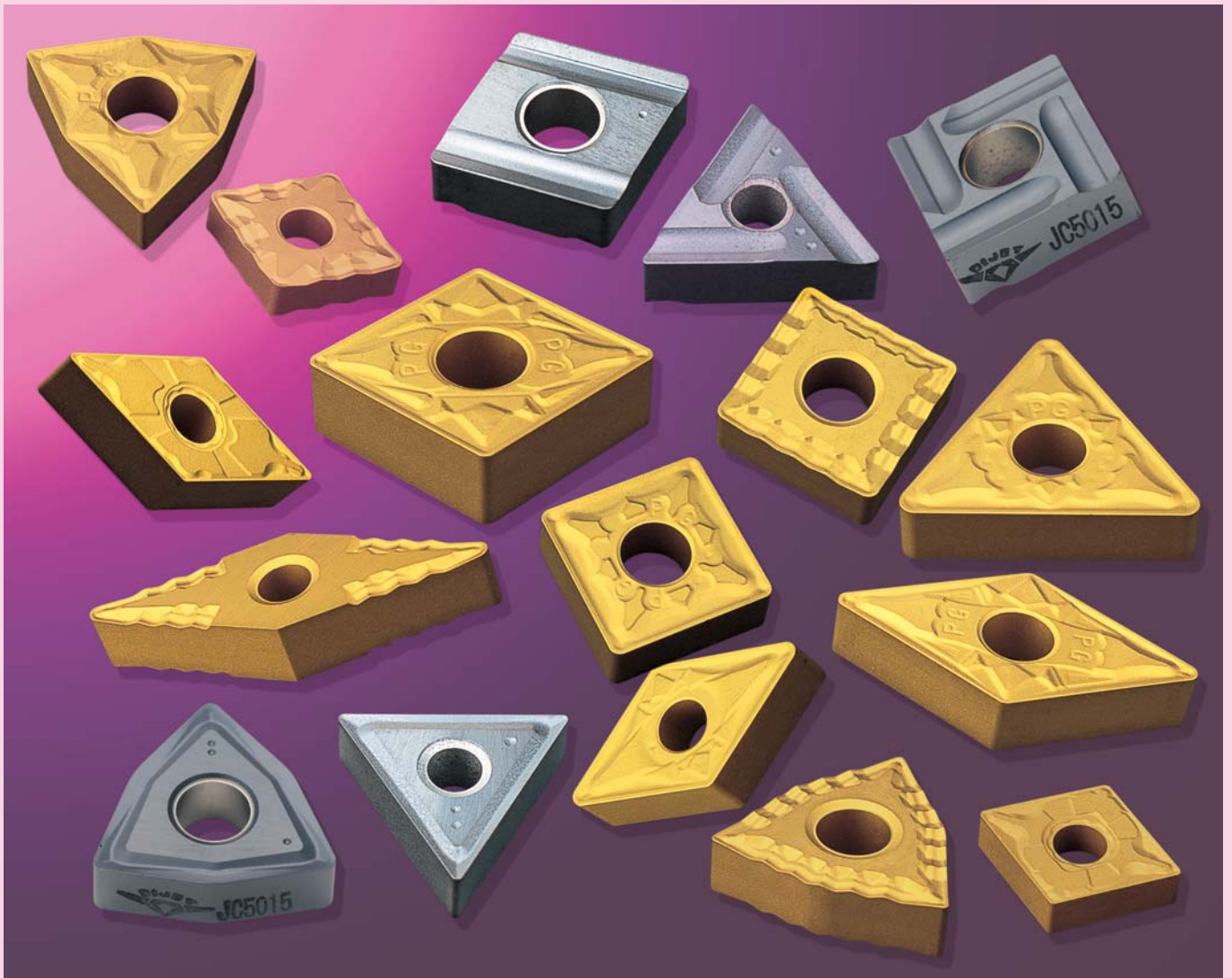


“ ISO Turning Inserts ”



“ ISO Turning Inserts ”

ISO Identification Table of Turning Inserts

C

①

N

②

M

③

G

④

12

⑤

① Symbol for Inserts Shape

② Symbol for Clearance Angle

③ Symbol for Tolerance Class

④ Symbol for Insert Type

⑤ Symbol for Insert Size

① INSERT SHAPE

| Symbol | Description | Angle | Figure |
|--------|---------------|-------|--------|
| H | Hexagonal | 120° | |
| O | Octagonal | 135° | |
| P | Pentagonal | 108° | |
| S | Square | 90° | |
| T | Triangular | 60° | |
| C | Rhombic | 80° | |
| D | | 55° | |
| E | | 75° | |
| F | | 50° | |
| M | | 86° | |
| V | | 35° | |
| L | Rectangular | 90° | |
| A | Parallelogram | 85° | |
| B | | 82° | |
| K | | 55° | |
| R | Round | - | |
| W | Trigon | 80° | |

② CLEARANCE ANGLE

| Symbol | Clearance |
|--------|-----------|
| A | 3° |
| B | 5° |
| C | 7° |
| D | 15° |
| E | 20° |
| F | 25° |
| G | 30° |
| N | 0° |
| P | 11° |
| O | Others |

③ TOLERANCES CLASS

| Symbol | Corner height | Thickness | Inscribed circle (mm) |
|--------|---------------|-----------|-----------------------|
| A | ±0.005 | ±0.025 | ±0.025 |
| F | ±0.005 | ±0.025 | ±0.013 |
| C | ±0.013 | ±0.025 | ±0.025 |
| H | ±0.013 | ±0.025 | ±0.013 |
| E | ±0.025 | ±0.025 | ±0.025 |
| G | ±0.025 | ±0.13 | ±0.025 |
| J* | ±0.005 | ±0.025 | ±0.05~±0.13 |
| K* | ±0.013 | ±0.025 | ±0.05~±0.13 |
| L* | ±0.025 | ±0.025 | ±0.05~±0.13 |
| M* | ±0.08~±0.18 | ±0.13 | ±0.05~±0.13 |
| U* | ±0.13~±0.38 | ±0.13 | ±0.08~±0.25 |

* Mark tolerance classes normally apply to as sintered indexable inserts and the tolerance is dependent upon insert size.

④ TYPE OF INSERT

| Symbol | Figure | Symbol | Figure | Symbol | Figure |
|--------|--------|--------|--------|--------|----------------|
| N | | U | | C | |
| R | | B | | J | |
| F | | A | | X | Special design |
| W | | M | | | |
| T | | G | | | |
| Q | | H | | | |

J,K,L,M

1. Tolerance on the Inscribed Circle

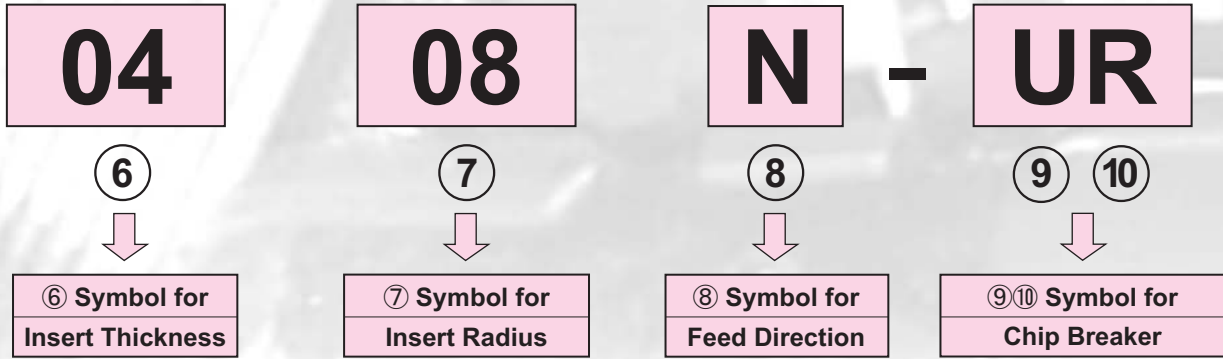
| I.C. | Triangular | Square | 80° Rhombic | 55° Rhombic | 35° Rhombic | Round |
|--------|------------|--------|-------------|-------------|-------------|-------|
| 6.35 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | — | — |
| 9.525 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 |
| 12.70 | ±0.08 | ±0.08 | ±0.08 | ±0.08 | — | ±0.08 |
| 15.875 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | — | ±0.10 |
| 19.05 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | — | ±0.10 |
| 25.40 | ±0.13 | ±0.13 | ±0.13 | — | — | ±0.12 |

2. Tolerance on Corner Height

| I.C. | Triangular | Square | 80° Rhombic | 55° Rhombic | 35° Rhombic |
|--------|------------|--------|-------------|-------------|-------------|
| 6.35 | ±0.08 | ±0.08 | ±0.08 | ±0.11 | — |
| 9.525 | ±0.08 | ±0.08 | ±0.08 | ±0.11 | ±0.13 |
| 12.70 | ±0.13 | ±0.13 | ±0.13 | ±0.15 | — |
| 15.875 | ±0.15 | ±0.15 | ±0.15 | ±0.18 | — |
| 19.05 | ±0.15 | ±0.15 | ±0.15 | — | — |
| 25.40 | ±0.18 | ±0.18 | ±0.18 | — | — |

I.C. = Inscribed Circle

“ ISO Turning Inserts ”



⑤ CUTTING EDGE LENGTH

| I.C. Incribed Circle (mm) | Insert Shape | | | | | | |
|---------------------------|--------------|----|----|----|----|----|----|
| | C | D | R | S | T | V | W |
| 3.97 | | | | | 06 | | |
| 5.56 | | | | | 09 | | |
| 6.35 | 06 | 07 | | 06 | 11 | | |
| 8.0 | | | 08 | | | | |
| 9.525 | 09 | 11 | 09 | 09 | 16 | 16 | 06 |
| 10.0 | | | 10 | | | | |
| 12.0 | | | 12 | | | | |
| 12.70 | 12 | 15 | 12 | 12 | 22 | 22 | 08 |
| 15.875 | 16 | | 15 | 15 | 27 | | |
| 16.0 | | | 16 | | | | |
| 19.05 | 19 | | 19 | 19 | 33 | | |
| 20.0 | | | 20 | | | | |
| 25.0 | | | 25 | | | | |
| 25.40 | 25 | | 25 | 25 | | | |

