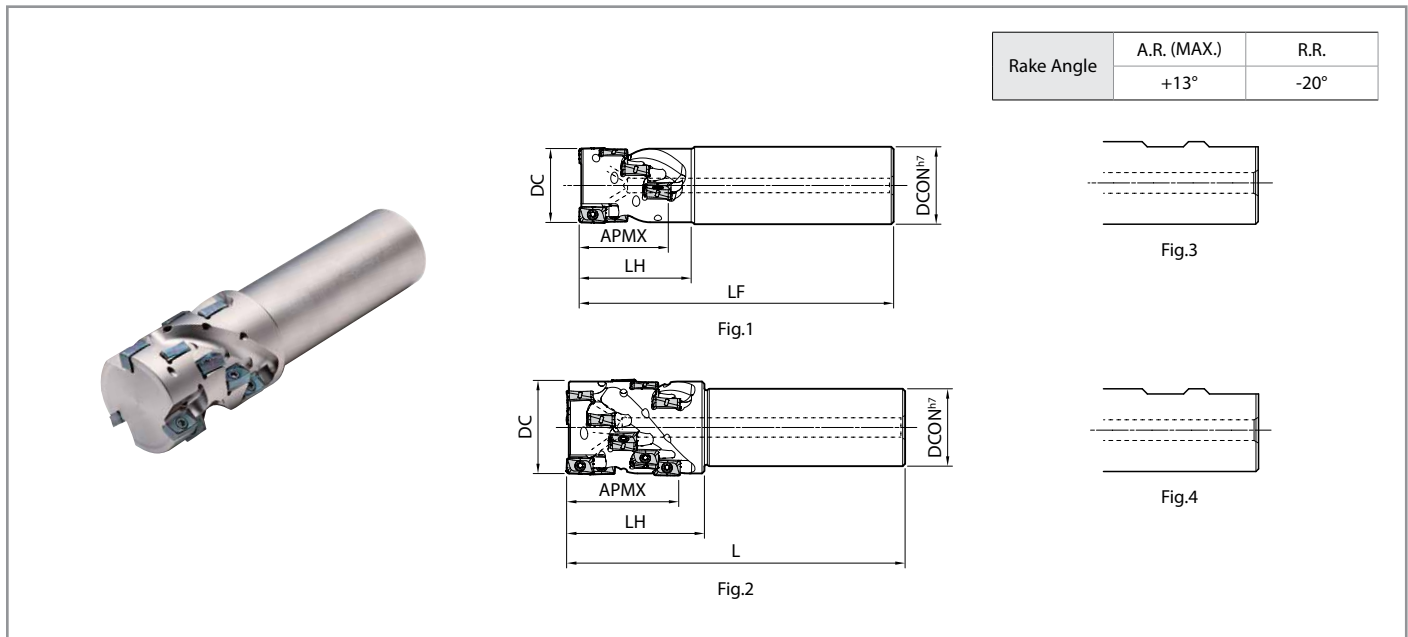
**A.** Yes. It can be used as a general BT arbor with a general BT spindle.

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)

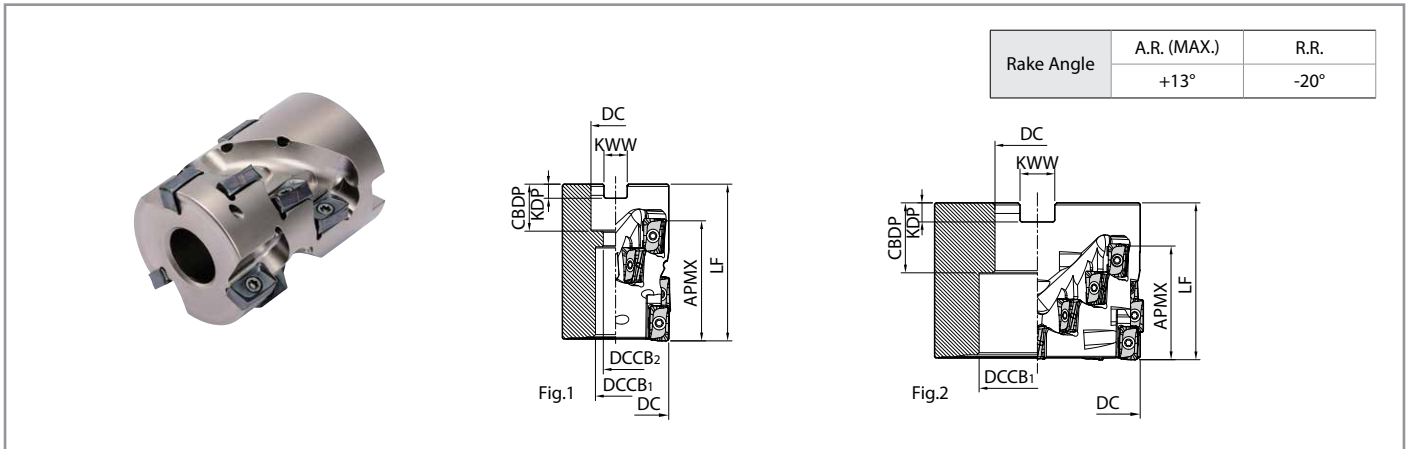
Shank	Part Number	Stock	No. of Flutes	No. of Stages	No. of Inserts	Dimensions (in)					Coolant Hole	Drawing	Spare Parts			Applicable Inserts	
						DC	DCON	LF	LH	APMX			Insert Screw	Wrench	Anti-Seize Compound		
						Insert Screw			Wrench				Anti-Seize Compound				
Weldon	MEWH 1000-W100-10-3-2T	●	2	3	6	1.000	1.000	3.806	1.523	1.102	✓	Fig.3	SB-3065TRP	DTPM-8	P-37	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	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	
						DC	DCON	LF	LH	APMX			Insert Screw	Wrench	Anti-Seize Compound		
						Insert Screw			Wrench				Anti-Seize Compound				
Cylindrical	MEWH 025-S25-10-3-2T	●	2	3	6	25	25	120	37	28	✓	Fig.1	SB-3065TRP	DTPM-8	P-37	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	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.  
 Aluminum machining is not recommended (AM chipbreaker is not available for MEWH)

