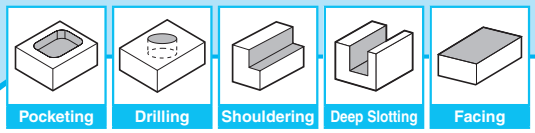
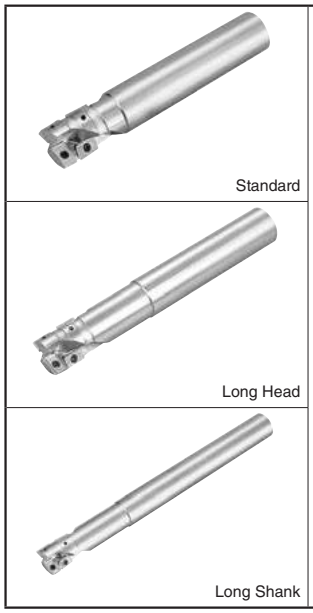
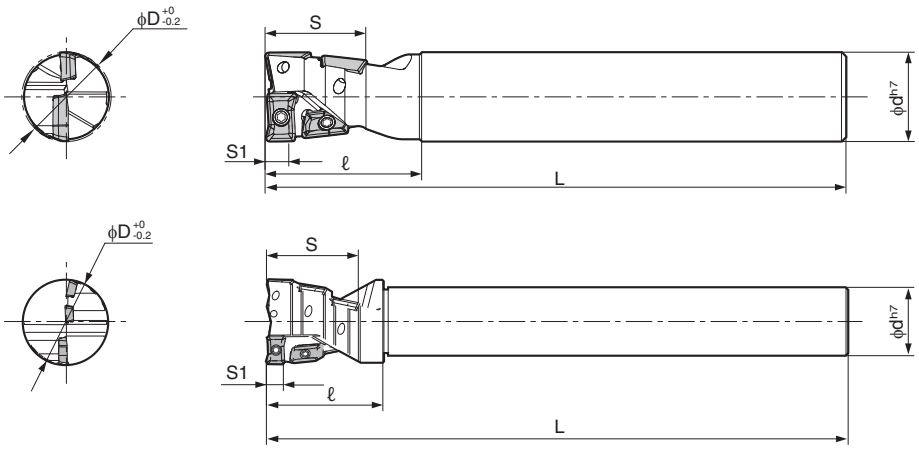


MEY





Toolholder Dimensions

Description		Std.	No. of Inserts	No. of Flutes	Dimension (mm) φD	φd	L	ℓ	S	S1	Rake Angle A.R.	R.R.	Drawing	Spare Parts: Clamp Screw	Wrench	Anti-seize Compound
Standard	MEY 16-S16	●	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	+13°	-9°		SB-2555TRG	DT-8	
	21-S20	●			21											
	25-S25	●			25	25	140	40	28	7.5		-11°		SB-3070TRG	DT-10	
	26-S25	●			26											
	32-S32	●			32	32	150	50	36	9.5		-9°		SB-4070TRG	DT-15	
	33-S32	●			33											
	40-S32	●	7		40		160	55	42	7.5		-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	MP-1
	20-S20-150H	●			20	20	150	53	22	6	+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	MP-1
	17-S16-190	●			17			31								
	20-S20-200	●			20	20	200	63	22	6	+13°	-9°		SB-2555TRG	DT-8	
	21-S20-200	●			21			35								
	25-S25-220	●			25	25	220	80	28	7.5		-11°		SB-3070TRG	DT-10	
	26-S25-220	●			26			40								
	32-S32-230	●			32	32	230	90	36	9.5		-9°		SB-4070TRG	DT-15	
	33-S32-230	●			33			50								
	40-S32-240	●	7		40		240	55	42	7.5		-11°	Fig.2	SB-3070TRG	DT-10	
	50-S42-250	●			50	42	250	70	54	9.5		-9°		SB-4070TRG	DT-15	
Weldon	MEY 16-S16-80W-H	●	4	2	16	16	80	31	19	4.5	+11°	-11°		SB-2040TRG	DTM-6	MP-1
	17-S16-80W-H	●			17											
	20-S20-85W-H	●			20	20	85	35	22	6	+13°	-9°		SB-2555TRG	DT-8	
	21-S20-85W-H	●			21											
	25-S25-95W-H	●			25	25	95	40	28	7.5		-11°		SB-3070TRG	DT-10	
	26-S25-95W-H	●			26											
	32-S32-110W-H	●			32	32	110	50	36	9.5		-9°		SB-4070TRG	DT-15	
	33-S32-110W-H	●			33											
	40-S32-130W-H	●	7		40		130	55	42	7.5		-11°		SB-3070TRG	DT-10	
	50-S40-140W-H	●			50	40	140	70	54	9.5		-9°		SB-4070TRG	DT-15	

