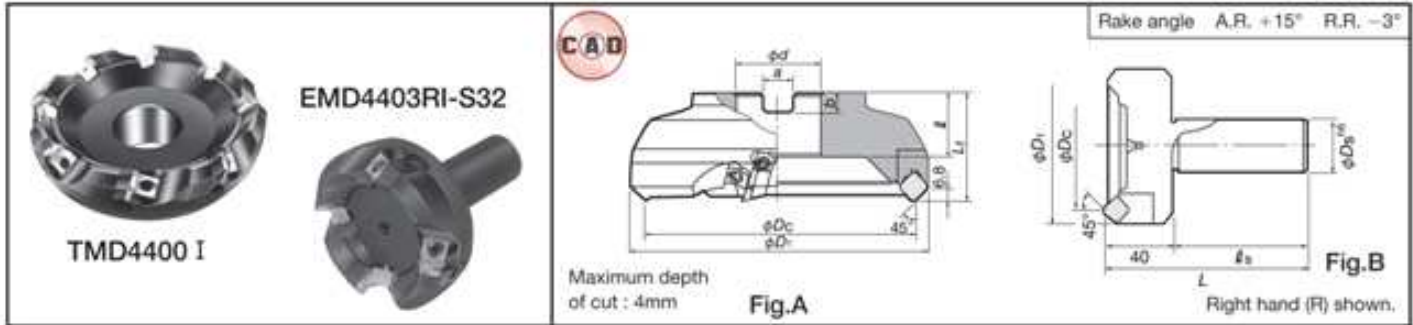




For general purpose milling of general steels, stainless steels, cast irons, and non-ferrous metals



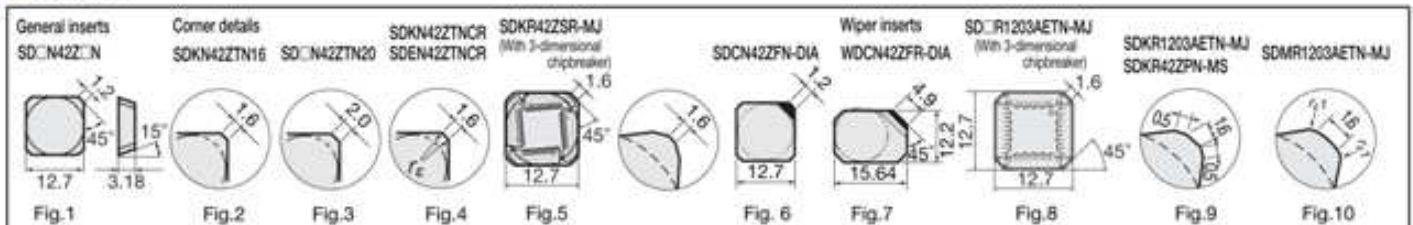
TMD4400 I (Fig.A)

| Cat. No. | Stock | | No. of inserts | Dimensions (mm) | | | | | | | Weight (kg) | Mounting details |
|-------------|-------|---|----------------|-----------------|------------|----------|-----|-------|------|------|-------------|------------------|
| | R | L | | ϕD_c | ϕD_1 | ϕd | l | L_t | b | a | | |
| TMD4403R/LI | ● | ● | 4 | 80 | 96 | 25.4 | 26 | 50 | 6 | 9.5 | 1.4 | 9-144(B) |
| TMD4404R/LI | ● | ● | 5 | 100 | 115 | 31.75 | 32 | 63 | 8 | 12.7 | 2.5 | |
| TMD4405R/LI | ● | ● | 6 | 125 | 139 | 38.1 | 38 | | 10 | 15.9 | 3.6 | |
| TMD4406R/LI | ● | ● | 8 | 160 | 173 | 50.8 | | | 11 | 19 | 5.6 | |
| TMD4408R/LI | ● | ● | 10 | 200 | 213 | 47.625 | 63 | 14 | 25.4 | 8.7 | 9-144(C) | |
| TMD4410R/LI | ● | ● | 12 | 250 | 263 | | | | | 16.3 | 9-144(D) | |
| TMD4412R/LI | ● | ● | 14 | 315 | 327 | | | | | 25.2 | | |

EMD4403RI-S32 (Fig.B, shank-type spec)

| Cat. No. | Stock | No. of inserts | Dimensions (mm) | | | | |
|---------------|-------|----------------|-----------------|------------|------------|-----|-------|
| | | | ϕD_c | ϕD_1 | ϕD_s | L | l_s |
| EMD4403RI-S32 | ● | 4 | 80 | 95 | 32 | 120 | 80 |

