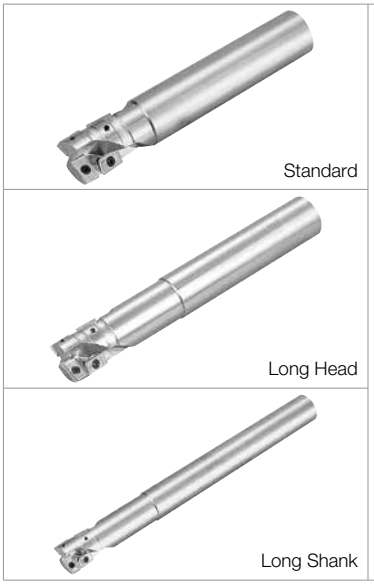
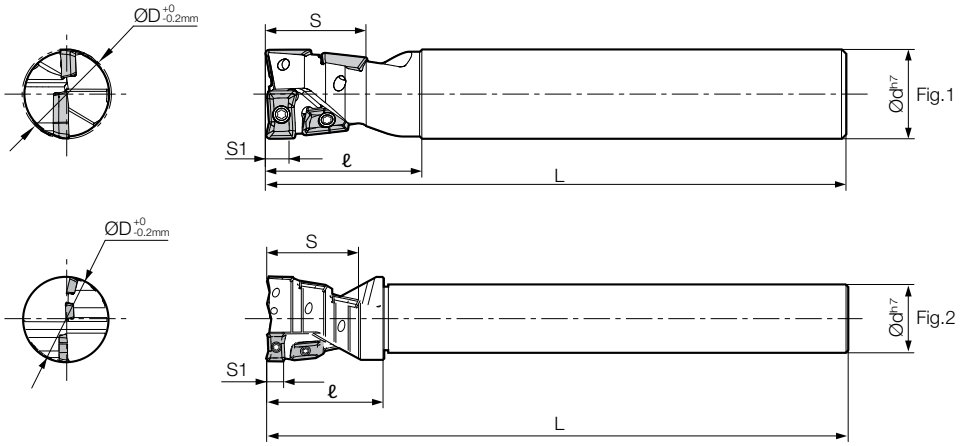
MULTI-FUNTION END MILLS

G1 - G7

Pocketing | Drilling | Shouldering | Deep Slotting | Facing

MEY End Mill





Toolholder Dimensions

	Part Number	Stock	Unit	No. of Inserts	No. of Flutes	Dimensions ØD	Dimensions Ød	Dimensions L	Dimensions ℓ	Dimensions S	Dimensions S1	Rake Angle (°) A.R.	Rake Angle (°) R.R.	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Anti-seize Compound
Standard	MEY 1000-S100-HG	●	inch	4	2	1.000	1.000	5.486	1.549	1.102	0.295	+13°	-11°	Fig.1	SB-3070TRG	DT-10	MP-1
	1250-S125-HG	●				1.250	1.250	5.858	1.921	1.417	0.374		-9°		SB-4070TRG	DT-15	
	1500-S125-HG	●		7		1.500		6.260	2.126	1.654	0.295		-11°	Fig.2	SB-3070TRG	DT-10	
	2000-S150-HG	●				1.984	1.500	6.649	2.712	2.126	0.374		-9°		SB-4070TRG	DT-15	
Standard	MEY 16-S16	○	mm	4	2	16	16	120	31	19	4.5	+11°	-11°	Fig.1	SB-2040TRG	DTM-6	MP-1
	17-S16	○				17											
	20-S20	○				20	20	130	35	22	6.0	+13°	- 9°	Fig.1	SB-2555TRG	DT-8	
	21-S20	○				21											
	25-S25	○				25	25	140	40	28	7.5	+13°	-11°	Fig.1	SB-3070TRG	DT-10	
	26-S25	○				26											
	32-S32	○				32	32	150	50	36	9.5	+13°	- 9°	Fig.1	SB-4070TRG	DT-15	
	33-S32	○				33											
	40-S32	○		7		40	32	160	55	42	7.5	+13°	-11°	Fig.2	SB-3070TRG	DT-10	
	50-S42	○				50	42	170	70	54	9.5		- 9°		SB-4070TRG	DT-15	
Long Head	MEY 16-S16-140H	○		4	2	16	16	140	51	19	4.5	+11°	-11°	Fig.1	SB-2040TRG	DTM-6	
	20-S20-150H	○				20	20	150	53	22	6.0	+13°	- 9°		SB-2555TRG	DT-8	
	25-S25-170H	○				25	25	170	70	28	7.5		-11°		SB-3070TRG	DT-10	
	32-S32-180H	○				32	32	180	80	36	9.5		- 9°		SB-4070TRG	DT-15	
Long Shank	MEY 16-S16-190	○		4	2	16	16	190	61	19	4.5	+11°	-11°	Fig.1	SB-2040TRG	DTM-6	
	17-S16-190	○				17			31								
	20-S20-200	○				20	20	200	63	22	6.0	+13°	- 9°	Fig.1	SB-2555TRG	DT-8	
	21-S20-200	○				21			35								
	25-S25-220	○				25	25	220	80	28	7.5	+13°	-11°	Fig.1	SB-3070TRG	DT-10	
	26-S25-220	○				26			40								
	32-S32-230	○				32	32	230	90	36	9.5	+13°	- 9°	Fig.1	SB-4070TRG	DT-15	
	33-S32-230	○				33			50								
	40-S32-240	○		7		40		240	55	42	7.5	+13°	-11°	Fig.2	SB-3070TRG	DT-10	
	50-S42-250	○		7		50	42	250	70	54	9.5	+13°	- 9°	Fig.2	SB-4070TRG	DT-15	