● : Standard Item □ : Made to Order / Quoted Item



Toolholder Dimensions (Inch Size)

Part Number	Stock	No. of Flutes	No. of Stages	No. of Inserts	Dimensions (in)										Drawing	Spare Parts				Applicable Inserts
					DC	DCB	DCCB <sub>1</sub>	DCCB <sub>2</sub>	LF	CBDP	KDP	KWW	APMX	Insert Screw		Wrench	Anti-Seize Compound	Arbor Bolt		
MEWH 1500R-10-4-3T	<input type="checkbox"/>	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-8	P-37	HH3/8-1.25	LOMU1004..	
2000R-10-5-3T	<input type="checkbox"/>	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	<input checked="" type="checkbox"/>	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	P-37	HH3/8-1.25	LOMU1505..	
2500R-15-3-3T	<input type="checkbox"/>	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	<input type="checkbox"/>	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	<input type="checkbox"/>	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				Applicable Inserts
					DC	DCB	DCCB <sub>1</sub>	DCCB <sub>2</sub>	LF	CBDP	KDP	KWW	APMX	Insert Screw		Wrench	Anti-Seize Compound	Arbor Bolt		
MEWH 040R-10-4-3T-M	<input checked="" type="checkbox"/>	3	4	12	40	16	15	9	53	19	5.6	8.4	37	Fig.1	SB-3065TRP	DTPM-8	P-37	HH8X25	LOMU1004..	
050R-10-5-3T-M	<input checked="" type="checkbox"/>	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	<input checked="" type="checkbox"/>	3	4	12	50	22	18	11	70	21	6.3	10.4	53	Fig.1	SB-4090TRP	DTPM-15	P-37	HH10X30	LOMU1505..	
063R-15-3-3T-M	<input checked="" type="checkbox"/>	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	<input checked="" type="checkbox"/>	4	4	16	80	32	26	18	70	28	8	14.4	53	Fig.1			HH16X45			
100R-15-4-5T-M	<input checked="" type="checkbox"/>	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.  
 Aluminum machining is not recommended (AM chipbreaker is not available for MEWH)

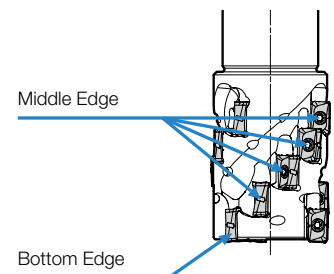
● : Standard Item    □ : Made to Order / Quoted Item

Recommended Cutting Conditions [P17](#)





Applicable Insert Placement Guide for MEWH

Insert Location	Toolholder Part Number											
	MEWH...10...						MEWH...15...					
	Corner R(RE) (mm)						Corner R(RE) (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 (RE) 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
			W1	S	D1	L	BS	RE	PR1535	PR1525	PR1510	CA6535	PDL025	GW25
 General Purpose	LOMU 100404ER-GM	0.260	0.157	0.134	0.429	0.083	0.016	●	●	●	●			MEW...-10.. MEWH...-10..
	LOMU 100408ER-GM					0.067	0.031	●	●	●	●			
	LOMU 100412ER-GM					0.051	0.047	●	●	●	●			
	LOMU 100416ER-GM					0.039	0.063	●	●	●	●			
	LOMU 100420ER-GM					0.039	0.079	●	●	●	●			
	LOMU 150504ER-GM	0.362	0.220	0.189	0.618	0.087	0.016	●	●	●	●			MEW...-15.. MEWH...-15..
	LOMU 150508ER-GM					0.071	0.031	●	●	●	●			
	LOMU 150510ER-GM					0.063	0.039	●	●	●	●			
	LOMU 150512ER-GM					0.055	0.047	●	●	●	●			
	LOMU 150516ER-GM					0.039	0.063	●	●	●	●			
LOMU 150520ER-GM	0.024	0.079	●	●	●	●								
 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..
 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..

