# VSNE

Diameter
ϕ125~500mm

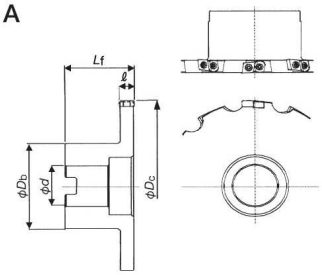
90°

P Steel M Stainless K Cast Iron

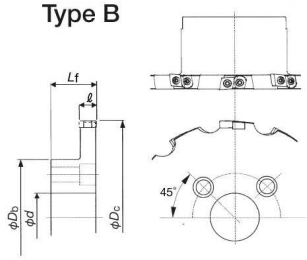
Slotting

For slotting of general steels, stainless steels and cast irons

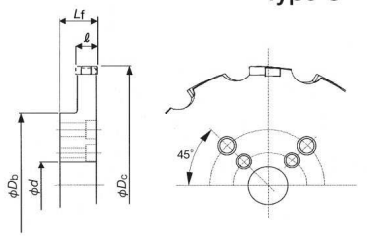
Type A




Type B



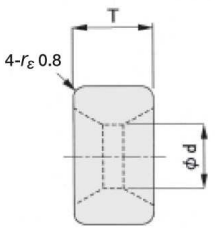

Type C

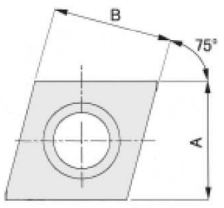



| Width ℓ (mm) | Cat. no. | Stock R | Stock L | Max. effective no. of teeth | Max. no. of inserts | Tool dia. øDc | Height Lf (mm) | Hole dia. ød (mm) | Flange dia. øDb | Type | Clamping screw |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13~16 | VSNE09125R/L13~16 | | | 4 | 8 | 125 | 50 | 31.75 | 70 | A | CSTB-4 |
| | VSNE09160R/L13~16 | | | 6 | 12 | 160 | 60 | 38.1 | 100 | | |
| | VSNE09200R/L13~16 | | | 7 | 14 | 200 | | 47.625 | 135 | B | |
| | VSNE09250R/L13~16 | | | 9 | 18 | 250 | | | 140 | | |
| | VSNE09315R/L13~16 | | | 11 | 22 | 315 | | | 150 | | |
| | VSNE09355R/L13~16 | | | 12 | 24 | 355 | | | 170 | | |
| | VSNE09400R/L13~16 | | | 13 | 26 | 400 | | | 180 | | |
| | VSNE09450R/L13~16 | | | 14 | 28 | 450 | | | 220 | C | |
| | VSNE09500R/L13~16 | | | 15 | 30 | 500 | | | 240 | | |
| 16~18.5 | VSNE10125R/L16~18.5 | | | 4 | 8 | 125 | 50 | 31.75 | 70 | A | CSTB-4 |
| | VSNE10160R/L16~18.5 | | | 6 | 12 | 160 | 60 | 38.1 | 100 | | |
| | VSNE10200R/L16~18.5 | | | 7 | 14 | 200 | | 47.625 | 135 | B | |
| | VSNE10250R/L16~18.5 | | | 9 | 18 | 250 | | | 140 | | |
| | VSNE10315R/L16~18.5 | | | 11 | 22 | 315 | | | 150 | | |
| | VSNE10355R/L16~18.5 | | | 12 | 24 | 355 | | | 170 | | |
| | VSNE10400R/L16~18.5 | | | 13 | 26 | 400 | | | 180 | | |
| | VSNE10450R/L16~18.5 | | | 14 | 28 | 450 | | | 220 | C | |
| | VSNE10500R/L16~18.5 | | | 15 | 30 | 500 | | | 240 | | |
| 18.5~23.6 | VSNE13125R/L18.5~23.6 | | | 3 | 6 | 125 | 50 | 31.75 | 70 | A | CSTB-5 |
| | VSNE13160R/L18.5~23.6 | | | 4 | 8 | 160 | 60 | 38.1 | 100 | | |
| | VSNE13200R/L18.5~23.6 | | | 5 | 10 | 200 | | 47.625 | 135 | B | |
| | VSNE13250R/L18.5~23.6 | | | 6 | 12 | 250 | | | 140 | | |
| | VSNE13315R/L18.5~23.6 | | | 8 | 16 | 315 | | | 150 | | |
| | VSNE13355R/L18.5~23.6 | | | 9 | 18 | 355 | | | 170 | | |
| | VSNE13400R/L18.5~23.6 | | | 10 | 20 | 400 | | | 180 | | |
| | VSNE13450R/L18.5~23.6 | | | 11 | 22 | 450 | | | 220 | C | |
| | VSNE13500R/L18.5~23.6 | | | 12 | 24 | 500 | | | 240 | | |
| 23.6~30.5 | VSNE16125R/L23.6~30.5 | | | 3 | 6 | 125 | 50 | 31.75 | 70 | A | CSTB-5 |
| | VSNE16160R/L23.6~30.5 | | | 4 | 8 | 160 | 60 | 38.1 | 100 | | |
| | VSNE16200R/L23.6~30.5 | | | 5 | 10 | 200 | | 47.625 | 135 | B | |
| | VSNE16250R/L23.6~30.5 | | | 6 | 12 | 250 | | | 140 | | |
| | VSNE16315R/L23.6~30.5 | | | 8 | 16 | 315 | | | 150 | | |
| | VSNE16355R/L23.6~30.5 | | | 9 | 18 | 355 | | | 170 | | |
| | VSNE16400R/L23.6~30.5 | | | 10 | 20 | 400 | | | 180 | | |
| | VSNE16450R/L23.6~30.5 | | | 11 | 22 | 450 | | | 220 | C | |
| | VSNE16500R/L23.6~30.5 | | | 12 | 24 | 500 | | | 240 | | |