S1 shows the edge length of the complete 2-insert part.

Applicable Inserts ➡ G3

Coat Anti-seize Compound (MP-1) thinly on portion of taper and thread when insert is fixed

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

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

Applicable Inserts

Part Number	Applicable Inserts B19			
				
	Side Edge Insert	No. of Inserts	Center Edge Insert	No. of Inserts
MEY 1000-S100-HG	JOMT13T308ER-D	3	GOMT13T308ER-D	1
1250-S125-HG	JOMT160408ER-D	3	GOMT160408ER-D	1
1500-S125-HG	JOMT13T308ER-D	6	GOMT13T308ER-D	1
2000-S150-HG	JOMT160408ER-D	6	GOMT160408ER-D	1
MEY 16-S16(-...)	JOMT08T208ER-D	3	GOMT08T208ER-D	1
17-S16(-...)				
20-S20(-...)	JOMT100308ER-D	3	GOMT100308ER-D	1
21-S20(-...)				
25-S25(-...)	JOMT13T308ER-D	3	GOMT13T308ER-D	1
26-S25(-...)				
32-S32(-...)	JOMT160408ER-D	3	GOMT160408ER-D	1
33-S32(-...)				
40-S32(-...)	JOMT13T308ER-D	6	GOMT13T308ER-D	1
50-S42(-...)	JOMT160408ER-D	6	GOMT160408ER-D	1

Recommended Cutting Conditions

Workpiece Material	fz (ipt)		Recommended Insert Grade (Vc: sfm)		
	Drilling	Shouldering Slotting	MEGACOAT		PVD Coated Carbide
			PR1225	PR1210	PR830
Carbon Steel	0.003~0.006	0.002~0.010	★ 390~820	-	☆ 390~660
Alloy Steel	0.003~0.006	0.002~0.010	★ 330~720	-	☆ 330~590
Mold Steel	0.003~0.005	0.002~0.006	★ 260~590	-	☆ 260~490
Stainless Steel	0.003~0.005	0.002~0.006	★ 390~720	-	☆ 330~590
Cast Iron	0.002~0.008	0.002~0.010	-	★ 330~720	-

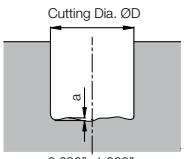
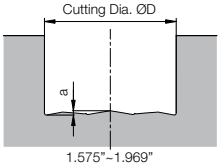
★: 1st Recommendation ☆: 2nd Recommendation

Drilling Precautions

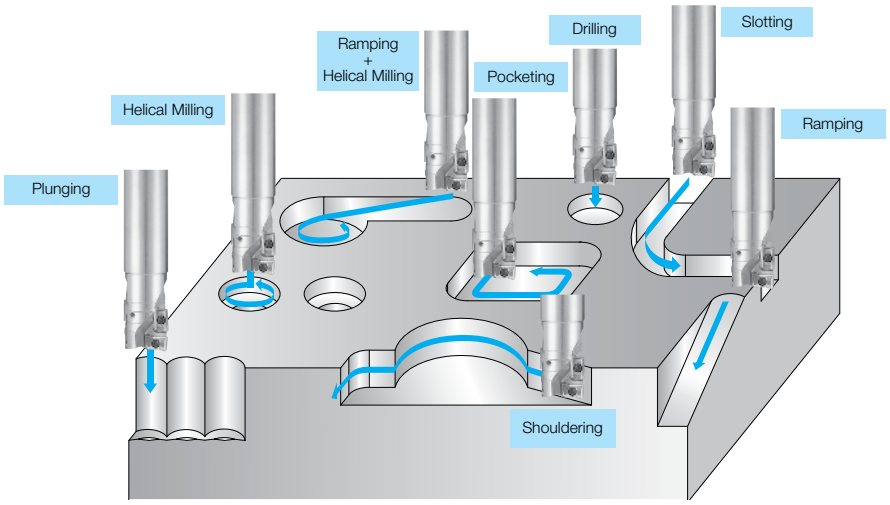
(1) Drilling conditions should be calculated as one flute effective.
(2) Use compressed air during drilling.
(3) Carbon Steel other than low carbon steel can be drilled to a depth of 0.5D without step feeding. For soft steel or sticky material such as stainless steel, step feed drilling (0.020"-0.039") is recommended.
(4) For stainless steel drilling, coolant is recommended.
(5) Please refer to the chart for maximum hole depth.

