

◆ Recommended Cutting Conditions (MHD-RSA)

Application	Description	Workpiece Material: C50 (S50C)				Workpiece Material: Cast Iron			
		Cutting Speed Vc (m/min)	fz (mm/t)	Max. Condition		Cutting Speed Vc (m/min)	fz (mm/t)	Max. Condition	
				Depth ap (mm)	Width ae (mm)			Depth ap (mm)	Width ae (mm)
Shouldering	MHD 32-S32-4RSA	100	0.1	40	1/2 of Cutting Dia.	120	0.15	45	1/2 of Cutting Dia.
	40-S32-5RSA	100	0.1	45	1/2 of Cutting Dia.				
	40-S42-5RSA								
	50-S42-6RSA								
Slotting	MHD 32-S32-4RSA	80	0.1	1/2 of Cutting Dia.	1/2 of Cutting Dia.	100	0.15	1/2 of Cutting Dia.	1/2 of Cutting Dia.
	40-S32-5RSA								
	40-S42-5RSA								
	50-S42-6RSA								
Ramping Shouldering	MHD 32-S32-4RSA	80	0.1	40	1/2 of Cutting Dia.	80	0.1	45	1/2 of Cutting Dia.
	40-S32-5RSA	80	0.1	45	1/2 of Cutting Dia.				
	40-S42-5RSA								
	50-S42-6RSA								
Ramping Slotting	MHD 32-S32-4RSA	80	0.1	1/2 of Cutting Dia.	1/2 of Cutting Dia.	80	0.1	1/2 of Cutting Dia.	1/2 of Cutting Dia.
	40-S32-5RSA								
	40-S42-5RSA								
	50-S42-6RSA								

• MHD32-S32-4RSA is not suitable for slotting and slant slotting of carbon steel / alloy steel.

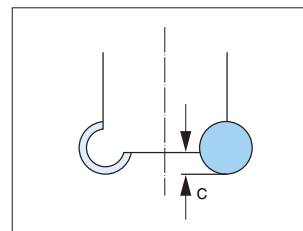
● Guide for Drilling

【Depth of Drilling】

• Radius Helical Endmill MHD-RSA / MHD-RC

Description	C-Dimension (Distance from body bottom to insert end: mm)	Recommended ap when Drilling
FPMT090340ER	3mm	2mm
RPMT10T3M0	4mm	3mm
RPMT1204M0 RPMT1204M0-H	5mm	4mm

The ap should have approx. 1mm clearance from C-dimension when Drilling.

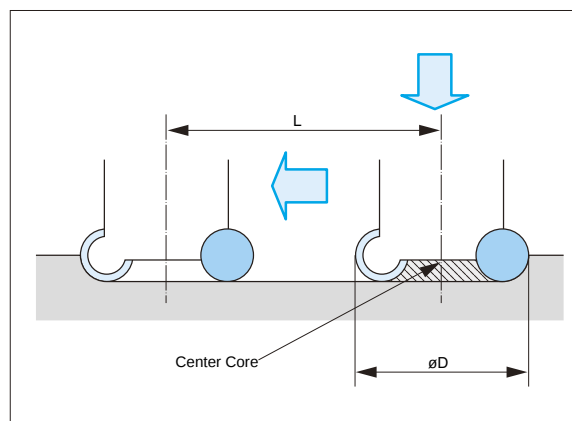


【Traversing after Drilling】

When Traversing after Drilling

- ① Reduce the table feed by 50% until the center core part is completely cut off.
(The internal cutting edge's radial rake angle is large in the negative direction)
- ② The Min. transfer length "L" to make the flat face is as follows.

Insert	L (mm)
FPMT090340ER	øD-7
RPMT10T3M0	øD-9
RPMT1204M0 RPMT1204M0-H	øD-11



● Guide for Ramping (Slant Milling)

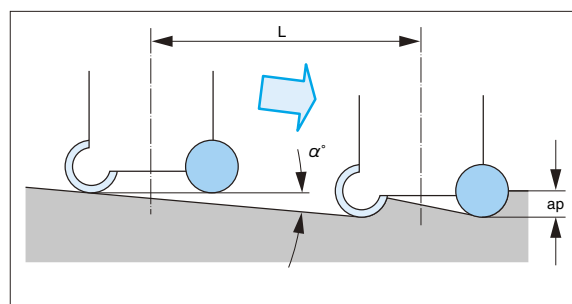
The transfer length "L" at the maximum slant angle α in the ramping operation depends on the ap.

Toolholder	Angle α (°)	$\tan \alpha$
MHD32-S32-4RSA(MHD32-4R)	6°	0.105
MHD40-S32-5RSA(MHD40-5R)	8°	0.141
MHD40-S42-5RSA(MHD40-5R)	8°	0.141
MHD50-S42-6RSA(MHD50-6R)	8°	0.141

* Above is the value considering the clearance 1mm between the tool body and the workpiece.

Formula of the Transfer Length "L" at Max. Slant Angle

$$L = \frac{ap}{\tan \alpha}$$



M



Milling