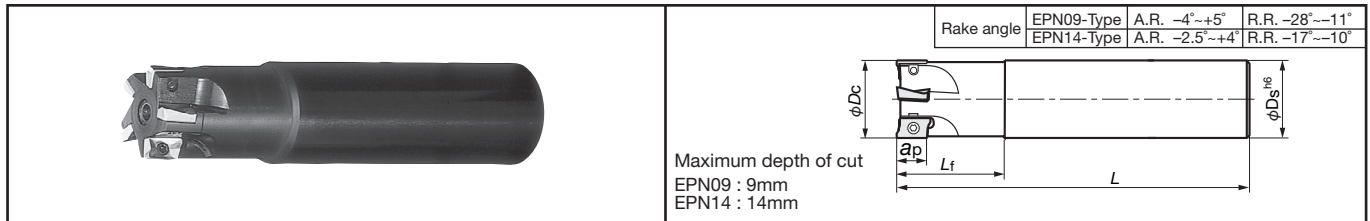




For square shoulder milling of general steels, cast irons and stainless steels



| | Cat. No. | Stock | No. of teeth | Dimensions (mm) | | | | | Clamping screw | Wrench |
|----|-----------|-------|--------------|-----------------|------------|-------|-------|----------|----------------|--------|
| | | | | ϕD_c | ϕD_s | a_p | L_f | L | | |
| 09 | EPN09010R | ▲ | 1 | 10 | 16 | 9 | 20 | 80 | CSTB-2.5S | T-8D |
| | EPN09012R | ▲ | | 12 | | | | | | |
| | EPN09016R | ▲ | 2 | 16 | 20 | | 25 | 85 | | |
| | EPN09018R | | | 18 | | | | | | |
| | EPN09020R | ▲ | 3 | 20 | 30 | | 100 | | | |
| | EPN09025R | ▲ | 4 | 25 | | | | | | |
| | EPN09030R | ▲ | 5 | 30 | 32 | | 40 | 120 | CSTB-2.5 | T-8D |
| | EPN09032R | | | 32 | | | | | | |
| | EPN09035R | ▲ | | 35 | | | | | | |
| | EPN09040R | ▲ | 6 | 40 | 32 | 40 | 120 | CSTB-2.5 | T-8D | |
| | EPN09050R | ▲ | 7 | 50 | | | | | | |
| | EPN14025R | ▲ | 2 | 25 | | | | | | 25 |
| 14 | EPN14030R | ▲ | 3 | 30 | 14 | 40 | 120 | | | |
| | EPN14035R | ▲ | 4 | 35 | | | | | | |
| | EPN14040R | ▲ | 5 | 40 | | | | | | |
| | EPN14050R | ▲ | 6 | 50 | | | | | | |
| | EPN14063R | ▲ | 7 | 63 | | | | | | |
| | EPN14080R | ▲ | 8 | 80 | 45 | 125 | | | | |

Inserts

| Cat. No. | Grades | | | | | Dimensions (mm) | | | | | | | | Application |
|-----------------|--------|-------|-------|-------|-------|-----------------|-------|------|----------|---------|-----|-------|-------|-----------------|
| | Coated | | | | | A | B | T | α | β | R | I.A.R | I.R.R | |
| | T3130 | T3030 | GH330 | GH340 | AH120 | | | | | | | | | |
| ANMT09T3PPPR-MJ | ● | ● | ● | | ● | 9.525 | 6.5 | 3.97 | +11° | 0° | 0.4 | +11° | +20° | General purpose |
| ANMT1404PPPR-MJ | ● | ● | ● | | ● | 14 | 9.525 | 4.76 | | | 0.8 | | | |
| ANMT09T3PPPR-ML | | | | ● | ● | 9.525 | 6.5 | 3.97 | | | 0.4 | | +25° | |
| ANMT1404PPPR-ML | | | | ● | ● | 14 | 9.525 | 4.76 | | | 0.8 | | | |

Standard cutting conditions

| Work materials | Stocked grades Chipbreaker Cutter diameter | Cutting speed & feed | Cutter diameter | | | |
|---|--|-------------------------------|---------------------|---------------------|----------------------|----------------------|
| | | | EPN09-type | | EPN14-type | |
| | | | $\phi 10,12$ | $\sim \phi 18$ | $\phi 20\sim$ | $\phi 25\sim$ |
| Carbon steels, Alloy steels (<300HB) JIS S50C,SCM440 | T3130-T3030 MJ | v_c (m/min) f_z (mm/t) | 60~100 0.05~0.1 | 80~120 0.1~0.15 | 100~200 0.1~0.2 | 100~200 0.1~0.2 |
| Mild steels-Low carbon steels (<250HB) JIS SS400,S25C | AH120 ML | v_c (m/min) f_z (mm/t) | 80~100 0.05~0.1 | 100~150 0.1~0.15 | 100~200 0.12~0.2 | 100~200 0.12~0.2 |
| Die steels (<300HB) JIS SKD11,SKD61 | T3130-T3030 MJ | v_c (m/min) f_z (mm/t) | 60~100 0.05~0.1 | 80~120 0.1~0.15 | 100~150 0.1~0.2 | 80~150 0.1~0.2 |
| Stainless steels (<250HB) SUS304,316 | AH120 ML | v_c (m/min) f_z (mm/t) | 80~100 0.05~0.1 | 100~150 0.1~0.15 | 100~200 0.1~0.2 | 100~200 0.1~0.2 |
| Gray cast irons Ductile cast irons JIS FC250,FCD400 | AH120 MJ | v_c (m/min) f_z (mm/t) | 80~100 0.08~0.12 | 100~150 0.12~0.2 | 100~200 0.15~0.25 | 100~200 0.15~0.25 |

Notes :

- In the table at left. v_c = cutting speed (m/min) and f_z = feed per tooth (mm/tooth)
- When machining general steels and die steels where the surface roughness is important, GH330 grade is recommended.
- When using the smaller side of the cutter diameters or cutting at a large depth of cut or a large cutting width, use the lower sides of "v_c" and "f_z" values shown in the table.
- Dry cutting (or air-blowing) is generally recommended.
- EPN-type TAC end mills can not be used for axial-feed cutting such as ramping, plunging, and drilling.
- No. of revolutions (min⁻¹) = Cutting speed × 1000 ÷ 3.14 ÷ Cutter diameter
- Table feed (mm/min) = No. of revolutions × Feed per tooth × No. of inserts
- When wet machining mild steels, carbon steels and alloy steels, use T3130 at lower cutting conditions.

● : Stocked in Japan.
▲ : Shortly unavailable