Cutting Dia. (ØD)	Max. Hole Depth
0.630" / Ø16mm	0.512" / 13mm
0.669" / Ø17mm	0.512" / 13mm
0.787" / Ø20mm	0.669" / 17mm
0.827" / Ø21mm	0.669" / 17mm
0.984" / Ø25mm	0.866" / 22mm
1.024" / Ø26mm	0.866" / 22mm
1.260" / Ø32mm	1.142" / 29mm
1.299" / Ø33mm	1.142" / 29mm
1.575" / Ø40mm	1.417" / 36mm
1.969" / Ø50mm	1.575" / 40mm

Drilled Hole Bottom Shape

Cutting Dia.	a	Shape of the bottom
0.630" / 0.669" Ø16mm, Ø17mm	0.020" 0.50mm	
0.787" / 0.827" Ø20mm, Ø21mm	0.025" 0.64mm	
0.984" / 1.024" Ø25, Ø26	0.033" 0.85mm	
1.260" / 1.299" Ø32mm, Ø33mm	0.044" 1.12mm	
1.575" Ø40mm	0.061" 1.54mm	
1.969" Ø50mm	0.065" 1.65mm	

Examples of MEY Multi-function Cutting



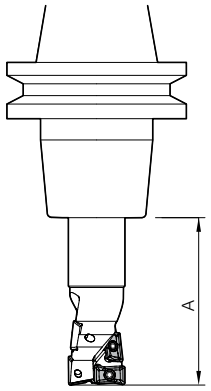
MEY Cutting Performance

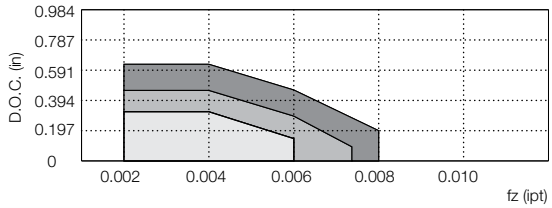
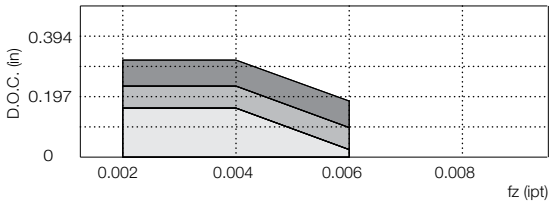
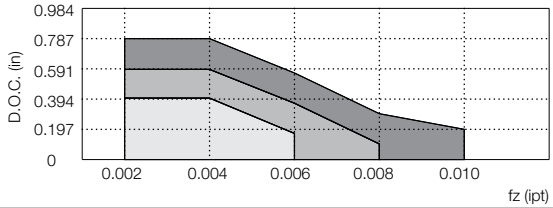
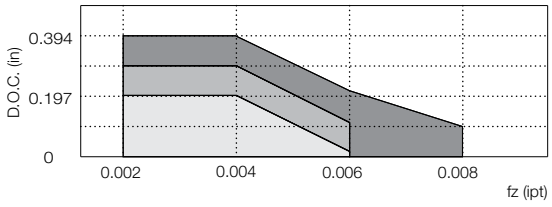
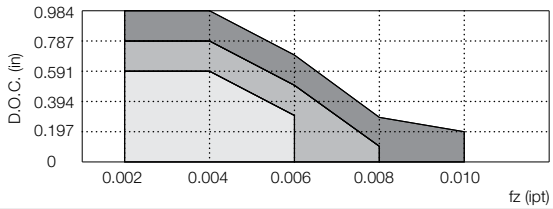
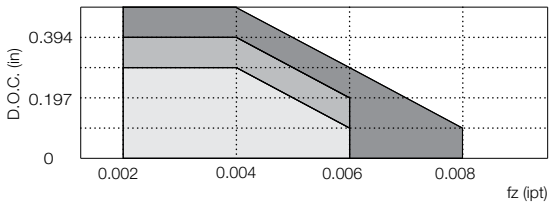
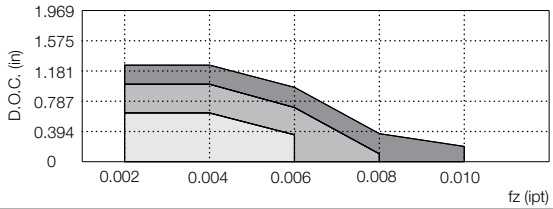
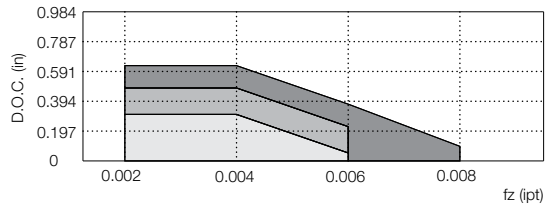
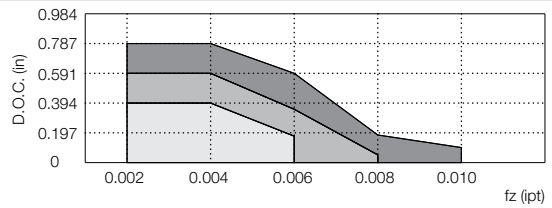
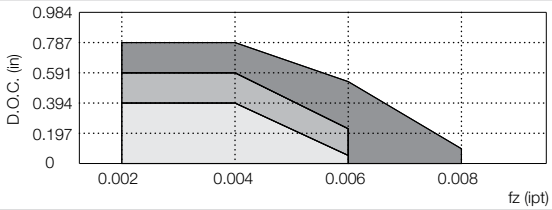
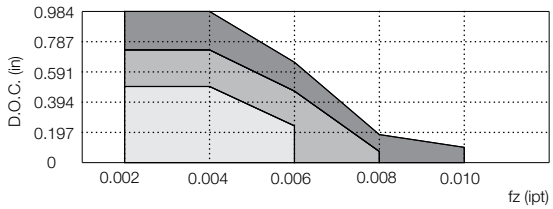
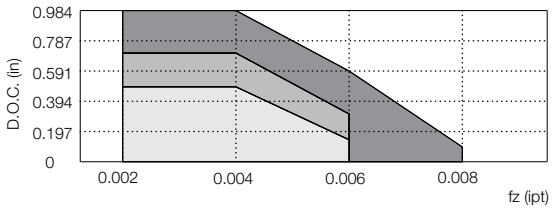
[Workpiece Material: 1049]