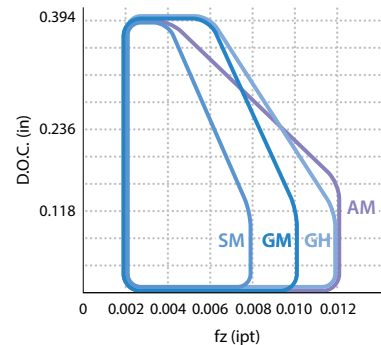
● : Standard Item

## LOMU...ER-GM Insert Appearance

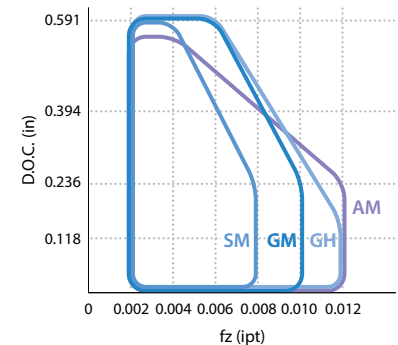
LOMU100404ER-GM LOMU150504ER-GM	LOMU100408ER-GM LOMU150508ER-GM
 04 Marking on Insert	 08 Has No Dimension Marking
LOMU150510ER-GM	LOMU100412ER-GM LOMU150512ER-GM
 10 Marking on Insert	 12 Marking on Insert
LOMU100416ER-GM LOMU150516ER-GM	LOMU100420ER-GM LOMU150520ER-GM
 16 Marking on Insert	 20 Marking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

## Applicable Chipbreaker Range (Shouldering)

LOMU10 Insert



LOMU15 Insert



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



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

Chipbreaker	Workpiece	Feed Rate fz : ipt			Recommended Insert Grade / Cutting Speed (Vc: sfm)					
		Toolholder Part Numbers			MEGACOAT NANO			CVD Coated Carbide	DLC Coated Carbide	Carbide
		MEW0625-MEW0750 MEW16 - MEW18	MEW1000-MEW1500 MEW1500R-MEW3000R MEW20 - MEW40 MEW040R - MEW080R	MEWH... (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	0.005 - <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 = DC/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 = DC/2)	Slotting
MEW1000...-15 MEW1500...-15 MEW25...-15 MEW50...-15		
MEW2000...-15 MEW3000...-15 MEW040R...-15 MEW080R...-15		

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

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

# MEWH Cutting Performance

## LOMU1004 Insert

Cutting Dia.	Part Number	2 Flute (D.O.C. × ae)	Part Number	3 Flute (D.O.C. × ae)
Ø1.000" Ø25mm	MEWH1000 -W100-10-3-2T		-	-
	MEWH025 -S25-10-3-2T			
Ø1.250" Ø32mm	MEWH1250 -W125-10-4-2T		-	-
	MEWH032 -S32-10-4-2T			
Ø1.500" Ø40mm	MEWH1500 -W125-10-5-2T MEWH040 -S32-10-5-2T		MEWH040 -S32-10-5-3T	

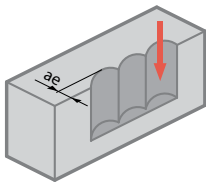
## LOMU1505 Insert

Cutting Dia.	Part Number	2 Flute (D.O.C. × ae)	Part Number	3 Flute (D.O.C. × ae)
Ø1.500" Ø40mm	MEWH1500 -W125-15-4-2T		-	-
	MEWH040 -S32-15-4-2T			
Ø2.000" Ø50mm	MEWH2000 -W150-15-4-2T		MEWH2000 -W150-15-4-3T	
	MEWH050 -S42-15-4-2T		MEWH050 -S42-15-4-3T	

Cutting Conditions : Vc = 490 sfm, fz = 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

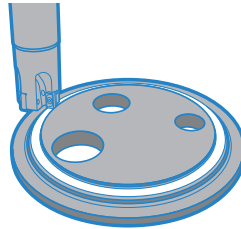
Insert Part Number	Maximum Width of Cut (ae)
LOMU10 LOGT10	0.197"
LOMU15 LOGT15	0.276"

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)

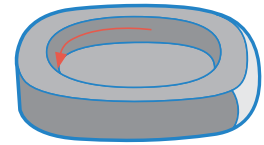
**72 cc/min**

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)



**KYOCERA Precision Tools**

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