⑥ THICKNESS

| Symbol | Thickness |
|--------|-----------|
| 02 | 2.38 |
| T2 | 2.78 |
| 03 | 3.18 |
| T3 | 3.97 |
| 04 | 4.76 |
| 06 | 6.35 |
| 07 | 7.94 |
| 09 | 9.52 |

⑦ RADIUS

| Symbol | Corner Radius(mm) |
|--------|--------------------------|
| 00 | Sharp point |
| 02 | 0.2 |
| 04 | 0.4 |
| 08 | 0.8 |
| 12 | 1.2 |
| 16 | 1.6 |
| 20 | 2.0 |
| 24 | 2.4 |
| M0 | Round (Metric dimension) |
| 00 | Round (Inch dimension) |

⑧ FEED DIRECTION

| Symbol | Corner Type |
|--------|-------------------|
| R | Right-hand insert |
| L | Left-hand insert |
| N | Neutral insert |


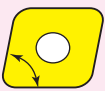






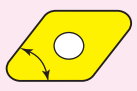
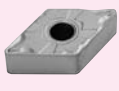



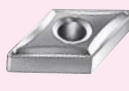



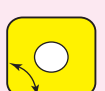











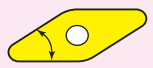








⑨⑩ CHIP BREAKER

| Groupe of application | Symmetrical chip-breaker | Asymmetrical chip-breaker |
|-----------------------|--------------------------|---------------------------|
| Finishing | PF, UA, F1, FT | MF, MM |
| Light Cutting | UR, SF | |
| Medium Cutting | PG, UB | SG |
| Roughing | UD, GG, UC | |

Symbols ⑧, ⑨ and ⑩ are optional symbols. Symbol in ⑧ may be omitted.

“ ISO Turning Inserts ”











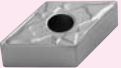
















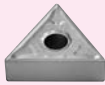



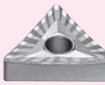













Indexable Inserts Table

| Operation | | Finishing  | | | | | | |
|----------------|---|---|---|--|---|---|---|---|
| Chip-Breakers | | PF | FT/MF/MM | | MF/MM | F1 | UA | SF |
| Hole Existence | | Yes | Yes | Yes/No | Yes | Yes | Yes | Yes |
| Work Materials | P Steel | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |
| | M Stainless Steel | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |
| | K Cast Iron | ☺ | ☹ | ☹ | ☹ | ☺ | ☹ | ☹ |
| Inserts Shape | 80° Rhombic  | CNMG-PF  p.171 | CCMT-FT  p.170 | | CCET-MF  p.192 | CNMG-F1  p.170 | CNMG-UA  p.171 | CNMG-SF  p.171 |
| | 55° Rhombic  | DNMG-PF  p.175 | DCMT-FT  p.174 | DCGT  p.193 p.193/4 | DCET-MF  p.192 p.193 | DNMG-F1  p.174 | DNMG-UA  p.175 | DNMG-SF  p.175 |
| | Round  | | | | | | | |
| | 90° Square  | | SCMT-FT  p.178 | SPMR-FT  p.181 | TNMG-MF/2  p.194 p.195 NEW | SNMG-F1  p.179 | SNMG-UA  p.179 | |
| | 60° Triangular  | | TCMT-FT  p.182 | TPMR-FT  p.186 | | TNMG-F1  p.182 | TNMG-UA  p.183 | TNMG-SF  p.183 |
| | 35° Rhombic  | | VBMT-FT  p.186 | VPET-MM  p.196 | VBET-MF  p.195 p.195 | VNMG-UT  p.187 | | |
| | 80° Trigon  | | | | WCMX  p.188 | | WNMG-UA  p.188 | WNMG-SF  p.189 |

☺ = Very Good ☺ = OK ☹ = Not recommended

ISO Turning Inserts

“ ISO Turning Inserts ”

| Medium | | | | | Roughing | | Cast Iron | |
|--|--|--|--|--|---|--|---|---|
| UR | UB | PG | SG | UD | GG | UC | No Chip-Breaker | |
| Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| ☺ | ☺ | ☺ | ☹ | ☺ | ☺ | ☺ | | |
| ☹ | ☺ | | ☺ | ☹ | ☹ | ☹ | | |
| ☹ | ☹ | ☹ | ☹ | ☺ | ☺ | ☹ | ☺ | ☺ |
| CNMG-UR  p.171 | CNMG-UB  p.172 | CNMG-PG  p.172 | CNMG-SG  p.172 | CNMG-UD  p.173 | CNMG-GG  p.173 | CNMM-UC  p.173 | CNMA  p.170 | |
| DNMG-UR  p.175 | DNMG-UB  p.176 | DNMG-PG  p.176 | DNMG-SG  p.176 | DNMG-UD  p.177 | DNMG-GG  p.177 | DNMM-UC  p.177 | DNMA  p.174 | |
| | | | | | RNMG-GG  p.178 | | | |
| SNMG-UR  p.179 | SNMG-UB  p.180 | SNMG-PG  p.179 | SNMG-SG  p.180 | SNMG-UD  p.180 | SNMG-GG  p.181 | SNMM-UC  p.181 | SNMA  p.182 | |
| TNMG-UR  p.183 | TNMG-UB  p.184 | TNMG-PG  p.183 | TNMG-SG  p.184 | TNMG-UD  p.184 | TNMG-GG  p.185 | TNMM-UC  p.185 | TNMA  p.150 | TPMN  p.185 |
| VNMG-UR  p.187 | | | | | VNMG-GG  p.187 | | VNMA  p.186 | |
| WNMG-UR  p.189 | WNMG-UB  p.189 | WNMG-PG  p.189 | WNMG-SG  p.190 | WNMG-UD  p.190 | WNMG-GG  p.190 | WNMM-UC  p.190 | WNMA  p.188 | |

☺ = Very Good ☹ = OK ☹ = Not recommended

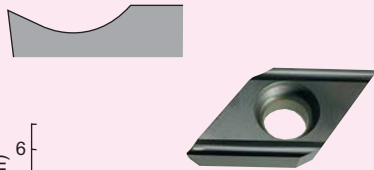
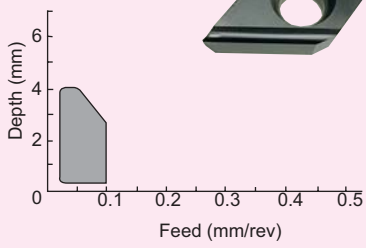
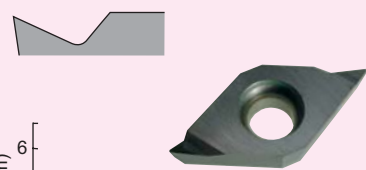
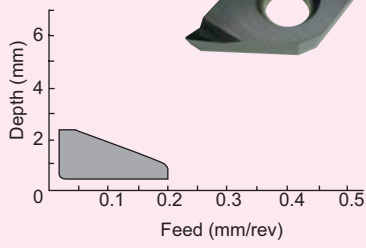
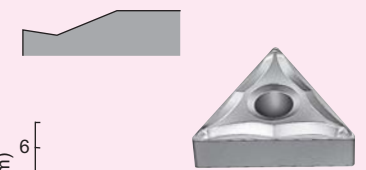
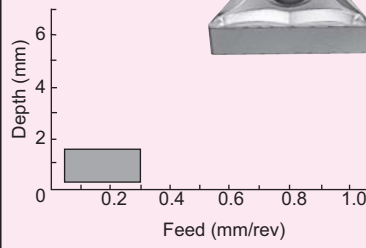
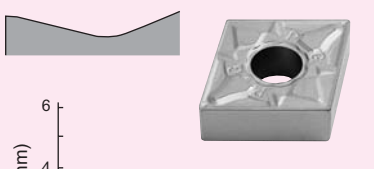
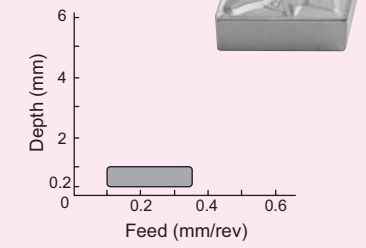
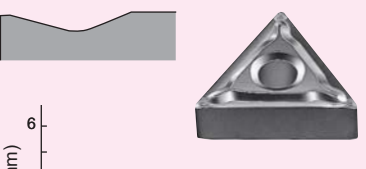
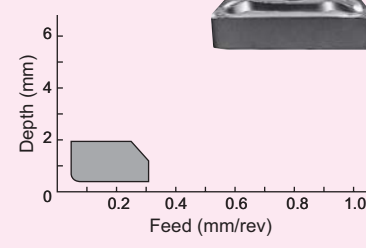