Cutting Dia.	Part Number	Overhang Length A (in)		
Ø16mm	MEY16-S16	1.220	[~2.402]	(Not Recommended)
	MEY16-S16-140H	-	~2.402	[~3.583]
	MEY16-S16-190	-	2.402	~3.583
Ø17mm	MEY17-S16	1.220	[~2.402]	(Not Recommended)
	MEY17-S16-190	1.220	~2.402	~3.583
Ø20mm	MEY20-S20	1.378	[~2.559]	(Not Recommended)
	MEY20-S20-150H	-	~2.559	[~3.740]
	MEY20-S20-200	-	2.559	~3.740
Ø21mm	MEY21-S20	1.378	[~2.559]	(Not Recommended)
	MEY21-S20-200	1.378	~2.559	~3.740
1.000"	MEY1000-S1000	1.575	[~2.756]	(Not Recommended)
Ø25mm	MEY25-S25	1.575	[~2.756]	(Not Recommended)
	MEY25-S25-170H	-	2.756	[~3.937]
	MEY25-S25-220	-	~3.150	~3.937
Ø26mm	MEY26-S25	1.575	[~2.756]	(Not Recommended)
	MEY26-S25-220	1.575	2.756	~3.937
1.250"	MEY1250-S125	1.969	[~3.150]	(Not Recommended)
Ø32mm	MEY32-S32	1.969	[~3.150]	(Not Recommended)
	MEY32-S32-180H	-	~3.150	[~4.331]
	MEY32-S32-230	-	3.543	~4.331]
Ø33mm	MEY33-S32	1.969	[~3.150]	(Not Recommended)
	MEY33-S32-230	1.969	~3.150	~4.331
1.500"	MEY1500-S125	2.165	[~3.346]	[~4.528]
Ø40mm	MEY40-S32	2.165	[~3.346]	[~4.528]
	MEY40-S32-240	2.165	~3.346	~5.118
1.984"	MEY2000-S150	2.756	[~3.937]	[~5.118]
Ø50mm	MEY50-S42	2.756	[~3.937]	[~5.118]
	MEY50-S42-250	2.756	~3.937	~5.118

When using dimensions in [ ], be careful that the chucking amount is sufficient.

