# MEF BOLT COUNTERSINKING END MILL

## Recommended Cutting Conditions

| Workpiece Material | fz (ipt) | Recommended Insert Grades (Cutting Speed Vc: sfm) | | |
|---|---|---|---|---|
| | | MEGACOAT | | Carbide |
| | | **PR1225** | **PR1210** | **KW10** |
| Carbon Steel | 0.004~0.006 | ★ 390~720 | - | - |
| Alloy Steel | 0.004~0.006 | ★ 390~720 | - | - |
| Mold Steel | 0.002~0.004 | ★ 330~590 | - | - |
| Stainless Steel | 0.002~0.004 | ★ 260~590 | - | - |
| Cast Iron | 0.004~0.008 | - | ★ 330~720 | ☆ 260~390 |
| Non-ferrous Metals | 0.004~0.008 | - | - | ★ 330~980 |

★: 1st Recommendation ☆: 2nd Recommendation

## Points at Bolt Counter Sink Milling

① Carbon Steel

Increase the feed rate to fz = 0.004~0.006 ipt for preventing long chips at low feed rates.
Chip control is good when setting Vc = 260 sfm for MEF11~MEF25, and Vc = 390 sfm for MEF26~MEF48.

| Part Number | Cutting Speed Vc (sfm) | fz (ipt) |
|---|---|---|
| **MEF11~MEF25** | 260 | 0.004~0.006 |
| **MEF26~MEF48** | 390 | 0.004~0.006 |

② Sticky Materials

Step feed is recommended for good chip control
Increase the feed rate to fz = 0.004~0.006 ipt for preventing long chips at low feed rate fz = 0.002 ipt.
Use cover to prevent accidents or injury by thick chips at higher feed rates.

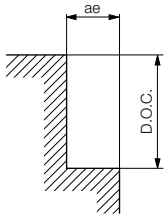
| Part Number | Cutting Speed Vc (sfm) | fz (ipt) | Step Feed (inch) |
|---|---|---|---|
| **MEF11~MEF48** | 260~490 | 0.004~0.006 | 0.020~0.059 |

③ Stainless Steel

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

## Cutting Performance when Shouldering

MEF Bolt Countersink End Mill is also recommended for shouldering.




Vc = 260~390 sfm
1055
DRY
Overhang Length:
Same as ℓ in the dimension table

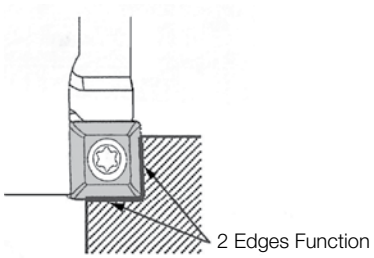



Fig.1

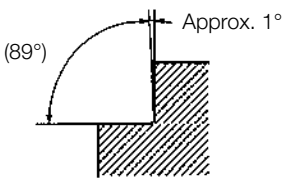
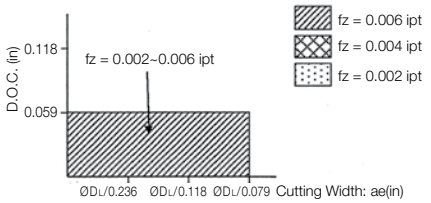
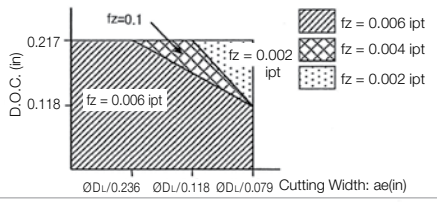
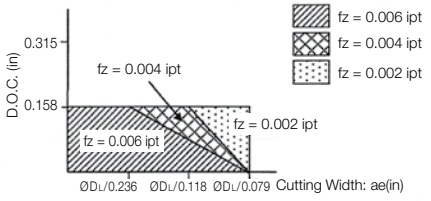
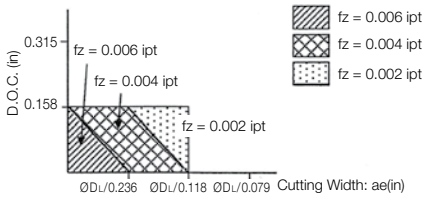



Fig.2

- When shouldering, both side edge and bottom edges function.
  Both edges wear at the same time depending on D.O.C..
  The insert uses 2 edges instead of 4.
  (Ref. to 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.
  (Ref. to Fig.2)

| Part Number | Cutting Range |
|---|---|
| **MEF11-S12**<br>**MEF14-S12**<br>**MEF17-S16**<br>**MEF18-S16** |  |
| **MEF20-S16**<br>**MEF22-S20**<br>~<br>**MEF25-S20** |  |
| **MEF26-S25**<br>~<br>**MEF32-S25**<br>**MEF35-S32** |  |
| **MEF39-S32**<br>**MEF43-S32**<br>**MEF48-S32** |  |