Notes: • Cutting edge width (ℓ) is unadjustable.

## Inserts




| Cat. No. | Stock | | | | Coated | | | Uncoated |
|---|---|---|---|---|---|---|---|---|
| | A | B | s | ød | AH120 | AH330 | AH110 | UX30 |
| ENEQ090508TN-T | 9.5 | | 5.5 | 4.8 | ● | | | |
| ENEQ090508FN-T | | | | | | | | |
| ENEQ100508TN-T | 10.2 | | 5.5 | 4.8 | ● | | | |
| ENEQ100508FN-T | | | | | | | | |
| ENEQ130608TN-T | 12.7 | | 6.35 | 5.9 | ● | | | |
| ENEQ130608FN-T | | | | | | | | |
| ENEQ160608TN-T | 16 | 13.5 | 6.35 | 5.9 | ● | | | |
| ENEQ160608FN-T | | | | | | | | |

## Standard cutting conditions

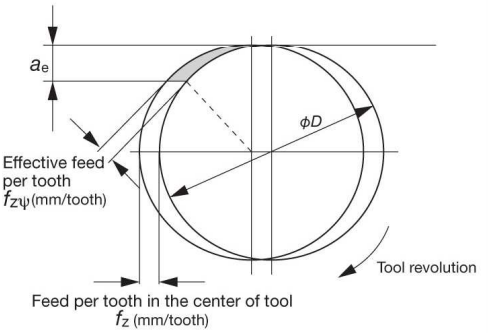
| Work material | Insert grades | Cutting speed $V_c$ (m/min) | Effective feed per tooth $f_{z\psi}$ (mm/tooth) |
|---|---|---|---|
| Mild steels, unhardened steels ( < 180 HB) | AH120<br>AH330 | 60～170<br>60～200 | 0.1～0.35 |
| Carbon steels, alloy steels (< 300 HB) | AH120<br>AH330 | 60～150<br>60～170 | 0.1～0.3 |
| Stainless steels ( < 250 HB) | AH120 | 60～150 | 0.1～0.3 |
| Die steels ( < 30 HRC) | AH120<br>AH330 | 60～150<br>60～170 | 0.1～0.3 |
| Gray cast irons | AH120<br>AH110 | 80～170<br>80～200 | 0.1～0.35 |
| Ductile cast irons | AH120<br>AH110 | 60～150<br>60～170 | 0.1～0.3 |

Calculating feed

$$f_{z\psi} = 2 \cdot f_z \sqrt{\frac{a_e}{D}\left(1 - \frac{a_e}{D}\right)}$$

$$f_z = \frac{f_{z\psi}}{2 \cdot \sqrt{\frac{a_e}{D}\left(1 - \frac{a_e}{D}\right)}}$$

$f_{z\psi}$ : Effective feed per tooth
$f_z$ : Feed per tooth in the center of tool
$a_e$ : Radial depth of cut
$D$ : Cutter diameter




● : Stocked in Japan.