Shape

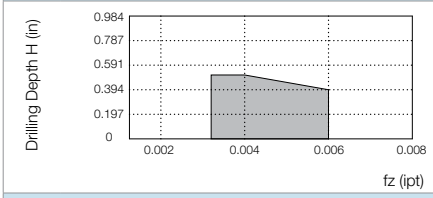


Part Number	■ Shouldering (Cutting Width ae = ØD/2) Note) Part ae = ØD/4	■ Slotting ■ Ramping and Helical Milling
MEY16-S16 MEY17-S16		
MEY20-S20 MEY21-S20		
MEY1000-S1000 MEY25-S25 MEY26-S25		
MEY1250-S125 MEY32-S32 MEY33-S32		
MEY1500-S125 MEY40-S32		
MEY2000-S150 MEY50-S42		

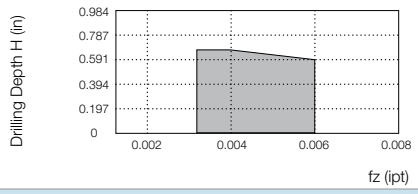
G MULTI-FUNCTION

Drilling Depth [Standard / Long Head / Long Shank: 1049]

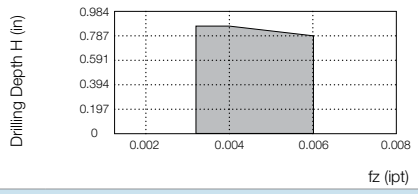
MEY16-S16 / MEY17-S16



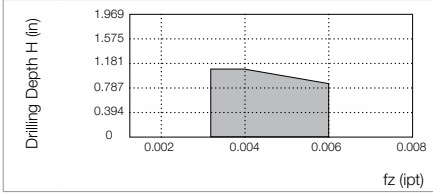
MEY20-S20 / MEY21-S20



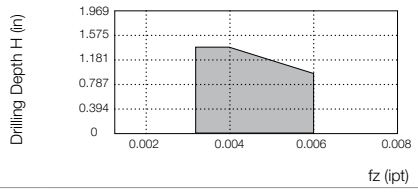
MEY1000-S100-HG
MEY25-S25 / MEY26-S25



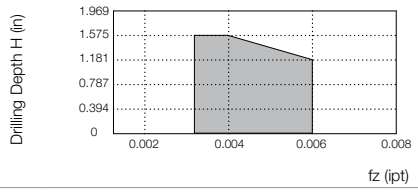
MEY1250-S125-HG
MEY32-S32 / MEY33-S32



MEY1500-S125-HG
MEY40-S32



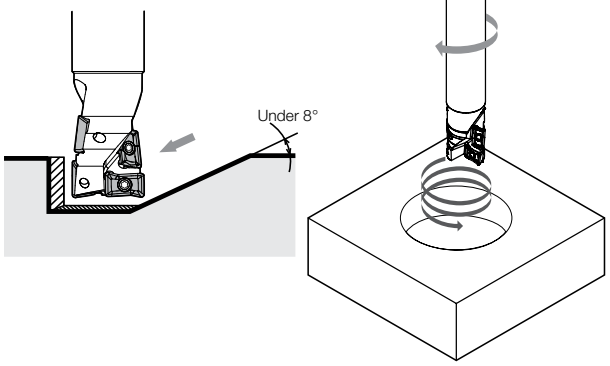
MEY2000-S150-HG
MEY50-S42



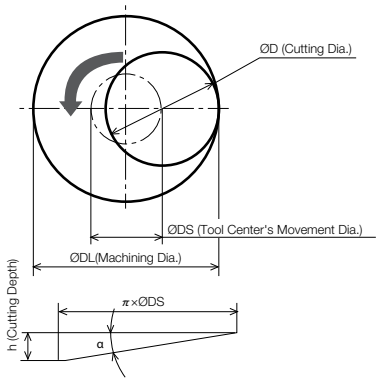
How to Use MEY Effectively

Ramping / Helical Milling

- Ramping angle is recommended to be under 8°.
- Plunge depth per revolution of helical milling should be set under 1/2 of the tool diameter.
  Use compressed air during machining.