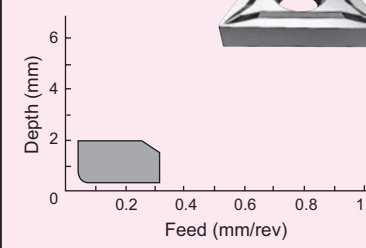
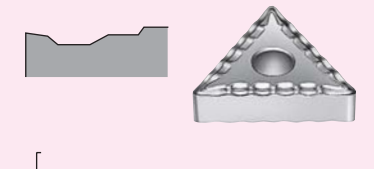
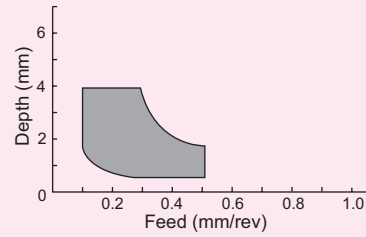
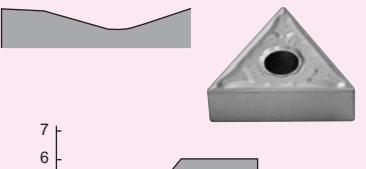
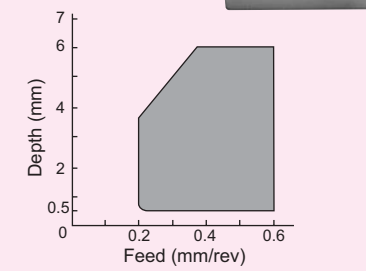
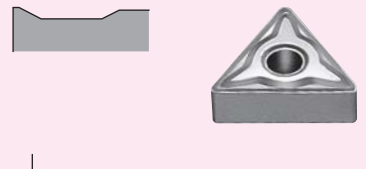
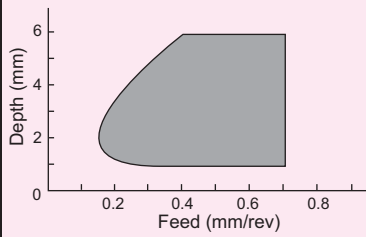
ISO Turning Inserts

“ ISO Turning Inserts ”

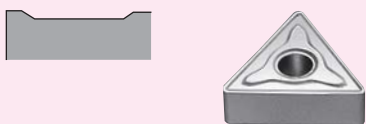
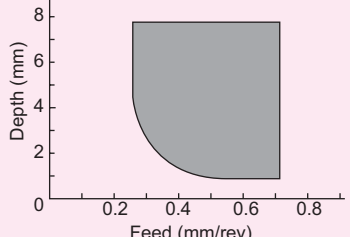
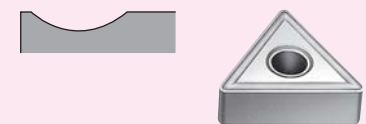
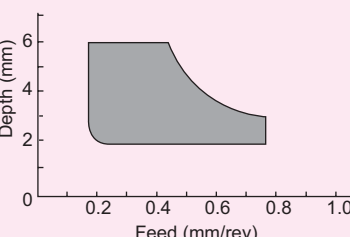
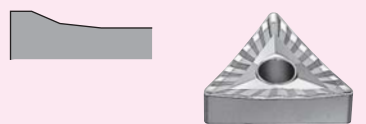
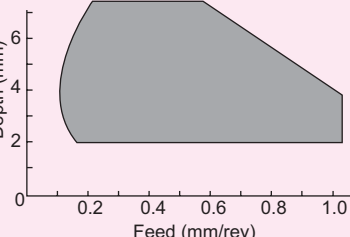
Choice of Chip-breakers

P Steel

ISO Turning Inserts


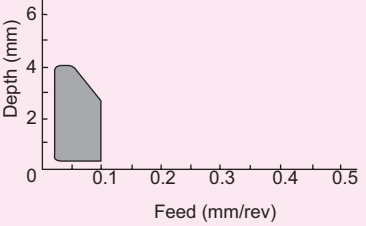

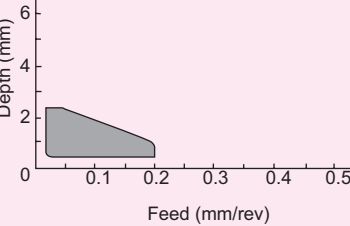
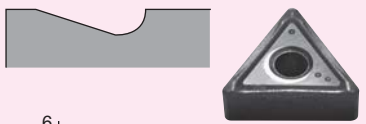
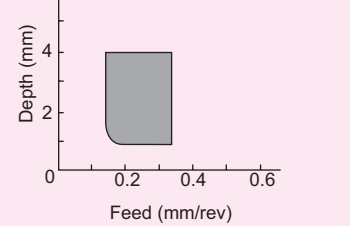
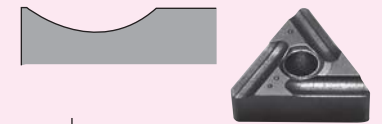
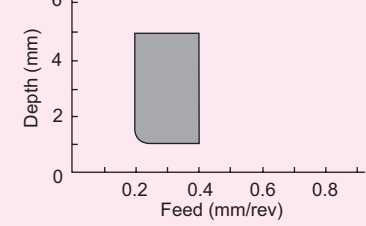
| | | | |
|---|--|--|--|
| <p>For Light cutting & Finishing</p> | <p>MF/2 Light cutting, super surface finish. Small components.</p>   | <p>MM/2 Good Light cutting, super surface finish. Small components.</p>   | <p>F1 Good cutting performance, possible super surface finish.</p>   |
| | <p>PF Tougher cutting edge, applicable for finishing and light cutting.</p>   | <p>UA Tougher cutting edge, applicable for finishing and light cutting.</p>   | <p>FT Suitable for Super finishing.</p>   |
| | <p>UR Excellent chip control for copy turning</p>   | <p>PG Longer tool life providing lower cutting forces.</p>   | <p>UB Tougher cutting edge.</p>   |

“ ISO Turning Inserts ”

| | | | |
|------------------------------------|--|---|--|
| For Medium to heavy Cutting | <p>UD Longer tool life providing tougher cutting edge.</p>   | <p>GG Possible to use for wide application with consistent cutting.</p>   | <p>UC Suitable for heavy duty cutting. One side use.</p>   |
|------------------------------------|--|---|--|

ISO Turning Inserts

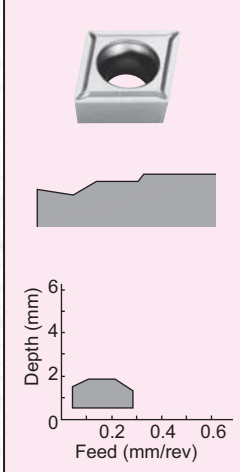
M Stainless Steel

| | | | |
|--|---|---|---|
| For Light cutting & Finishing | <p>MF/2 Light cutting, super surface finish. Small components.</p>   | <p>MM/2 Good Light cutting, super surface finish. Small components</p>   | <p>SF Excellent for Stainless Steel.</p>   |
| | For Light to Medium Cutting | <p>SG General cutting for Stainless Steel.</p>   | |

“ ISO Turning Inserts ”


■ CCMT

80° Rhombic Positive 7° (M class)

|  | CCMT | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | FT | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | | |
| CCMT 060202-FT | ● | ● | | | | | | ● | | | | 6.35 | 2.38 | 0.2 | 2.90 |
| CCMT 060204-FT | ● | ● | | | | | | ● | | | | 6.35 | 2.38 | 0.4 | 2.90 |
| CCMT 060208-FT | ● | ● | | | | | | ● | | | | 6.35 | 2.38 | 0.8 | 2.90 |
| CCMT 09T302-FT | ● | ● | | | | | | ● | | | | 9.525 | 3.97 | 0.2 | 4.40 |
| CCMT 09T304-FT | ● | ● | | | | | | ● | | | | 9.525 | 3.97 | 0.4 | 4.40 |
| CCMT 09T308-FT | ● | ● | | | | | | ● | | | | 9.525 | 3.97 | 0.8 | 4.40 |
| CCMT 120404-FT | ● | ● | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| CCMT 120408-FT | ● | ● | | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| CCMT 120412-FT | ● | | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |

■ CNMA

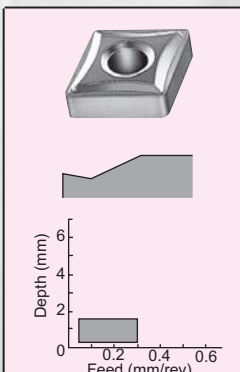
80° Rhombic Negative (M class)

|  | CNMA | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | — | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | | |
| CNMA 120404 | ● | ● | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMA 120408 | ● | ● | | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| CNMA 120412 | ● | ● | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| CNMA 190612 | | ○ | | | | | | | | | | 19.05 | 6.35 | 1.2 | 7.93 |
| CNMA 190616 | | ○ | | | | | | | | | | 19.05 | 6.35 | 1.6 | 7.93 |

○ Will not be available after current stock exhausted.

■ CNMG

80° Rhombic Negative (M class)

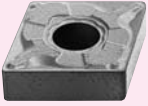


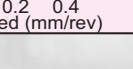
|  | CNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | F1 | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | CX10 | CX50 |
| Cat. No. | | | | | | | | | | | | | | | |
| CNMG 090304-F1 | | | | | | | | | | | | 9.525 | 3.18 | 0.4 | 3.81 |
| CNMG 090308-F1 | | | | | | | | | | | | 9.525 | 3.18 | 0.8 | 3.81 |
| CNMG 090404-F1 | | | | | | | | | | | | 9.525 | 4.76 | 0.4 | 3.81 |
| CNMG 090408-F1 | | | | | | | | | | | | 9.525 | 4.76 | 0.8 | 3.81 |
| CNMG 120404-F1 | | | | | | | | ○ | ● | ● | | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMG 120408-F1 | | | | | | | | ○ | ● | ● | | 12.70 | 4.76 | 0.8 | 5.16 |

○ Will not be available after current stock exhausted.





