

# Endmill [TP ☐☐ / TE ☐☐ Insert]



Shouldering

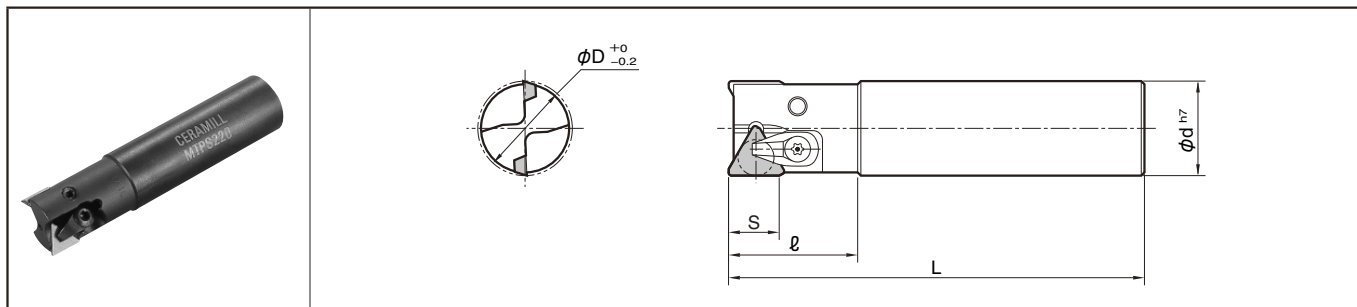


Slotting



Facing

## MTPS / MTES



### Toolholder Dimensions

| Description     | Std. | No. of Insert | Dimension (mm) |    |     |    |      |  | Rake Angle (°) |      | Spare Parts |        |  |
|-----------------|------|---------------|----------------|----|-----|----|------|--|----------------|------|-------------|--------|--|
|                 |      |               | øD             | ød | L   | l  | S    |  | A.R.           | R.R. | Clamp Set   | Wrench |  |
| <b>MTPS 216</b> | ●    | 1             | 16             | 16 | 80  | 25 | 9.0  |  | +3°            | -5°  | CPS-2S      | FT-15  |  |
| <b>220</b>      | ●    | 2             | 20             | 20 | 90  | 30 |      |  | +5°            | -4°  |             |        |  |
| <b>MTES 325</b> | ●    | 2             | 25             | 25 | 110 | 35 | 13.5 |  | +11°           | -2°  | CPS-5E      | FT-15  |  |
| <b>330</b>      | ●    | 2             | 30             | 32 | 125 | 45 |      |  | +15°           | -2°  |             |        |  |
| <b>335</b>      | ●    | 3             | 35             | 32 | 125 | 45 |      |  | +15°           | 0°   |             |        |  |

### Applicable Inserts

| Toolholder      | Applicable Inserts              |                                                       |                 |                           |                                       |
|-----------------|---------------------------------|-------------------------------------------------------|-----------------|---------------------------|---------------------------------------|
|                 | ➡ M12                           | ➡ M21                                                 | ➡ M12           | ➡ M12                     | ➡ M21                                 |
|                 |                                 |                                                       |                 |                           |                                       |
| <b>MTPS 216</b> | TPGN 110302<br>110304<br>110308 | TPGN 110302 ○○<br>110304 ○○<br>110308 ○○<br>(CBN/PCD) | -               | -                         | -                                     |
| <b>220</b>      | TPMN 110304<br>110308           |                                                       |                 |                           |                                       |
| <b>MTES 325</b> | -                               | -                                                     | TEMR 1603PTFR-H | TEKN 1603PTTR<br>1603PTFR | TEEN 1603PTFR<br>1603PTFR-NE<br>(PCD) |
| <b>330</b>      |                                 |                                                       |                 |                           |                                       |
| <b>335</b>      |                                 |                                                       |                 |                           |                                       |

### MTPS / MTES Recommended Cutting Conditions

| Workpiece Material | fz<br>(mm/t) | Recommended Insert Grade (Cutting Speed Vc: m/min) |              |              |                   |              |             |       |              |              |              |        |              | Max. ap (mm) |                      |                  |                        |
|--------------------|--------------|----------------------------------------------------|--------------|--------------|-------------------|--------------|-------------|-------|--------------|--------------|--------------|--------|--------------|--------------|----------------------|------------------|------------------------|
|                    |              | Cermet                                             |              |              | PVDCoated Carbide |              |             |       | Carbide      |              | CBN          |        | PCD          |              |                      |                  |                        |
|                    |              | TN60                                               | TN100M       | TC60M        | PR630             | PR730        | PR830       | PR905 | PW30         | KW10         | KBN10B       | KBN25B | KPD001       | KPD010       | Cutting Dia.<br>(øD) | Slotting<br>(ap) | Shouldering<br>(ap×ae) |
| Stainless Steel    | ~0.12        |                                                    | ☆<br>120~200 | ☆<br>120~200 | ☆<br>120~200      | ★<br>120~200 |             |       | ☆<br>80~120  |              |              |        |              |              | ~ø20                 | 2                | 5×2                    |
| Carbon Steel       | ~0.15        | ☆<br>150~200                                       | ★<br>120~200 | ☆<br>120~200 | ☆<br>120~200      | ★<br>120~200 |             |       | ☆<br>60~120  |              |              |        |              |              | ~ø20                 | 3                | 6×2                    |
| Alloy Steel        | ~0.15        | ☆<br>120~200                                       | ★<br>100~180 | ☆<br>100~180 | ☆<br>100~180      | ★<br>100~180 |             |       | ☆<br>60~120  |              |              |        |              |              | ~ø20                 | 3                | 6×2                    |
| Mold Steel         | ~0.15        | ☆<br>120~200                                       | ★<br>100~180 | ☆<br>100~180 | ☆<br>80~150       | ★<br>80~150  |             |       | ☆<br>60~120  |              |              |        |              |              | ~ø20                 | 3                | 6×2                    |
| Cast Iron          | ~0.2         |                                                    |              |              |                   |              | ★<br>80~180 |       | ☆<br>80~150  | ☆<br>300~500 | ★<br>300~500 |        |              |              | ~ø20                 | 3                | 6×2                    |
| Non-ferrous Metals | ~0.2         |                                                    |              |              |                   |              |             |       | ★<br>100~300 |              |              |        | ★<br>300~500 | ☆<br>300~500 | ~ø20                 | 3                | 6×2                    |
| Hard Materials     | ~0.05        |                                                    |              |              |                   |              |             |       |              |              | ★<br>80~150  |        |              |              | ~ø20                 | -                | 2×0.5                  |

★ : 1st Recommendation ☆ : 2nd Recommendation

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