Helical Milling Factors



How to find "ØDS"

ØDS=ØDL-ØD

How to find "h"

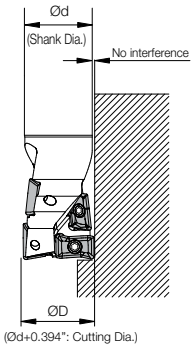
h=π×ØDS×tanα

(α should be under 8°)

Shouldering

- Tools with 0.039" larger cutting diameter than shank diameter are available.
- High wall shouldering is possible
- Lineup

Part Number	Unit	ØD	Ød
MEY1500-S125-HG	inch	1.500"	1.250"
MEY2000-S1500-HG		1.984"	1.500"
MEY17-S16	mm	17	16
MEY21-S20		21	20
MEY26-S25		26	25
MEY33-S32		33	32
MEY17-S16-190		17	16
MEY21-S20-200		21	20
MEY26-S25-220		26	25
MEY33-S32-230		33	32

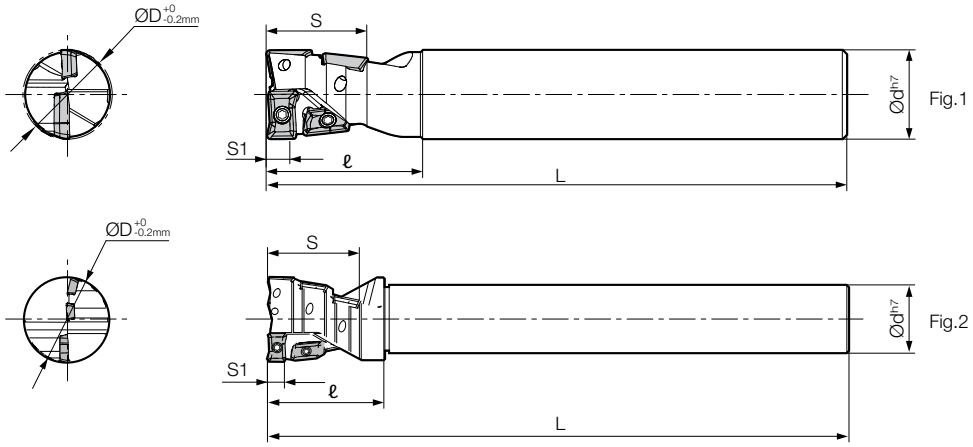


Pocketing | Drilling | Shouldering | Deep Slotting | Facing

MEZ-G End Mill


Standard


Long Shank / Long Head



Toolholder Dimensions

	Part Number	Stock	No. of Inserts	No. of Flutes	Dimensions (mm) ØD	Ød	L	ℓ	S	Rake Angle (°) A.R.	R.R.	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts B20
Standard	MEZ 16-S16G	○	4	2	16	16	120	31	16	+9°	-5°	Fig.1	SB-2040TRG	DTM-6	NDMT 080208ER-D□
	20-S20G	○	4	2	20	20	130	33	21		-4°		SB-2555TRG	DT-8	NDMT 10T208ER-D□
	25-S25G	○	4	2	25	25	140	40	25		-5°		SB-3070TRG	DT-10	NEMT 120308ER-D□
	32-S32G	○	4	2	32	32	150	50	33		-2°		SB-4070TRG	DT-15	NEMT 16T308ER-D□
	40-S32G	○	7	2	39	32	160	55	39	+9°	-3°	Fig.2	SB-3070TRG	DT-10	NEMT 120308ER-D□
	50-S42G	○	7	2	49	42	170	70	51		-2°		SB-4070TRG	DT-15	NEMT 16T308ER-D□
Long Head	MEZ 16-S16-140HG	○	4	2	16	16	140	51	16	+9°	-5°	Fig.1	SB-2040TRG	DTM-6	NDMT 080208ER-D□
	20-S20-150HG	○	4	2	20	20	150	53	21		-4°		SB-2555TRG	DT-8	NDMT 10T208ER-D□
	25-S25-170HG	○	4	2	25	25	170	70	25		-5°		SB-3070TRG	DT-10	NEMT 120308ER-D□
	32-S32-180HG	○	4	2	32	32	180	80	33		-2°		SB-4070TRG	DT-15	NEMT 16T308ER-D□
Long Shank	MEZ 16-S16-190G	○	4	2	16	16	190	61	16	+9°	-5°	Fig.1	SB-2040TRG	DTM-6	NDMT 080208ER-D□
	20-S20-200G	○	4	2	20	20	200	63	21		-4°		SB-2555TRG	DT-8	NDMT 10T208ER-D□
	25-S25-220G	○	4	2	25	25	220	80	25		-5°		SB-3070TRG	DT-10	NEMT 120308ER-D□
	32-S32-230G	○	4	2	32	32	230	90	33		-2°		SB-4070TRG	DT-15	NEMT 16T308ER-D□
	40-S32-240G	○	7	2	39	32	240	55	39	+9°	-3°	Fig.2	SB-3070TRG	DT-10	NEMT 120308ER-D□
	50-S42-250G	○	7	2	49	42	250	70	51		-2°		SB-4070TRG	DT-15	NEMT 16T308ER-D□

