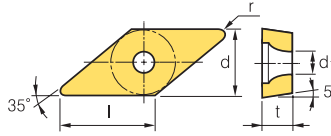


B Turning Insert (Positive)

VB



| Dimensions (mm) | | | |
|-----------------|-------|------|----------------|
| Size | d | t | d ₁ |
| 11 | 6.35 | 3.18 | 2.8 |
| 16 | 9.525 | 4.76 | 4.4 |

Rhombic **35° Positive**
Relief Angle: 5°

| Workpiece | Material Compatibility | | | | | | | | | | | | Machining types | | | | |
|--------------------------------------|------------------------|-----------------|-----------|-------------------|--------------------------------------|----------------|---|---|---|---|---|---|-----------------|---|---|---|---|
| | Steel | Stainless steel | Cast iron | Non-ferrous metal | Heat resistant alloy, Titanium alloy | Hardened steel | P | M | K | N | S | H | ● | ⊙ | ⊛ | ⊞ | |
| Steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Non-ferrous metal | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Heat resistant alloy, Titanium alloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hardened steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

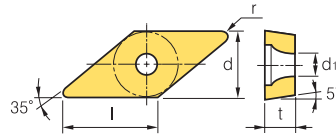
| Inserts | Designation | Cermet | | Coated | | Coated | | | | | | | | | | | | Uncoated | | Cutting Condition | | | | | | | | | |
|---------------------|-------------|-------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|-------------------|--------|--------|-----|-----|-------------------------|---------------------|-----------|-----------|-----------|
| | | CN1500 | CN2000 | CN2500 | CC1500 | CC2500 | NC3215 | NC3120 | NC3225 | NC3030 | NC5330 | NC6310 | NC6315 | NC9115 | NC9125 | NC9135 | PC5300 | PC5400 | PC8105 | PC8110 | PC8115 | PC9030 | H01 | H05 | f _n (mm/rev) | a _p (mm) | | | |
| Finishing | | VBGT | 1103003R-KF | | | | | | | | | | | | | | | | | | | | | | | 0.01-0.06 | 0.04-1.30 | | |
| | | | 110301R-KF | | | | | | | | | | | | | | | | | | | | | | | | 0.02-0.08 | 0.05-1.50 | |
| | | | 110302R-KF | | | | | | | | | | | | | | | | | | | | | | | | | 0.03-0.13 | 0.06-1.70 |
| | | | 1103003L-KF | | | | | | | | | | | | | | | | | | | | | | | | | 0.01-0.06 | 0.04-1.30 |
| | | | 110301L-KF | | | | | | | | | | | | | | | | | | | | | | | | | 0.02-0.08 | 0.05-1.50 |
| | | | 110302L-KF | | | | | | | | | | | | | | | | | | | | | | | | | | 0.03-0.13 |
| Finishing | | VBGT | 110302-VP1 | | | | | | | | | | | | | | | | | | | | | | | | 0.03-0.10 | 0.08-1.50 | |
| | | | 160402-VP1 | | | | | | | | | | | | | | | | | | | | | | | | 0.04-0.20 | 0.16-1.50 | |
| | | | 160404-VP1 | | | | | | | | | | | | | | | | | | | | | | | | 0.05-0.20 | 0.18-1.80 | |
| Medium to finishing | | VBGT | 160404 | | | | | | | | | | | | | | | | | | | | | | | | 0.07-0.20 | 0.50-1.50 | |
| | | | 160408 | | | | | | | | | | | | | | | | | | | | | | | | 0.15-0.25 | 0.70-2.00 | |
| Medium to finishing | | VBGT | 1103003R-KM | | | | | | | | | | | | | | | | | | | | | | | | 0.01-0.06 | 0.04-1.30 | |
| | | | 110301R-KM | | | | | | | | | | | | | | | | | | | | | | | | | 0.02-0.08 | 0.05-1.50 |
| | | | 110302R-KM | | | | | | | | | | | | | | | | | | | | | | | | | 0.03-0.13 | 0.06-1.70 |
| | | | 160404R-KM | | | | | | | | | | | | | | | | | | | | | | | | | 0.05-0.15 | 0.50-2.00 |
| | | | 1103003L-KM | | | | | | | | | | | | | | | | | | | | | | | | | 0.01-0.06 | 0.04-1.30 |
| | | | 110301L-KM | | | | | | | | | | | | | | | | | | | | | | | | | 0.02-0.08 | 0.05-1.50 |
| | | | 110302L-KM | | | | | | | | | | | | | | | | | | | | | | | | | 0.03-0.13 | 0.06-1.70 |
| | | | 160404L-KM | | | | | | | | | | | | | | | | | | | | | | | | | 0.05-0.15 | 0.50-2.00 |
| Finishing | | VBMT | 110302-VB | | | | | | | | | | | | | | | | | | | | | | | | 0.05-0.15 | 0.20-1.20 | |
| | | | 110304-VB | | | | | | | | | | | | | | | | | | | | | | | | 0.06-0.18 | 0.20-1.20 | |
| | | | 110308-VB | | | | | | | | | | | | | | | | | | | | | | | | 0.08-0.20 | 0.60-1.20 | |
| | | | 160402-VB | | | | | | | | | | | | | | | | | | | | | | | | 0.06-0.20 | 0.05-1.00 | |
| | | | 160404-VB | ● | ● | | | | ● | | | | | | | | | | | | | | | | | | 0.08-0.20 | 0.20-1.50 | |
| | | | 160408-VB | ● | ● | | | | ● | | | | | | | | | | | | | | | | | | | 0.10-0.23 | 0.50-1.50 |
| | | | 160412-VB | | | | | | | | | | | | | | | | | | | | | | | | | 0.12-0.25 | 0.80-1.50 |
| Finishing | | | 160404-VF | ● | ● | ● | | | ● | ● | | | | | | ● | | | | | | | | | | 0.05-0.20 | 0.30-1.00 | | |
| | | | 160408-VF | ● | ● | ● | | | | | | | | | | | | ● | | | | | | | | 0.10-0.25 | 0.30-1.00 | | |