Inserts



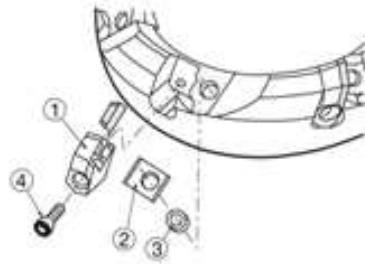
| Type | Cat. No. (Inch system) | ISO CAT. NO. (METRIC SYSTEM) | Accuracy | Honing | Grades | | | | | | | | | | Figure | | | | |
|-----------------|------------------------|------------------------------|----------|---------|--------|-------|-------|-------|-------|--------|-------|----------|------|------|--------|-------|------|----------|---------|
| | | | | | Coated | | | | | Cermet | | Uncoated | | | | T-DIA | | | |
| | | | | | T3130 | T3030 | GH330 | T1015 | AH120 | AH330 | AH140 | NS740 | N308 | TH10 | | | UX30 | TX25 | TX30 |
| General inserts | SDCN42ZTN | SDCN1203AETN-12 | C | With | | | | | | | | | | | | | | | Fig.1 |
| | SDCN42ZFN | SDCN1203AEFN-12 | | Without | | | | | | | | | | | | | | | |
| | SDCN42ZFN-DIA | SDCN1203AEFN-D | | | | | | | | | | | | | | | | | Fig.6 |
| | SDCN42ZTN20 | SDCN1203AETN-20 | E | With | | | | | | | | | | | | | | | Fig.3 |
| | SDEN42ZTN20 | SDEN1203AETN-20 | | Without | | | | | | | | | | | | | | | |
| | SDEN42ZFN | SDEN1203AEFN-12 | | With | | | | | | | | | | | | | | | Fig.1 |
| | SDEN42ZTNCR | SDEN1203AETNCR | K | With | | | | | | | | | | | | | | | Fig.4 |
| | SDKN42ZTN | SDKN1203AETN-12 | | Without | | | | | | | | | | | | | | | |
| | SDKN42ZFN | SDKN1203AEFN-12 | | With | | | | | | | | | | | | | | | Fig.1 |
| | SDKN42ZTNCR | SDKN1203AETN-CR | K | With | | | | | | | | | | | | | | | Fig.4 |
| | SDKN42ZTN16 | SDKN1203AETN-16 | | Without | | | | | | | | | | | | | | | |
| | SDKR42ZSR-MJ | SDKR1203AESR-MJ | | With | | | | | | | | | | | | | | | Fig.5 |
| | SDKR1203AETN-MJ | | K | With | | | | | | | | | | | | | | | Fig.8,9 |
| | SDKR42ZPN-MS | SDKR1203AEPN-MS | | Without | | | | | | | | | | | | | | | |
| SDMR1203AETN-MJ | | M | With | | | | | | | | | | | | | | | Fig.8,10 | |
| Wiper insert | WDCN42ZFR-DIA | SDCX1203AEFR-WD | C | Without | | | | | | | | | | | | | | Fig.7 | |

Notes: • T-DIA is Tungaloy's trade name for polycrystalline sintered diamond. The insert is one-corner type.
• Inserts can be used for former PS-series TAC mills.

"DX140": 1-insert packing

● : Stocked in Japan.

Replacement parts



| No. | Parts | Part Cat. No. |
|-----|----------------------|---------------|
| ① | Locator | LD440R/L |
| ② | Insert locking wedge | WP440R/L |
| ③ | Wedge fixing screw | FDS-8S |
| ④ | Locator fixing screw | CM4×0.7×14 |
| — | T-handle wrench | TP-4 |

Standard cutting conditions

| Work materials | Insert grades | Roughing (Depth of cut : 1.5~4 mm) | | Finishing (Depth of cut : 0.3~0.7mm) | |
|---|-------------------------|------------------------------------|---------------------------------|--------------------------------------|---------------------------------|
| | | Cutting speed v_c (m/min) | Feed per tooth f_z (mm/tooth) | Cutting speed v_c (m/min) | Feed per tooth f_z (mm/tooth) |
| Mild steels Unhardened steels (<180 HB) | NS740·N308 | 150~250 | 0.1~0.2 | 150~250 | 0.1~0.25 |
| | AH330 | 150~400 | 0.1~0.25 | 150~400 | 0.1~0.28 |
| | AH120·GH330 | 150~250 | | 150~250 | |
| | T3130·T3030 | 150~300 | 0.1~0.28 | 180~300 | 0.1~0.3 |
| AH140·UX30 | 100~180 | 130~200 | | | |
| Carbon steels Alloy steels (<300 HB) | T3130·T3030 | 150~280 | 0.1~0.25 | 180~280 | 0.1~0.28 |
| | NS740·N308 | 100~180 | 0.1~0.18 | 150~200 | 0.1~0.23 |
| | AH330 | 100~320 | 0.1~0.23 | 150~320 | 0.1~0.25 |
| | AH120·GH330 | 100~200 | | 150~200 | |
| | UX30 | 80~130 | 0.1~0.25 | 100~150 | 0.1~0.28 |
| Stainless steels (<250 HB) | AH140 | 80~180 | 0.15~0.25 | 100~200 | 0.15~0.28 |
| | AH120·GH330 | 150~230 | 0.15~0.23 | 200~250 | 0.15~0.25 |
| | UX30 | 150~180 | | 180~200 | |
| Die steels (<30 HRC) | AH120·T3130·T3030·GH330 | 100~150 | 0.1~0.15 | 100~150 | 0.1~0.2 |
| | AH330 | 100~250 | | 100~250 | |
| | UX30 | 80~130 | | 80~130 | |
| Cast irons Ductile cast irons | T1015 | 100~200 | 0.1~0.2 | 100~200 | 0.1~0.25 |
| | TH10·UX30 | 80~130 | | 80~130 | |
| Aluminum alloys (Si : <12%) | TH10 | 200~1000 | 0.05~0.2 | 350~1000 | 0.1~0.3 |
| | DX140 | | 0.05~0.18 | | 0.1~0.2 |
| Copper alloys | TH10 | 200~500 | 0.1~0.2 | 200~500 | 0.1~0.25 |

- Notes:
- Dry cutting is recommended for all materials except for aluminum alloys.
 - Maximum depth of cut for DX140 SDCN42ZFN-DIA is 2 mm.
 - When wet machining mild steels, carbon steels and alloy steels, use T3130 at lower cutting conditions.

- No. of revolutions (min^{-1}) = Cutting speed \times 1000 \div 3.14 \div Cutter diameter
- Table feed (mm/min) = No. of revolutions \times Feed per tooth \times No. of inserts