

◆ Recommended Cutting Conditions

Workpiece Material	fz (mm/t)	Recommended Insert Grade (Cutting Speed Vc: m/min)											
		Cermet			PVD Coated Carbide						Carbide		
		TN60	TN100M	TC60	PR630	PR730	PR830			PR660	PR905	PW30	KW10
Stainless Steel	0.05~0.1					☆ 60~120				★ 60~120			
Carbon Steel	0.1~0.15					★ 80~150				☆ 60~130			
Alloy Steel	0.1~0.15					★ 80~150				☆ 60~130			
Mold Steel	0.05~0.1					★ 70~120				☆ 70~120			
Cast Iron	0.1~0.2										★ 100~180		☆ 80~120
Non-ferrous Metals	0.1~0.2												★ 100~300

★ : 1st Recommendation ☆ : 2nd Recommendation

◆ Points at Bolt Counter Sink Milling

① Carbon Steel

Increase the feed rate to **fz=0.1~0.15 mm/t** for preventing long chips at low feed rates.

Chip control is good when setting **Vc=80m/min** for MEF11~MEF25, and **Vc=120m/min** for MEF26~MEF48.

Description	Cutting Speed Vc (m/min)	Feed Rate fz (mm/t)
MEF11~MEF25	80	0.1~0.15
MEF26~MEF48	120	0.1~0.15

② Sticky Materials

Step feed is recommended for good chip control

Increase the feed rate to **fz=0.1~0.15 mm/t** for preventing long chips at low feed rate (**fz=0.05mm/t**).

Use cover to prevent accidents or injury by thick chips at higher feed rates.

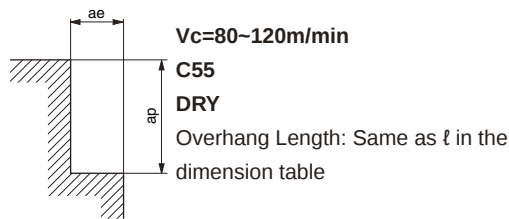
Description	Cutting Speed Vc (m/min)	Feed Rate fz (mm/t)	Step Feed (mm)
MEF11~MEF48	80~150	0.1~0.15	0.5~1.5

③ Stainless Steel

Use a lower Cutting Speed. High Cutting Speeds cause chattering.

◆ Cutting Performance when Shouldering

MEF Bolt Countersink Endmill is also recommended of shouldering.



- When shouldering, both side edge and bottom edges function. Both edges wear at the same time depending on ap. The insert uses 2 edges instead of 4. (See Fig.1)
- MEF type's side edge is designed to have a slight clearance for the countersink milling. Therefore, worked side wall is approx. 1° inclined against the vertical face. (Fig.2)

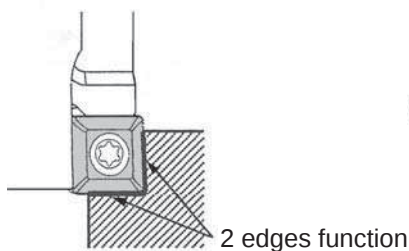


Fig.1

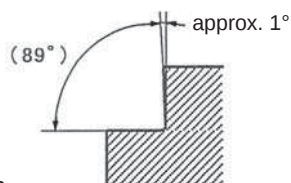


Fig.2

Description	Cutting Range
MEF11-S12 MEF14-S12 MEF17-S16 MEF18-S16	
MEF20-S16 MEF22-S20 MEF25-S25	
MEF26-S25 MEF32-S25 MEF35-S32	
MEF39-S32 MEF43-S32 MEF48-S32	



Milling