Cutting edge geometry **A52~A61**
 Recommended chip breaker **B04~B11**
 Code system **B26~B27**
 ● : Stock item

| Available tool holders | | | |
|------------------------|-----------|-------------|------|
| Designation | Page | Designation | Page |
| SVABR/L | B183 | SVVBN | B184 |
| SVHBR/L | B183 | SVQBR/L | B211 |
| SVJBR/L | B115, 183 | SVUBR/L | B212 |



VB



| Dimensions (mm) | | | |
|-----------------|-------|-----------|----------------|
| Size | d | t | d ₁ |
| 11 | 6.35 | 2.38~3.18 | 2.8~3.4 |
| 16 | 9.525 | 4.76 | 4.4 |

Rhombic 35° Positive
Relief Angle: 5°

| Workpiece | Machining types | | | | | | | | | | | | | | | |
|--------------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | M | K | N | S | H | | | | | | | | | | |
| Steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Non-ferrous metal | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Heat resistant alloy, Titanium alloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hardened steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

| Inserts | Designation | Cermet | | Coated | | Coated | | | | | | | | | | Uncoated | | Cutting Condition | | | | | | | | | | |
|--|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|-------------------|--------|--------|--------|--------|-----|-----|----------------------------|------------------------|-----------|-----------|
| | | CN1500 | CN2000 | CN2500 | CC1500 | CC2500 | NC3215 | NC3120 | NC3225 | NC3030 | NC5330 | NC6310 | NC6315 | NC9115 | NC9125 | NC9135 | PC5300 | PC5400 | PC8105 | PC8110 | PC8115 | PC9030 | H01 | H05 | f _n (mm/rev) | a _p (mm) | | |
| Finishing [Mild steel] | VBMT 110302-VL | | | | | | | | | | | | | | | | | | | | | | | | 0.03~0.20 | 0.20~1.20 | | |
| | 110304-VL | | | | | | | | | | | | | | | | | | | | | | | | | 0.04~0.20 | 0.20~1.20 | |
| | 110308-VL | | | | | | | | | | | | | | | | | | | | | | | | | 0.08~0.20 | 0.20~1.20 | |
| | 160402-VL | | | | | | | | | | | | | | | | | | | | | | | | | 0.03~0.20 | 0.30~1.50 | |
| | 160404-VL | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.05~0.20 | 0.30~1.50 | |
| | 160408-VL | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.10~0.20 | 0.30~1.50 | |
| | 160412-VL | | | | | | | | | | | | | ● | ● | ● | | | | ● | ● | ● | | | | 0.10~0.25 | 0.30~1.50 | |
| Finishing | VBMT 160402-VP1 | | | | | | | | | | | | | | | | | | | | | | | | | 0.04~0.20 | 0.16~1.50 | |
| | 160404-VP1 | | | | | | | | | | | | | | | | | | | | | | | | | 0.05~0.20 | 0.18~1.80 | |
| | 160408-VP1 | | | | | | | | | | | | | | | | | | | | | | | | | 0.06~0.20 | 0.20~1.80 | |
| Medium to finishing | VBMT 160404 | | ● | | | | ● | ● | ● | ● | | | | | | | | | | | | | | | | 0.07~0.20 | 0.50~1.50 | |
| | 160408 | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.15~0.25 | 0.70~2.00 | |
| Medium to finishing | VBMT 110304-HMP | | | | | | ● | | | | | | | | | | | | | | | ● | | | 0.03~0.20 | 0.15~2.70 | | |
| | 110308-HMP | | | | | | ● | | | | | | | | | | | | | | | | | | | 0.05~0.25 | 0.40~2.70 | |
| | 160404-HMP | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | 0.07~0.20 | 0.20~2.70 | |
| | 160408-HMP | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | 0.09~0.27 | 0.50~2.70 |
| | 160412-HMP | | | | | | | | | | | | | | | | | | | | | | | | | | 0.11~0.32 | 0.50~2.70 |
| Medium to finishing new | VBMT 110302-MP | | | | | | | | | | | | | | | | | | | | | | | | | 0.04~0.14 | 0.20~1.50 | |
| | 110304-MP | | | | | | ● | ● | | | | | | ● | ● | | | | | | | | | | | 0.05~0.15 | 0.20~1.50 | |
| | 110308-MP | | | | | | ● | ● | | | | | | | | | | | | | | | | | | 0.10~0.28 | 0.30~2.00 | |
| | 160402-MP | | | | | | | | | | | | | | | | | | | | | | | | | 0.06~0.16 | 0.25~2.00 | |
| | 160404-MP | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.08~0.20 | 0.30~2.00 | |
| | 160408-MP | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.10~0.25 | 0.50~2.30 | |
| | 160412-MP | ● | ● | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.10~0.35 | 0.50~2.30 | |

Cutting edge geometry **A52~A61**
 Recommended chip breaker **B04~B11**
 Code system **B26~B27**
 ● : Stock item

| Available tool holders | | | |
|------------------------|-----------|-------------|------|
| Designation | Page | Designation | Page |
| SVABR/L | B183 | SVVBN | B184 |
| SVHBR/L | B183 | SVQBR/L | B211 |
| SVJBR/L | B115, 183 | SVUBR/L | B212 |