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

Coat Anti-seize Compound thinly on portion of taper and thread when insert is fixed.

● : Std. Item

Applicable Inserts

Description		Applicable Inserts ➡ M19			
		Side Edge	No. of Inserts	Center Edge	No. of Inserts
MEY	16-S16(-...)	JOMT08T208ER-D	3	GOMT08T208ER-D	1
	17-S16(-...)				
	20-S20(-...)	JOMT100308ER-D		GOMT100308ER-D	
	21-S20(-...)				
	25-S25(-...)	JOMT13T308ER-D		GOMT13T308ER-D	
	26-S25(-...)				
	32-S32(-...)	JOMT160408ER-D		GOMT160408ER-D	
	33-S32(-...)				
	40-S32(-...)	JOMT13T308ER-D	6	GOMT13T308ER-D	
	50-S42(-...)	JOMT160408ER-D		GOMT160408ER-D	

Recommended Cutting Conditions

Workpiece Material	fz (mm/t)		Recommended Insert Grades (Cutting Speed Vc: m/min)		
			MEGACOAT		PVD Coated Carbide
	Drilling	Shouldering Slotting	PR1225	PR1210	PR830
Carbon Steel	0.08~0.15	0.05~0.25	★ 120~250	-	☆ 120~200
Alloy Steel	0.08~0.15	0.05~0.25	★ 100~220	-	☆ 100~180
Mold Steel	0.08~0.12	0.05~0.15	★ 80~180	-	☆ 80~150
Stainless Steel	0.08~0.12	0.05~0.15	★ 120~220	-	☆ 100~180
Cast Iron	0.05~0.20	0.05~0.25	-	★ 100~220	-

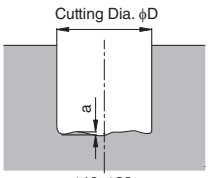
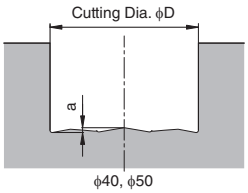
★ : 1st Recommendation ☆ : 2nd Recommendation

Caution of drilling

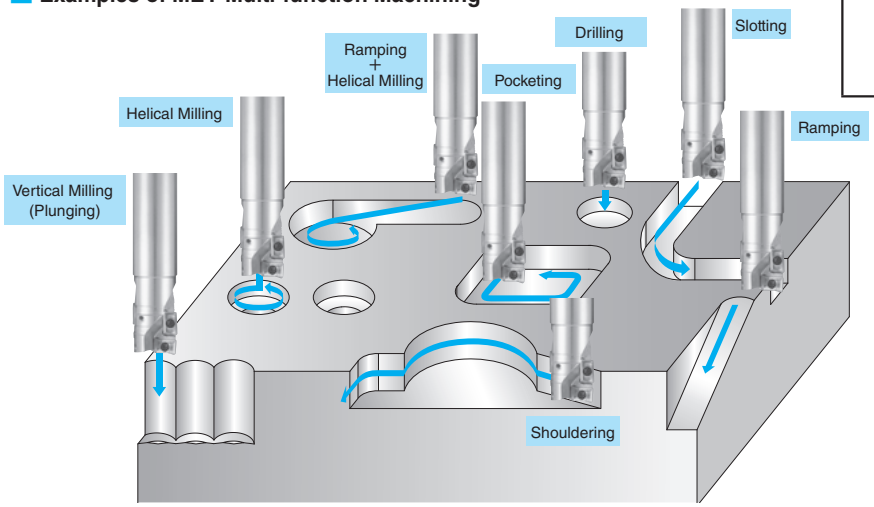
(1) Drilling conditions should be calculated as one flute line.
(2) Use compressed air during drilling.
(3) Carbon steel other than low carbon steel can be drilled to a depth of 0.5D without step feeding.
For soft steel or sticky material such as stainless steel, step feed drilling (0.5-1.0mm) is recommended.
(4) For stainless steel drilling, coolant is recommended.
(5) Please refer to right list for maximum hole depth.