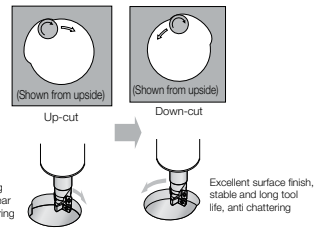
Recommended Cutting Conditions

Workpiece Material	fz (ipt) Drilling	fz (ipt) Shouldering Slotting	Recommended Insert Grade (Vc: sfm) Cermet TN100M	MEGACOAT PR1225	MEGACOAT PR1210	Carbide KW10
Carbon Steel	0.002~0.008	0.002~0.008	★ 390~660	★ 390~820	-	-
Alloy Steel	0.002~0.008	0.002~0.008	★ 330~590	★ 330~720	-	-
Mold Steel	0.002~0.005	0.002~0.006	★ 330~590	★ 260~590	-	-
Stainless Steel	0.002~0.005	0.002~0.006	☆ 390~660	★ 390~720	-	-
Cast Iron	0.002~0.008	0.002~0.008	-	-	★ 330~720	☆ 260~490
Non-ferrous Metals	0.002~0.008	0.002~0.008	-	-	-	★ 330~980

★: 1st Recommendation ☆: 2nd Recommendation

- Drilling conditions should be calculated as one flute line.Step feed (0.5-0.1mm) is recommended.
- Coolant is recommended when drilling stainless steel / cast iron.

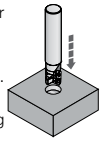
- Down-Cut milling is recommended for the improvement of tool life and surface finish.
- Compressed air is recommended.



How to Use the Silver Drill Mill MEZ-G Effectively

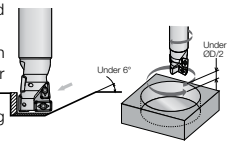
Drilling

- Step feeding is recommended for good chip control. (Depth approx. 1mm)
- Drill depth should be under 0.5D. (D:Drilling Dia.) Use compressed air when during machining.



Ramping · Helical Milling

- Ramping angle is recommended to be under 6°.
- Plunge depth per revolution when helical milling should be under 1/2D.
- Use compressed air when during machining.



End Milling

- Tough edge insert is recommended for high load end milling. (High feed rate,large ap) Use a low cutting force insert to prevent chattering.


N(D/E)MT...ER-DH (Tough Edge type) N(D/E)MT...ER-DH (Tough Edge type)

G MULTI-FUNCTION

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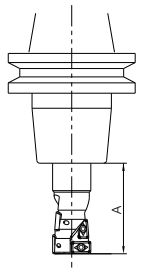
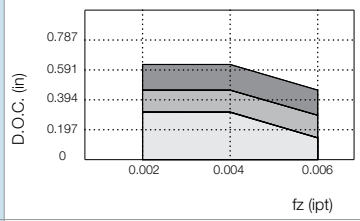
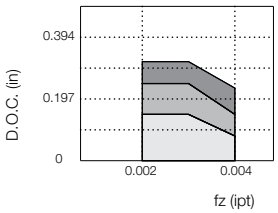
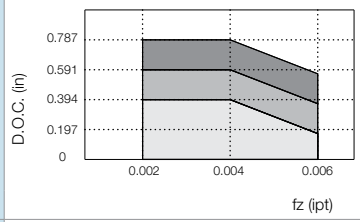
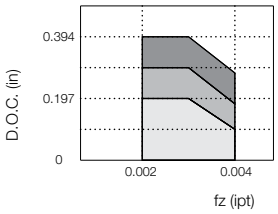
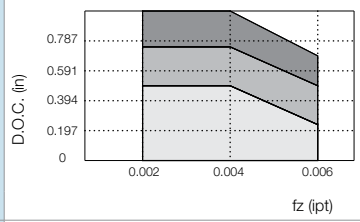
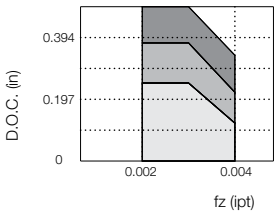
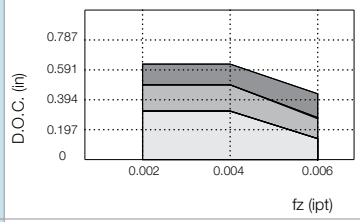
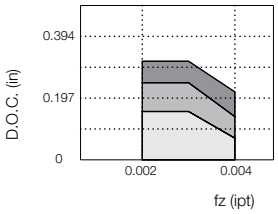
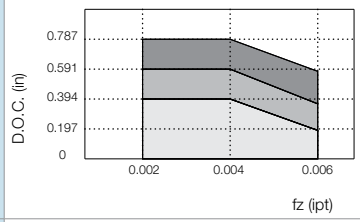
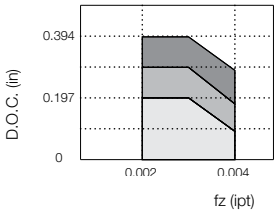
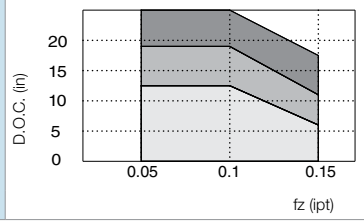
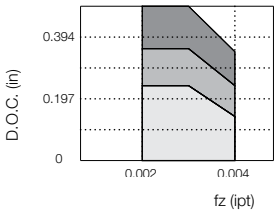
Cutting Performance of MEZ-G