“ ISO Turning Inserts ”

CNMG




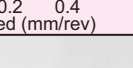
80° Rhombic Negative (M class)

|     | CNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|----------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | PF | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| | Cat. No. | | | | | | | | | | | | | | |
| | CNMG 090304-PF | | ● | ○ | | | | | | | ○ | 9.525 | 3.18 | 0.4 | 3.81 |
| CNMG 090308-PF | | ● | ○ | | | | | | | ○ | 9.525 | 3.18 | 0.8 | 3.81 | |






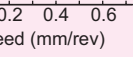
○ Will not be available after current stock exhausted.

|     | CNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|----------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | UA | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| | Cat. No. | | | | | | | | | | | | | | |
| | CNMG 120404-UA | | ● | ● | ● | | | ○ | | | ● | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMG 120408-UA | | ● | ● | ● | | | ● | | | ● | 12.70 | 4.76 | 0.8 | 5.16 | |
| CNMG 120412-UA | | | ○ | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| CNMG 120416-UA | | | ○ | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | |

○ Will not be available after current stock exhausted.

|     | CNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|--|----------------|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|------|------|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | |
| | SF | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | | | | | NIT | NAT | CX50 |
| | Cat. No. | | | | | | | | | | | | | | | |
| | CNMG 120404-SF | | ● | | | | ● | ● | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMG 120408-SF | | ● | | | | ● | ● | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |

○ Will not be available after current stock exhausted.

|       | CNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|----------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | UR | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | PX90 | CX50 |
| | Cat. No. | | | | | | | | | | | | | | |
| | CNMG 090304-UR | | ○ | ○ | ○ | | | | | | ○ | 9.525 | 3.18 | 0.4 | 3.81 |
| | CNMG 090308-UR | | ○ | ○ | ○ | | | | | | ○ | 9.525 | 3.18 | 0.8 | 3.81 |
| | CNMG 090404-UR | | | | | | | | | | | 9.525 | 4.76 | 0.4 | 3.81 |
| | CNMG 090408-UR | | | | | | | | | | | 9.525 | 4.76 | 0.8 | 3.81 |
| | CNMG 120404-UR | | ● | ● | ● | ● | | | | ● | ● | 12.70 | 4.76 | 0.4 | 5.16 |
| | CNMG 120408-UR | | ● | ● | ● | ● | | | | ● | ● | 12.70 | 4.76 | 0.8 | 5.16 |
| | CNMG 120412-UR | | ● | ● | ● | ● | | | | ● | | 12.70 | 4.76 | 1.2 | 5.16 |
| CNMG 120416-UR | | | ○ | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | |



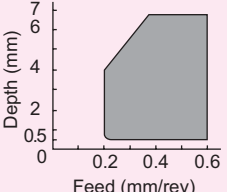
○ Will not be available after current stock exhausted.

ISO Turning Inserts



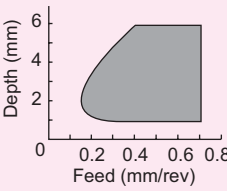
“ ISO Turning Inserts ”

CNMG



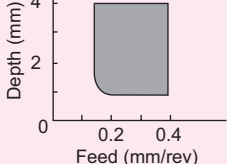
80° Rhombic Negative (M class)

|    | CNMG PG Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|------|--------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | PX75 | CX50 | | | | |
| CNMG 090304-PG | ● | ● | ● | ● | | | | | | | ○ | 9.525 | 3.18 | 0.4 | 3.81 |
| CNMG 090308-PG | ● | ● | ● | ● | | | | | | | ○ | 9.525 | 3.18 | 0.8 | 3.81 |
| CNMG 120404-PG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMG 120408-PG | ● | ● | ● | ● | ● | | | | ● | | | 12.70 | 4.76 | 0.8 | 5.16 |
| CNMG 120412-PG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| CNMG 120416-PG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |
| CNMG 160608-PG | ● | ● | ● | ● | ● | | | | | | | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMG 160612-PG | ● | ● | ● | ● | ● | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 |

○ Will not be available after current stock exhausted.

|    | CNMG UB Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|------|--------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| CNMG 090304-UB | | | | | | | | | | | | 9.525 | 3.18 | 0.4 | 3.81 |
| CNMG 090308-UB | | | | | | | | | | | | 9.525 | 3.18 | 0.8 | 3.81 |
| CNMG 120404-UB | | ● | ● | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMG 120408-UB | | ● | ● | | | | | | | ○ | | 12.70 | 4.76 | 0.8 | 5.16 |
| CNMG 120412-UB | | ● | ● | | | | | | | ○ | | 12.70 | 4.76 | 1.2 | 5.16 |
| CNMG 120416-UB | | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |
| CNMG 160608-UB | | ○ | ○ | | | | | | | | | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMG 160612-UB | | ● | ● | | | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG 160616-UB | | | | | | | | | | | | 15.875 | 6.35 | 1.6 | 6.35 |

○ Will not be available after current stock exhausted.

|    | CNMG SG Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|------|-----------------|------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | NIT | CX10 | | | | |
| CNMG 120404L-SG | | ○ | | | | ● | ● | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMG 120404R-SG | | ○ | | | | ● | ● | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMG 120408L-SG | | ○ | | | | ● | ● | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| CNMG 120408R-SG | | ○ | | | | ● | ● | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| CNMG 120412L-SG | | | | | | ● | ● | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| CNMG 120412R-SG | | | | | | ● | ● | | | | | 12.70 | 4.76 | 1.2 | 5.16 |



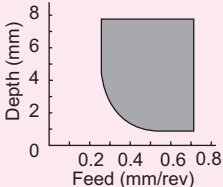
○ Will not be available after current stock exhausted.

ISO Turning Inserts



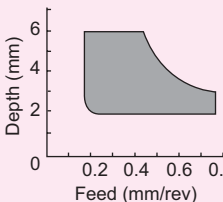
“ ISO Turning Inserts ”



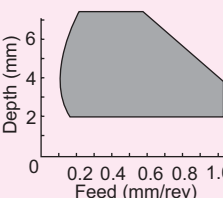
CNMG-CNMM

80° Rhombic Negative (M class)

|    | CNMG UD Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|------|--------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| CNMG 120408-UD | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| CNMG 120412-UD | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| CNMG 120416-UD | | | | ● | ○ | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |
| CNMG 160608-UD | | ● | ● | | | | | | | | | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMG 160612-UD | | ● | ● | | | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG 160616-UD | | ● | ● | | | | | | | | | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMG 190608-UD | | | | | | | | | | | | 19.05 | 6.35 | 0.8 | 7.93 |
| CNMG 190612-UD | | ● | ● | ● | ● | | | | | | | 19.05 | 6.35 | 1.2 | 7.93 |
| CNMG 190616-UD | | | ● | ● | ○ | | | | | | | 19.05 | 6.35 | 1.6 | 7.93 |

○ Will not be available after current stock exhausted.

|    | CNMG GG Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|------|--------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| CNMG 120404-GG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| CNMG 120408-GG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| CNMG 120412-GG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| CNMG 120416-GG | | ● | | ● | ● | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |
| CNMG 160608-GG | | ● | ● | | | | | | | | | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMG 160612-GG | | ● | ● | ● | ● | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG 160616-GG | | | | | | | | | | | | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMG 190608-GG | | ● | ● | ● | ● | | | | | | | 19.05 | 6.35 | 0.8 | 7.93 |
| CNMG 190612-GG | | ● | ● | ● | ● | | | | | | | 19.05 | 6.35 | 1.2 | 7.93 |
| CNMG 190616-GG | | ● | ● | ● | ● | | | | | | | 19.05 | 6.35 | 1.6 | 7.93 |
| CNMG 190624-GG | | | | | | | | | | | | 19.05 | 6.35 | 2.4 | 7.93 |

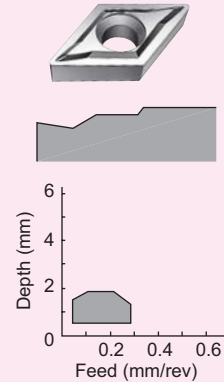
|    | CNMM UC Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|------|--------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| CNMM 120408-UC | | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| CNMM 120412-UC | | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| CNMM 120416-UC | | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |
| CNMM 160608-UC | | | | | | | | | | | | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMM 160612-UC | | | ● | ● | | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMM 160616-UC | | | ● | ● | | | | | | | | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMM 190612-UC | | | ● | ● | | | | | | | | 19.05 | 6.35 | 1.2 | 7.93 |
| CNMM 190616-UC | | | ● | ● | | | | | | | | 19.05 | 6.35 | 1.6 | 7.93 |
| CNMM 190624-UC | | | | | | | | | | | | 19.05 | 6.35 | 2.4 | 7.93 |
| CNMM 250724-UC | | | | | | | | | | | | 25.40 | 7.94 | 2.4 | 9.12 |
| CNMM 250924-UC | | | | | | | | | | | | 25.40 | 7.94 | 2.4 | 9.12 |

○ Will not be available after current stock exhausted.

“ ISO Turning Inserts ”


■ DCMT

55° Rhombic Positive 7° (M class)

|  | DCMT | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | FT | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | |
| DCMT 070202-FT | | ● | ● | | | | | ● | | | | | 6.35 | 2.38 | 0.2 | 2.90 | |
| DCMT 070204-FT | | ● | ● | | | | | ● | | | | | 6.35 | 2.38 | 0.4 | 2.90 | |
| DCMT 070208-FT | | ● | ● | | | | | | | | | | 6.35 | 2.38 | 0.8 | 2.90 | |
| DCMT 11T302-FT | | ● | ● | | | | | ● | | | | | 9.525 | 3.97 | 0.2 | 4.40 | |
| DCMT 11T304-FT | | ● | ● | | | | | ● | | | | | 9.525 | 3.97 | 0.4 | 4.40 | |
| DCMT 11T308-FT | | ● | ● | | | | | ● | | | | | 9.525 | 3.97 | 0.8 | 4.40 | |

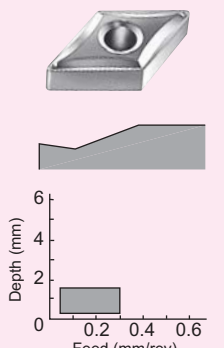
■ DNMA

55° Rhombic Negative (M class)

|  | DNMA | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | — | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | |
| DNMA 150404 | | ● | ● | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| DNMA 150408 | | ● | ● | | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| DNMA 150412 | | ● | ● | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| DNMA 150608 | | | | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| DNMA 150612 | | | | | | | | | | | | | | | | | |