Cutting Dia. (ϕD)	Max. hole depth (mm)
ϕ16	13
ϕ17	13
ϕ20	17
ϕ21	17
ϕ25	22
ϕ26	22
ϕ32	29
ϕ33	29
ϕ40	36
ϕ50	40

Shape of the bottom of the drilled hole

Cutting Dia.	a (mm)	Shape of the bottom
ϕ16, ϕ17	0.5	
ϕ20, ϕ21	0.64	
ϕ25, ϕ26	0.85	
ϕ32, ϕ33	1.12	
ϕ40	1.54	
ϕ50	1.65	

Examples of MEY Multi-function Machining



Cutting Performance of MEY

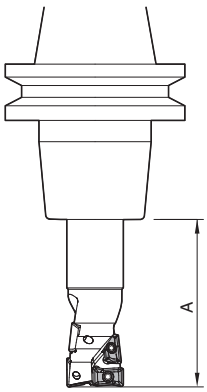
〔Workpiece Material : S50C〕

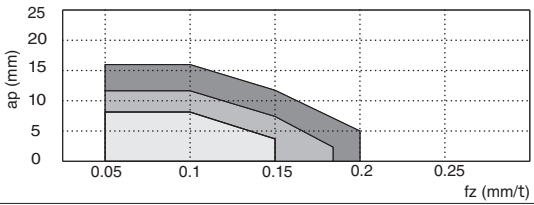
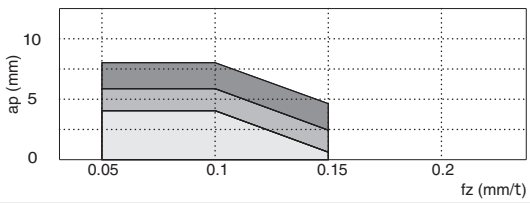
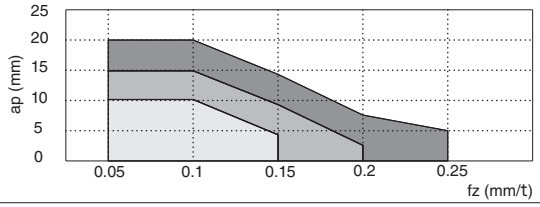
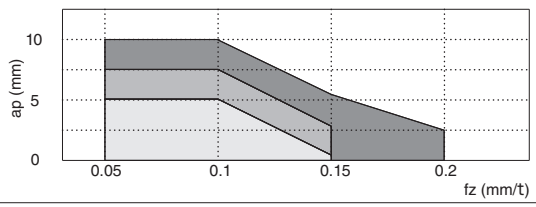
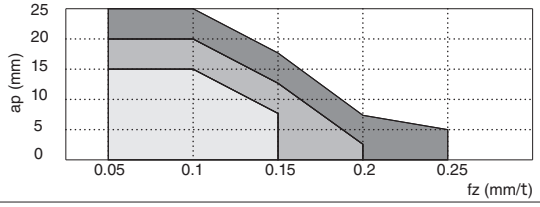
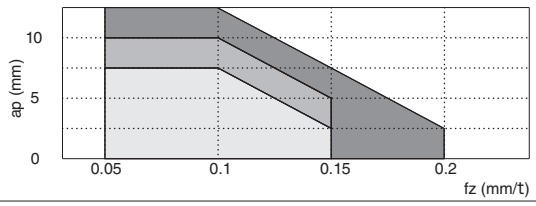
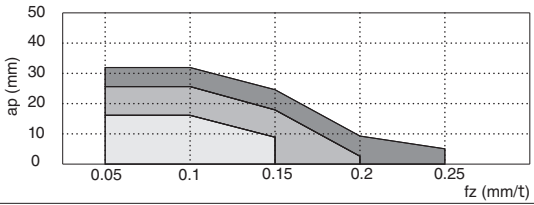