[Workpiece Material: 1049]

Cutting Dia.	Part Number	Overhang Length A (in)			Cutting Dia.	Part Number	Overhang Length A (in)			Shape
Ø16	**MEZ16-S16G**	1.220	[~2.402]	(Not Recommended)	Ø32	**MEZ32-S32G**	1.969	[~3.150]	(Not Recommended)	
	MEZ16-S16-140HG	-	~2.402	[~3.583]		**MEZ32-S32-180HG**	-	3.150	[~4.331]	
	MEZ16-S16-190G	-	2.402	~3.583		**MEZ32-S32-230G**	-	3.543	~4.331	
Ø20	**MEZ20-S20G**	1.299	[~2.480]	(Not Recommended)	Ø39	**MEZ40-S32G**	2.165	[~3.346]	[~4.528]	
	MEZ20-S20-150HG	-	~2.480	[~3.661]		**-**	-	-	-	
	MEZ20-S20-200G	-	2.480	~3.661		**MEZ40-S32-240G**	2.165	~3.346	~4.528	
Ø25	**MEZ25-S25G**	1.575	[~2.756]	(Not Recommended)	Ø49	**MEZ50-S42G**	2.756	[~3.937]	[~5.118]	
	MEZ25-S25-170HG	-	2.756	[~3.937]		**-**	-	-	-	
	MEZ25-S25-220G	-	3.150	~3.937		**MEZ50-S42-250G**	2.756	~3.937	~5.118	

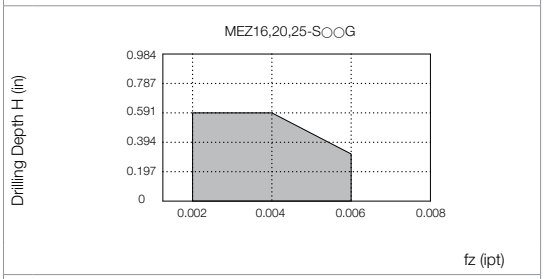
When using dimensions in [ ], be careful that the chucking amount is sufficient.

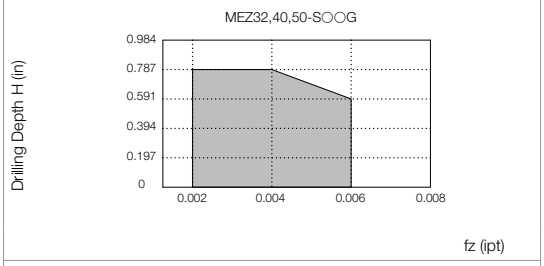
Shouldering / Slotting

Part Number	■ Shouldering (Cutting width ae = ØD/2) Note) ☐ Part ae = ØD/4	■ Slotting ■ Ramping and Helical Milling
MEZ16-S16G		
MEZ20-S20G		
MEZ25-S25G		
MEZ32-S32G		
MEZ40-S32G		
MEZ50-S42G		

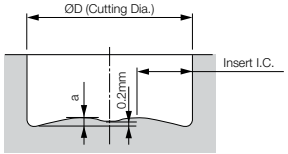
Drilling Depth

■ Drilling Depth
(Standard / Long Head / Long Shank)



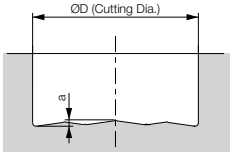


Shape of the bottom of the drilled hole
(Ø16mm~Ø49mm)



Ø16mm~Ø32mm

Cutting Dia.	Ø16mm	Ø20mm	Ø25mm	Ø32mm
a	0.30mm	0.33mm	0.38mm	0.45mm



Ø39mm,Ø49mm

Cutting Dia.	Ø39mm	Ø49mm
a	0.68mm	0.74mm