■ DNMG

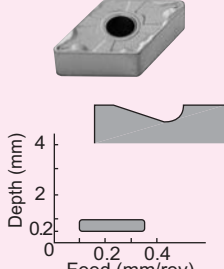
55° Rhombic Negative (M class)

|  | DNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | F1 | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | CX10 | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | |
| DNMG 150404-F1 | | | | | | | | | | ● | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| DNMG 150408-F1 | | | | | | | | | | ● | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| DNMG 150604-F1 | | | | | | | | | | | | | 12.70 | 6.35 | 0.4 | 5.16 | |
| DNMG 150608-F1 | | | | | | | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 | |

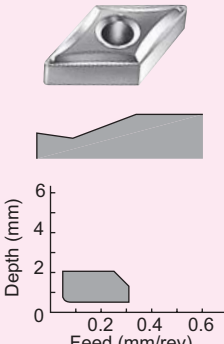
“ ISO Turning Inserts ”

■ DNMG

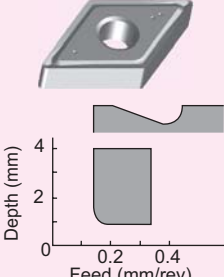
55° Rhombic Negative (M class)

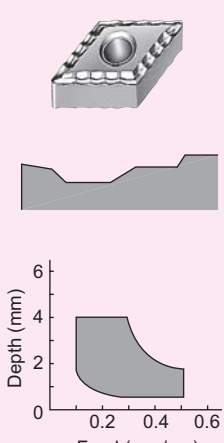
|  | DNMG | Grade | | | | | | | | Dimensions (mm) | | | | |
|---|------|-------|--------|--------|--------|--------|--------|--------|------|-----------------|-------|-----------|-------------|-----------|
| | | PF | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | |
| Cat. No. | | | | | | | | | | | | | | |
| DNMG 110404-PF | | ● | ○ | | | | | | | ○ | 9.525 | 4.76 | 0.4 | 3.81 |
| DNMG 110408-PF | | ● | ○ | | | | | | | ○ | 9.525 | 4.76 | 0.8 | 3.81 |

○ Will not be available after current stock exhausted.

|  | DNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|------|-------|--------|--------|--------|--------|--------|--------|------|-----------------|-------|-----------|-------------|-----------|------|
| | | UA | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | CX10 |
| Cat. No. | | | | | | | | | | | | | | | |
| DNMG 150404-UA | | ● | ○ | ○ | | | | ○ | | | ● | 12.70 | 4.76 | 0.4 | 5.16 |
| DNMG 150408-UA | | ● | ○ | ○ | | | | ○ | | | ● | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMG 150412-UA | | | ○ | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| DNMG 150604-UA | | ● | | | | | | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150608-UA | | ● | ○ | | | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMG 150612-UA | | | | ○ | | | | | | | | 12.70 | 6.35 | 1.2 | 5.16 |

○ Will not be available after current stock exhausted.

|  | DNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|-----|------|
| | | SF | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | | | | | NIT | NAT |
| Cat. No. | | | | | | | | | | | | | | | | |
| DNMG 150404-SF | | | | | | | | | | | ● | ● | 12.70 | 4.76 | 0.4 | 5.16 |
| DNMG 150408-SF | | | | | | | | | | | ● | ● | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMG 150604-SF | | | | | | | | | | | ● | ● | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150608-SF | | | | | | | | | | | ● | ● | 12.70 | 6.35 | 0.8 | 5.16 |

|  | DNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|------|-------|--------|--------|--------|--------|--------|--------|------|-----------------|-------|-----------|-------------|-----------|------|
| | | UR | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT |
| Cat. No. | | | | | | | | | | | | | | | |
| DNMG 110404-UR | | ● | ● | ● | | | | | | | ○ | 9.525 | 4.76 | 0.4 | 3.81 |
| DNMG 110408-UR | | ● | ● | ● | | | | | | | ○ | 9.525 | 4.76 | 0.8 | 3.81 |
| DNMG 150404-UR | | ● | ● | ● | ● | | | | | | ● | 12.70 | 4.76 | 0.4 | 5.16 |
| DNMG 150408-UR | | ● | ● | ● | ● | | | | | | ○ | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMG 150412-UR | | ○ | ○ | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| DNMG 150604-UR | | | ● | ● | | | | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150608-UR | | ○ | ● | ● | | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMG 150612-UR | | ○ | ○ | | | | | | | | | 12.70 | 6.35 | 1.2 | 5.16 |
| DNMG 150616-UR | | | | | | | | | | | | 12.70 | 6.35 | 1.6 | 5.16 |

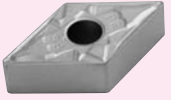

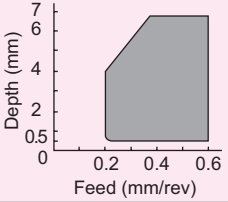
○ Will not be available after current stock exhausted.

ISO Turning Inserts

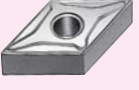

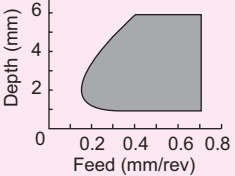
“ ISO Turning Inserts ”

■ DNMG



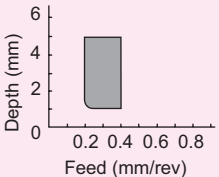
55° Rhombic Negative (M class)

|    | DNMG | | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|----------|---|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | PG | | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | Cat. No. | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| DNMG 110404-PG | ● | ● | ● | ● | ● | | | | | | | ○ | 9.525 | 4.76 | 0.4 | 3.81 |
| DNMG 110408-PG | ● | ● | ● | ● | | | | | | | | ○ | 9.525 | 4.76 | 0.8 | 3.81 |
| DNMG 150404-PG | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| DNMG 150408-PG | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMG 150412-PG | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| DNMG 150604-PG | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150608-PG | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMG 150612-PG | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 6.35 | 1.2 | 5.16 |

○ Will not be available after current stock exhausted.

|    | DNMG | | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|----------|---|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-----------|-------------|-----------|------|------|
| | UB | | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | Cat. No. | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | CX10 | CX50 |
| DNMG 150404-UB | | ● | ● | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| DNMG 150408-UB | | ● | ● | | | | | | | | | ● | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMG 150412-UB | | | ● | | | | | | | | | ○ | 12.70 | 4.76 | 1.2 | 5.16 |
| DNMG 150604-UB | | ● | ● | | | | | | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150608-UB | | ● | ● | | | | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMG 150612-UB | | | | | | | | | | | | | 12.70 | 6.35 | 1.2 | 5.16 |

○ Will not be available after current stock exhausted.

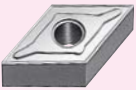

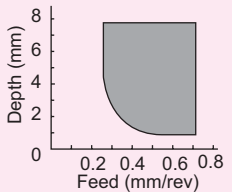
|    | DNMG | | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|----------|---|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|-----|------|
| | SG | | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | Cat. No. | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | | | | | NIT | NAT |
| DNMG 150404L-SG | | ○ | | | | | ● | ● | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| DNMG 150404R-SG | | ○ | | | | | ● | ● | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| DNMG 150408L-SG | | ○ | | | | | ● | ● | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMG 150408R-SG | | ○ | | | | | ● | ● | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMG 150604L-SG | | ○ | | | | | ● | ● | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150604R-SG | | ○ | | | | | ● | ● | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150608L-SG | | | | | | | ● | ● | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMG 150608R-SG | | | | | | | ● | ● | | | | | 12.70 | 6.35 | 0.8 | 5.16 |

○ Will not be available after current stock exhausted.



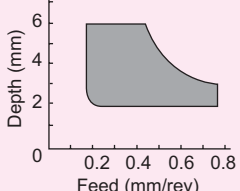
“ ISO Turning Inserts ”

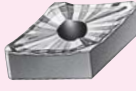

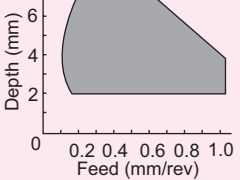
DNMG-DNMM

55° Rhombic Negative (M class)

|    | DNMG UD Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | Iscribed Circle | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| DNMG 150404-UD | | | | ● | ● | | | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150408-UD | | | | ● | ● | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMG 150412-UD | | | | | ● | | | | | | | 12.70 | 6.35 | 1.2 | 5.16 |
| DNMG 150604-UD | | | | ○ | | | | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150608-UD | ● | ● | ● | ● | | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMG 150612-UD | ● | ● | ● | ● | | | | | | | | 12.70 | 6.35 | 1.2 | 5.16 |
| DNMG 150616-UD | | | | | | | | | | | | 12.70 | 6.35 | 1.6 | 5.16 |

○ Will not be available after current stock exhausted.

|    | DNMG GG Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | Iscribed Circle | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| DNMG 150404-GG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| DNMG 150408-GG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMG 150412-GG | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| DNMG 150604-GG | | ● | ● | ● | ● | | | | | | | 12.70 | 6.35 | 0.4 | 5.16 |
| DNMG 150608-GG | | ● | ● | ● | ● | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMG 150612-GG | | ● | ● | ● | ● | | | | | | | 12.70 | 6.35 | 1.2 | 5.16 |
| DNMG 150616-GG | | | | | | | | | | | | 12.70 | 6.35 | 1.6 | 5.16 |

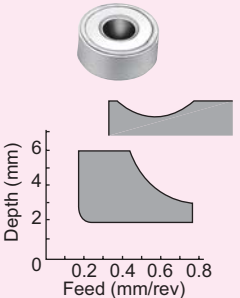
|    | DNMM UC Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | Iscribed Circle | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| DNMM 150408-UC | | | | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| DNMM 150412-UC | | | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| DNMM 150608-UC | | | ● | ● | | | | | | | | 12.70 | 6.35 | 0.8 | 5.16 |
| DNMM 150612-UC | | | ● | ● | | | | | | | | 12.70 | 6.35 | 1.2 | 5.16 |
| DNMM 150616-UC | | | | | | | | | | | | 12.70 | 6.35 | 1.6 | 5.16 |

ISO Turning Inserts

“ ISO Turning Inserts ”

RNMG

Round Negative (M Class)

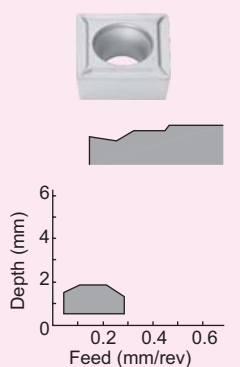


| RNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | |
| RNMG 090300-GG | | | | ● | | | | | | | 9.525 | 3.18 | - | 3.81 |
| RNMG 120400-GG | ○ | | ● | ● | | | | | | | 12.70 | 4.76 | - | 5.16 |
| RNMG 190600-GG | | | | ● | | | | | | | 19.05 | 6.35 | - | 7.93 |

○ Will not be available after current stock exhausted.