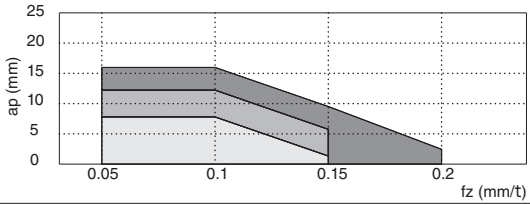
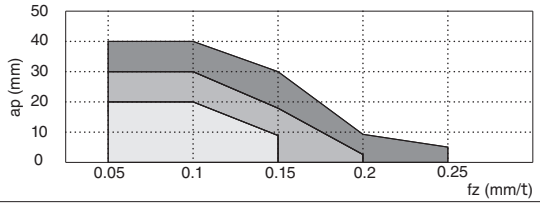
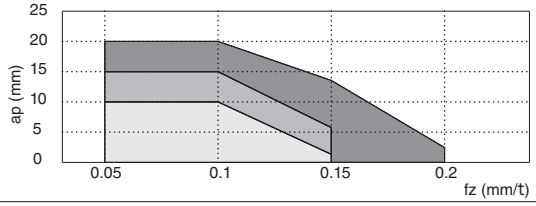
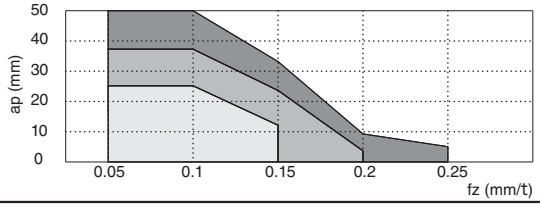
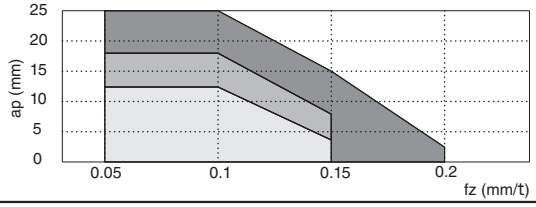
Cutting Dia.	Description	Overhang Length A (mm)		
ϕ16	MEY16-S16	31	[~61]	(Not Recommended)
	MEY16-S16-140H	-	~61	[~91]
	MEY16-S16-190	-	61	~91
ϕ17	MEY17-S16	31	[~61]	(Not Recommended)
	MEY17-S16-190	31	~61	~91
ϕ20	MEY20-S20	35	[~65]	(Not Recommended)
	MEY20-S20-150H	-	~65	[~95]
	MEY20-S20-200	-	65	~95
ϕ21	MEY21-S20	35	[~65]	(Not Recommended)
	MEY21-S20-200	35	~65	~95

When using in [ ] dimension, be careful that the chucking length to the shank may get too short.

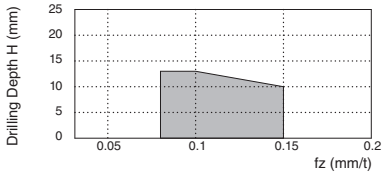
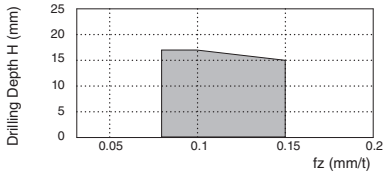
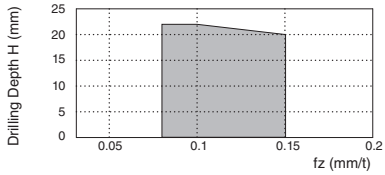
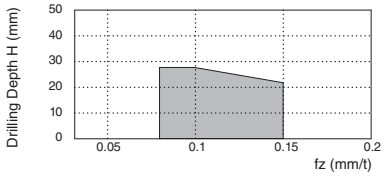
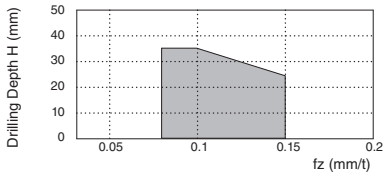
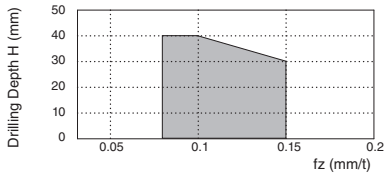
Cutting Dia.	Description	Overhang Length A (mm)		
ϕ25	MEY25-S25	40	[~70]	(Not Recommended)
	MEY25-S25-170H	-	70	[~100]
	MEY25-S25-220	-	~80	~100
ϕ26	MEY26-S25	40	[~70]	(Not Recommended)
	MEY26-S25-220	40	~70	~100
ϕ32	MEY32-S32	50	[~80]	(Not Recommended)
	MEY32-S32-180H	-	~80	[~110]
	MEY32-S32-230	-	90	~110
ϕ33	MEY33-S32	50	[~80]	(Not Recommended)
	MEY33-S32-230	50	~80	~110
ϕ40	MEY40-S32	55	[~85]	[~115]
	MEY40-S32-240	55	~85	~115
ϕ50	MEY50-S42	70	[~100]	[~130]
	MEY50-S42-250	70	~100	~130

Shape



Description	■ Shouldering (Cutting width ae = ϕD/2) Note) Part ae = ϕD/4	■ Slotting ■ Ramping and Helical Milling
MEY16-S16 MEY17-S16		
MEY20-S20 MEY21-S20		
MEY25-S25 MEY26-S25		
MEY32-S32 MEY33-S32		
MEY40-S32		
MEY50-S42		

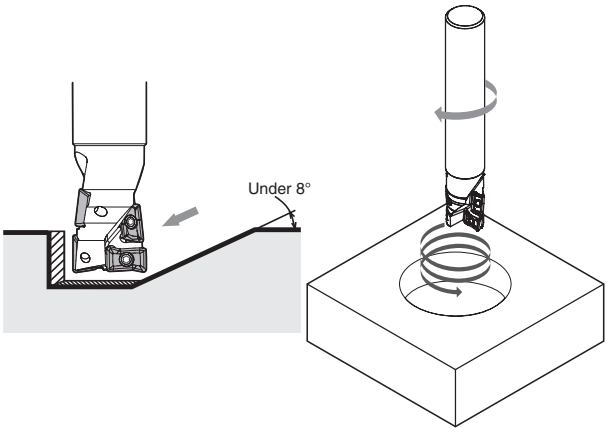
Drilling [Standard / Long Head / Long Shank: S50C]

MEY16-S16 MEY17-S16	MEY20-S20 MEY21-S20	MEY25-S25 MEY26-S25
		
MEY32-S32 MEY33-S32	**MEY40-S32**	**MEY50-S42**
		

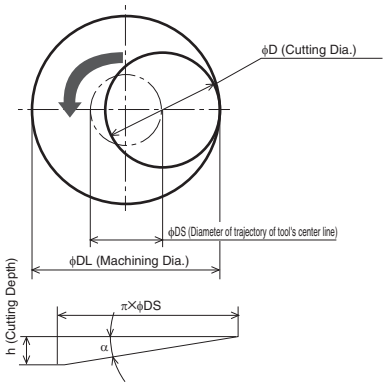
How to Use MEY Effectively

Ramping / Helical Milling

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



Helical Milling Factors



ϕDS(How to find diameter of trajectory of tool's center line)

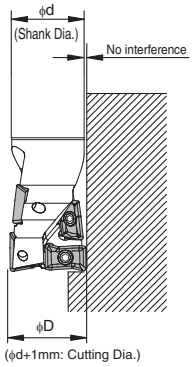
ϕDS=ϕDL-ϕD

h (How to find "h")

h=π×ϕDS×tanα

(α should be under 8°)

Shouldering

- Tools with 1mm larger cutting diameter than shank diameter are available.
  High wall shouldering is possible.
- Lineup (mm)

Description	ϕD	ϕd
MEY17-S16	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