SCMT


90° Square Positive 7° (M Class)



| SCMT | Grade | | | | | | | | Dimensions (mm) | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | |
| SCMT 09T304-FT | | ● | ● | | | | | | | | 9.525 | 3.97 | 0.4 | 4.40 |
| SCMT 09T308-FT | | ● | ● | | | | | | | | 9.525 | 3.97 | 0.8 | 4.40 |
| SCMT 120404-FT | | ● | ● | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| SCMT 120408-FT | | ● | ● | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |

SNMA

90° Square Negative (M Class)



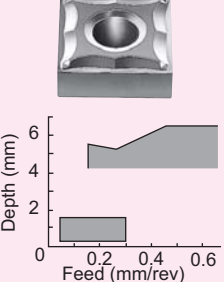
| SNMA | Grade | | | | | | | | Dimensions (mm) | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | |
| SNMA 120404 | ○ | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| SNMA 120408 | ● | ● | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| SNMA 120412 | ● | ● | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| SNMA 120416 | ● | ○ | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |

○ Will not be available after current stock exhausted.

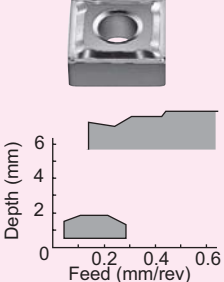
“ ISO Turning Inserts ”

■ SNMG

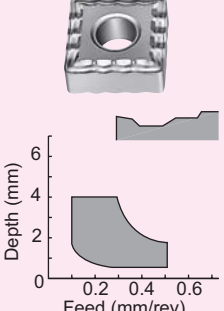
90° Square Negative (M Class)

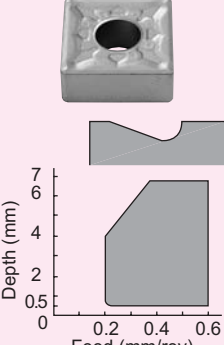
| | | | | | | | | | | | | | | | |
|---|-----------------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|
|  | SNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
| | F1 | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | CX10 | CX50 |
| | Cat. No. | | | | | | | LN10 | NIT | CX10 | CX50 | | | | |
| | SNMG 120404-F1 | | | | | | | ○ | | ● | | 12.70 | 4.76 | 0.4 | 5.16 |
| | SNMG 120408-F1 | | | | | | | ○ | | ● | | 12.70 | 4.76 | 0.8 | 5.16 |
| | | | | | | | | | | | | | | | |

○ Will not be available after current stock exhausted.

| | | | | | | | | | | | | | | | |
|--|-----------------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|
|  | SNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
| | UA | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| | Cat. No. | | | | | | | LN10 | NIT | NAT | CX50 | | | | |
| | SNMG 120404-UA | | ○ | ○ | ○ | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| | SNMG 120408-UA | | ○ | ○ | ○ | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| | | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | |

○ Will not be available after current stock exhausted.

| | | | | | | | | | | | | | | | |
|---|-----------------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|
|  | SNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
| | UR | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| | Cat. No. | | | | | | | LN10 | NIT | NAT | CX50 | | | | |
| | SNMG 120404-UR | | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| | SNMG 120408-UR | | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| SNMG 120412-UR | | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| | | | | | | | | | | | | | | | |


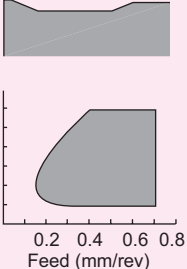
| | | | | | | | | | | | | | | | |
|---|-----------------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|
|  | SNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
| | PG | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| | Cat. No. | | | | | | | LN10 | NIT | NAT | CX50 | | | | |
| | SNMG 120404-PG | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| | SNMG 120408-PG | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| SNMG 120412-PG | | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| SNMG 120416-PG | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | |
| | | | | | | | | | | | | | | | |

ISO Turning Inserts


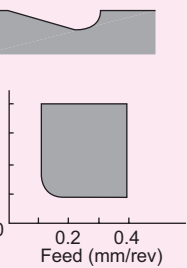
“ ISO Turning Inserts ”

■ SNMG


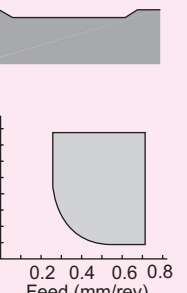
90° Square Negative (M class)

|   | SNMG UB Cat. No.. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|---|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|--------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| SNMG 120404-UB | ● | ● | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| SNMG 120408-UB | ● | ● | ○ | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| SNMG 120412-UB | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| SNMG 120416-UB | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | |
| SNMG 150612-UB | | | | | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 | |
| SNMG 150616-UB | | | | | | | | | | | 15.875 | 6.35 | 1.6 | 6.35 | |

○ Will not be available after current stock exhausted.

|   | SNMG SG Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|--|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | NIT | CX10 | | | | |
| SNMG 120404L-SG | | ○ | | | | ● | ● | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| SNMG 120404R-SG | | ○ | | | | ● | ● | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| SNMG 120408L-SG | | ○ | | | | ● | ● | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| SNMG 120408R-SG | | ○ | | | | ● | ● | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| SNMG 120412L-SG | | ○ | | | | ● | ● | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| SNMG 120412R-SG | | ○ | | | | ● | ● | | | | 12.70 | 4.76 | 1.2 | 5.16 | |



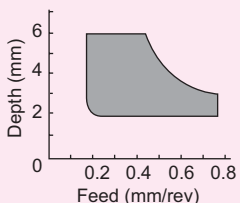
○ Will not be available after current stock exhausted.



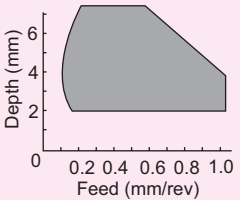
|   | SNMG UD Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|--------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| SNMG 120408-UD | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| SNMG 120412-UD | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| SNMG 120416-UD | | | | ● | ● | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | |
| SNMG 150612-UD | | | | | | | | | | | 15.875 | 6.35 | 0.8 | 6.35 | |
| SNMG 150616-UD | | | | | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 | |
| SNMG 190608-UD | | | | | | | | | | | 15.875 | 6.35 | 1.6 | 6.35 | |
| SNMG 190612-UD | | | ● | ● | ● | | | | | | 19.05 | 6.35 | 0.8 | 7.93 | |
| SNMG 190616-UD | | | | ● | ● | | | | | | 19.05 | 6.35 | 1.2 | 7.93 | |
| | | | | | | | | | | | 19.05 | 6.35 | 1.6 | 7.93 | |

“ ISO Turning Inserts ”

SNMG-SNMM



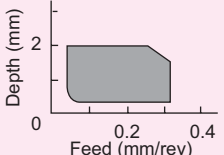
90° Square Negative (M class)

|    | SNMG GG Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|--------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| SNMG 120404-GG | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| SNMG 120408-GG | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| SNMG 120412-GG | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| SNMG 120416-GG | ● | ● | ● | ● | ● | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | |
| SNMG 150608-GG | | | | | | | | | | | 15.875 | 6.35 | 0.8 | 6.35 | |
| SNMG 150612-GG | | ● | | | ● | | | | | | 15.875 | 6.35 | 1.2 | 6.35 | |
| SNMG 150616-GG | | ● | | | ● | | | | | | 15.875 | 6.35 | 1.6 | 6.35 | |
| SNMG 190608-GG | | | | | | | | | | | 19.05 | 6.35 | 0.8 | 7.93 | |
| SNMG 190612-GG | | ● | | ● | ● | | | | | | 19.05 | 6.35 | 1.2 | 7.93 | |
| SNMG 190616-GG | | ● | ● | ● | ● | | | | | | 19.05 | 6.35 | 1.6 | 7.93 | |
| SNMG 250724-GG | | | | | ● | | | | | | 25.40 | 7.94 | 2.4 | 9.12 | |

|    | SNMM UC Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| SNMM 120408-UC | | | ● | ● | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| SNMM 120412-UC | | | ● | ● | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |
| SNMM 120416-UC | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | |
| SNMM 190612-UC | | | ● | ● | | | | | | | 19.05 | 6.35 | 1.2 | 7.93 | |
| SNMM 190616-UC | | | ● | ● | ● | | | | | | 19.05 | 6.35 | 1.6 | 7.93 | |
| SNMM 190624-UC | | | | | | | | | | | 19.05 | 6.35 | 2.4 | 7.93 | |
| SNMM 250724-UC | | | ● | ● | | | | | | | 25.40 | 7.94 | 2.4 | 9.12 | |
| SNMM 250924-UC | | | ● | ● | | | | | | | 25.40 | 9.52 | 2.4 | 9.12 | |

SPMR

90° Square Positive 11° (M class)

|    | SPMR FT Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| SPMR 090304-FT | | | | ● | ● | ● | | ● | | | 9.525 | 3.18 | 0.4 | - | |
| SPMR 090308-FT | | | | ● | ● | ● | | ● | | | 9.525 | 3.18 | 0.8 | - | |
| SPMR 120304-FT | | ● | ● | ● | ● | | | ○ | | | 12.70 | 3.18 | 0.4 | - | |
| SPMR 120308-FT | | ● | ● | ● | ● | | | ○ | | | 12.70 | 3.18 | 0.8 | - | |
| SPMR 120312-FT | | ● | ● | | | | | ○ | | | 12.70 | 3.18 | 1.2 | - | |

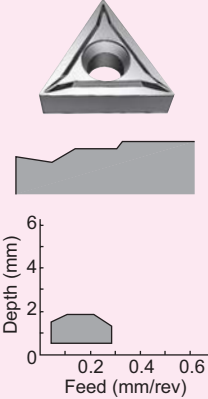
○ Will not be available after current stock exhausted.

ISO Turning Inserts

“ ISO Turning Inserts ”


TCMT

60° Triangular Positive 7° (M class)

|  | TCMT | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|---|----------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | FT | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| | Cat. No. | | | | | | | | | | | | | | | | |
| | TCMT 110202-FT | | ● | ● | | | | | ● | | | | 6.35 | 2.38 | 0.2 | 2.90 | |
| | TCMT 110204-FT | | ● | ● | | | | | ● | | | | 6.35 | 2.38 | 0.4 | 2.90 | |
| | TCMT 110208-FT | | ● | ● | | | | | ● | | | | 6.35 | 2.38 | 0.8 | 2.90 | |
| | TCMT 16T304-FT | | ● | ● | | | | | | | | | 9.525 | 3.97 | 0.4 | 4.40 | |
| | TCMT 16T308-FT | | ● | ● | | | | | | | | | 9.525 | 3.97 | 0.8 | 4.40 | |

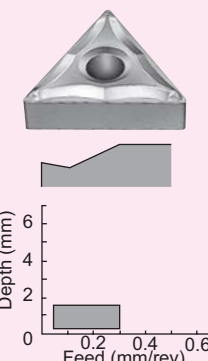
TNMA

60° Triangular Negative (M class)

|  | TNMA | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|---|-------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | — | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| | Cat. No. | | | | | | | | | | | | | | | | |
| | TNMA 160404 | ● | ● | | | | | | | | | | 9.525 | 3.18 | 0.4 | 3.81 | |
| | TNMA 160408 | ● | ● | | ● | | | | | | | | 9.525 | 3.18 | 0.8 | 3.81 | |
| | TNMA 160412 | ● | ● | | | | | | | | | | 9.525 | 3.18 | 1.2 | 3.81 | |
| | TNMA 220404 | | | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| | TNMA 220408 | | ● | | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| | TNMA 220412 | | ● | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |

TNMG

60° Triangular Negative (M class)

|  | TNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|---|----------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | F1 | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | CX10 | CX50 | | |
| | Cat. No. | | | | | | | | | | | | | | | | |
| | TNMG 160404-F1 | | | | | | | | ○ | | ● | | 9.525 | 4.76 | 0.4 | 3.81 | |
| | TNMG 160408-F1 | | | | | | | | ○ | | ● | | 9.525 | 4.76 | 0.8 | 3.81 | |

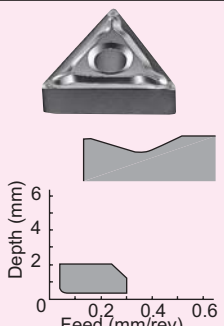
○ Will not be available after current stock exhausted.

ISO Turning Inserts

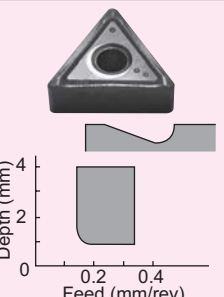
“ ISO Turning Inserts ”

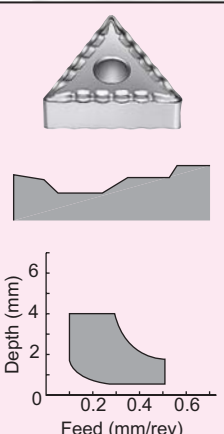
TNMG

60° Triangular Negative (M class)

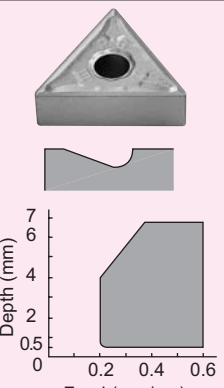
|  | TNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|------|-------|--------|--------|--------|--------|--------|--------|------|-----------------|-------|-----------|-------------|-----------|------|
| | | UA | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT |
| Cat. No. | | | | | | | | | | | | | | | |
| TNMG 160404-UA | | ● | ● | ● | ● | | | ○ | | | ● | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160408-UA | | ● | ● | ● | ● | | | | | | ● | 9.525 | 4.76 | 0.8 | 3.81 |
| TNMG 160412-UA | | ● | ● | ● | | | | | | | | 9.525 | 4.76 | 1.2 | 3.81 |

○ Will not be available after current stock exhausted.

|  | TNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|--|------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|-----|------|
| | | SF | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | | | | | NIT | NAT |
| Cat. No. | | | | | | | | | | | | | | | | |
| TNMG 160404-SF | | | | | | | | | | | ● | ● | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160408-SF | | | | | | | | | | | ● | ● | 9.525 | 4.76 | 0.8 | 3.81 |

|  | TNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|------|-------|--------|--------|--------|--------|--------|--------|------|-----------------|-------|-----------|-------------|-----------|------|------|
| | | UR | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | PX90 | CX50 |
| Cat. No. | | | | | | | | | | | | | | | | |
| TNMG 160404-UR | | ● | ● | ● | ● | ● | | | | | ● | ● | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160408-UR | | ● | ● | ● | ● | ● | | | | | ● | ● | 9.525 | 4.76 | 0.8 | 3.81 |
| TNMG 160412-UR | | ○ | ● | ● | ● | | | | | | | | 9.525 | 4.76 | 1.2 | 3.81 |
| TNMG 220404-UR | | | | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| TNMG 220408-UR | | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| TNMG 220412-UR | | ● | ● | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| TNMG 220416-UR | | | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |

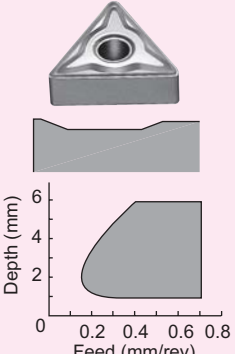
○ Will not be available after current stock exhausted.

|  | TNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|------|-------|--------|--------|--------|--------|--------|--------|------|-----------------|-------|-----------|-------------|-----------|-----|------|
| | | PG | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | | | |
| TNMG 160404-PG | | ● | ● | ● | ● | ● | | | | | | | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160408-PG | | ● | ● | ● | ● | ● | | | | | | | 9.525 | 4.76 | 0.8 | 3.81 |
| TNMG 160412-PG | | ● | ● | ● | ● | ● | | | | | | | 9.525 | 4.76 | 1.2 | 3.81 |
| TNMG 220408-PG | | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| TNMG 220412-PG | | ● | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |

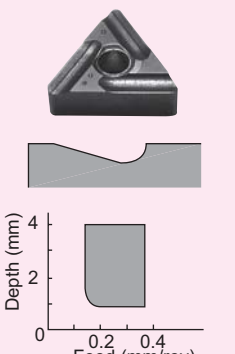
“ ISO Turning Inserts ”

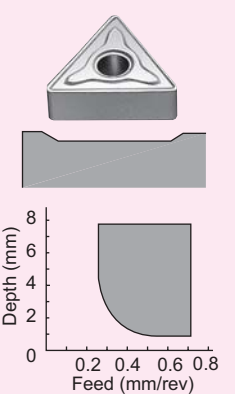
TNMG

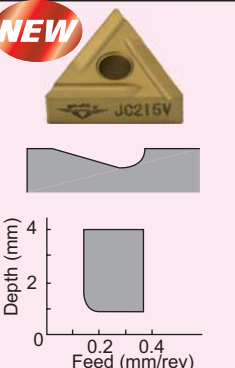
60° Triangular Negative (M class)

|  | TNMG UB Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| TNMG 160404-UB | ● ● | | | | | | | | | | 9.525 | 4.76 | 0.4 | 3.81 | |
| TNMG 160408-UB | ● ● ○ | | | | | | | | | | 9.525 | 4.76 | 0.8 | 3.81 | |
| TNMG 160412-UB | ● ● ○ | | | | | | | | | | 9.525 | 4.76 | 1.2 | 3.81 | |
| TNMG 220408-UB | ● ● | | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| TNMG 220412-UB | ● ● ○ | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |

○ Will not be available after current stock exhausted.

|  | TNMG SG Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|--|--------|--------|--------|--------|--------|--------|--------|------|-----------------|------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | NIT | CX10 | | | | |
| TNMG 160404L-SG | | | | | | | ● ● | | | | | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160404R-SG | | | | | | | ● ● | | | | | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160408L-SG | | | | | | | ● ● | | | | | 9.525 | 4.76 | 0.8 | 3.81 |
| TNMG 160408R-SG | | | | | | | ● ● | | | | | 9.525 | 4.76 | 0.8 | 3.81 |



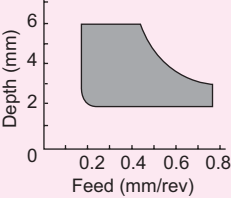
|  | TNMG UD Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | NAT | CX50 | | | | |
| TNMG 160404-UD | | | | | | | | | | | | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160408-UD | ● ● | ● ● | ● ● | ● ● | ● ● | | | | | | | 9.525 | 4.76 | 0.8 | 3.81 |
| TNMG 160412-UD | ● ● | ● ● | ● ● | ● ● | ● ● | | | | | | | 9.525 | 4.76 | 1.2 | 3.81 |
| TNMG 160416-UD | | | | ● ● | | | | | | | | 9.525 | 4.76 | 1.6 | 3.81 |
| TNMG 220408-UD | ● ● | ● ● | ● ● | ● ● | ● ● | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| TNMG 220412-UD | ● ● | ● ● | ● ● | ● ● | ● ● | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| TNMG 220416-UD | | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |



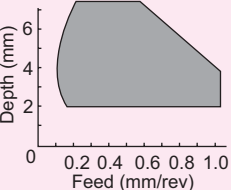
|  | TNMG GNP Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|---|--------|--------|--------|--------|--------|--------|--------|------|-----------------|------|-------|-----------|-------------|-----------|
| | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | NIT | CX10 | | | | |
| TNMG 160404L-GNP | | | ● ● | | | | | | | | | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160404R-GNP | | | ● ● | | | | | | | | | 9.525 | 4.76 | 0.4 | 3.81 |
| TNMG 160408L-GNP | | | ● ● | | | | | | | | | 9.525 | 4.76 | 0.8 | 3.81 |
| TNMG 160408R-GNP | | | ● ● | | | | | | | | | 9.525 | 4.76 | 0.8 | 3.81 |

“ ISO Turning Inserts ”

TNMG-TNMM

60° Triangular Negative (M class)


|    | TNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|------|----------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|-----|------|
| | GG | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | Cat. No. | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | | | | | NIT | NAT |
| TNMG 160404-GG | ● | ● | ● | ● | ● | | | | | | | 9.525 | 3.18 | 0.4 | 3.81 |
| TNMG 160408-GG | ● | ● | ● | ● | ● | | | | | | | 9.525 | 3.18 | 0.8 | 3.81 |
| TNMG 160412-GG | ● | ● | ● | ● | ● | | | | | | | 9.525 | 3.18 | 1.2 | 3.81 |
| TNMG 220404-GG | | ● | | ● | ● | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| TNMG 220408-GG | | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| TNMG 220412-GG | | ● | ● | ● | ● | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| TNMG 220416-GG | | ● | | | | ● | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |
| TNMG 270612-GG | | ● | | | | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 |
| TNMG 270616-GG | | ● | | | | | | | | | | 15.875 | 6.35 | 1.6 | 6.35 |

|    | TNMM | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|------|----------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|-----|------|
| | UC | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | Cat. No. | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | | | | | NIT | NAT |
| TNMM 160408-UC | | | | ● | ○ | | | | | | | 9.525 | 4.76 | 0.8 | 3.81 |
| TNMM 160412-UC | | | | ● | ○ | | | | | | | 9.525 | 4.76 | 1.2 | 3.81 |
| TNMM 220408-UC | | | | ● | ○ | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| TNMM 220412-UC | | | | ● | ○ | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |
| TNMM 220416-UC | | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 |
| TNMM 270612-UC | | | | | | | | | | | | 15.875 | 6.35 | 1.2 | 6.35 |
| TNMM 270616-UC | | | | | | | | | | | | 15.875 | 6.35 | 1.6 | 6.35 |

○ Will not be available after current stock exhausted.

TPMN

60° Triangular Positive 11° (M class)

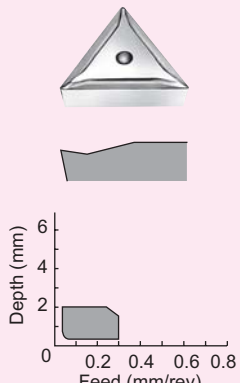
|  | TPMN | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|----------|-----|-----------------|-----------|-------------|-----------|------|-----|---|
| | - | Coated | | | | | | Uncoated | | I. C. | Thickness | Nose Radius | Hole Dia. | | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC5040 | KT9 | | | | | | | |
| TPMN 110304 | | | ● | ● | ● | | | | ● | | | | 6.35 | 3.18 | 0.4 | - |
| TPMN 110308 | | | | ● | ● | | | | ● | | | | 6.35 | 3.18 | 0.8 | - |
| TPMN 160304 | | | | ● | ● | | | | ● | | | | 9.525 | 3.18 | 0.4 | - |
| TPMN 160308 | | ● | ● | ● | ● | | | | ● | | | | 9.525 | 3.18 | 0.8 | - |
| TPMN 160312 | | ○ | ○ | | | | | | ● | | | | 9.525 | 3.18 | 1.2 | - |
| TPMN 220408 | | | | ● | ● | | | | ● | | | | 12.70 | 4.76 | 0.8 | - |
| TPMN 220412 | | | | ● | ● | | | | ● | | | | 12.70 | 4.76 | 1.2 | - |

○ Will not be available after current stock exhausted.

“ ISO Turning Inserts ”

TPMR

60° Triangular Positive 11° (M class)

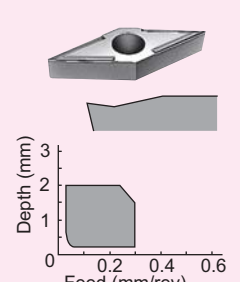


The diagram shows a 60-degree triangular insert with a central hole. The graph plots Depth (mm) on the y-axis (0 to 6) against Feed (mm/rev) on the x-axis (0 to 0.8). The insert is shown at a depth of approximately 3.18 mm for a feed of 0.2 mm/rev.

| TPMR | Grade | | | | | | | | Dimensions (mm) | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | |
| TPMR 110304-FT | ● | ● | ● | ● | ● | | ● | | | | 6.35 | 3.18 | 0.4 | - |
| TPMR 110308-FT | ● | ● | ● | ● | ● | | ● | | | | 6.35 | 3.18 | 0.8 | - |
| TPMR 160304-FT | ● | ● | ● | ● | ● | | ● | | | | 9.525 | 3.18 | 0.4 | - |
| TPMR 160308-FT | ● | ● | ● | ● | ● | | ● | | | | 9.525 | 3.18 | 0.8 | - |
| TPMR 160312-FT | | | | | | | ● | | | | 9.525 | 3.18 | 1.2 | - |

VBMT

35° Rhombic Positive 5° (M class)

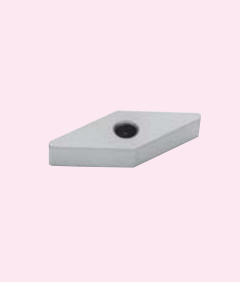


The diagram shows a rhombic insert with a central hole. The graph plots Depth (mm) on the y-axis (0 to 3) against Feed (mm/rev) on the x-axis (0 to 0.6). The insert is shown at a depth of approximately 4.76 mm for a feed of 0.2 mm/rev.

| VBMT | Grade | | | | | | | | Dimensions (mm) | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | |
| VBMT 160404-FT | ● | ● | | | | | | | | | 9.525 | 4.76 | 0.4 | 4.40 |
| VBMT 160408-FT | ● | ● | | | | | | | | | 9.525 | 4.76 | 0.8 | 4.40 |

VNMA

35° Rhombic Negative (M class)



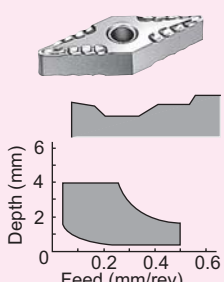
The diagram shows a rhombic insert with a central hole.

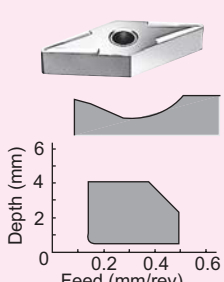
| VNMA | Grade | | | | | | | | Dimensions (mm) | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | Coated | | | | | Cermet | | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| Cat. No. | | | | | | | | | | | | | | |
| VNMA 160404 | ● | | | | | | | | | | 9.525 | 4.76 | 0.4 | 4.40 |
| VNMA 160408 | ● | | | | | | | | | | 9.525 | 4.76 | 0.8 | 4.40 |

“ ISO Turning Inserts ”

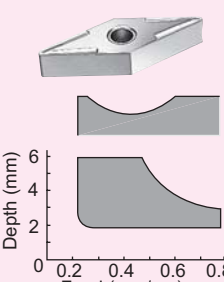
VNMG

35° Rhombic Negative (M class)

|  | VNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | UR | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | |
| VNMG 160404-UR | | ● | ● | | | ● | | | | | | ● | 9.525 | 4.76 | 0.4 | 4.40 | |
| VNMG 160408-UR | | ● | ● | ● | ● | | | | | | | ● | 9.525 | 4.76 | 0.8 | 4.40 | |

|  | VNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|--|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | UT | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | |
| VNMG 160404-UT | | | ● | ● | | | | ○ | | | | ● | 9.525 | 4.76 | 0.4 | 4.40 | |
| VNMG 160408-UT | | | ● | ● | ● | | | ● | | | | ● | 9.525 | 4.76 | 0.8 | 4.40 | |

○ Will not be available after current stock exhausted.

|  | VNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | |
|---|------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|------|------|------|--|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | GG | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | |
| VNMG 160404-GG | | ● | ● | ● | ● | ● | | | | | | | 9.525 | 4.76 | 0.4 | 4.40 | |
| VNMG 160408-GG | | ● | ● | ● | ● | ● | | | | | | | 9.525 | 4.76 | 0.8 | 4.40 | |


○ Will not be available after current stock exhausted.

ISO Turning Inserts

“ ISO Turning Inserts ”


■ WCMX (For Drilling)

80° Trigon Positive 7° (M class)

|  | WCMX | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|-------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | Cat. No. | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| | WCMX 030208 | | | ● | ● | | | | | | | 5.56 | 2.38 | 0.8 | 2.80 |
| | WCMX 040208 | | | ● | ● | | | | | | | 6.35 | 2.38 | 0.8 | 3.10 |
| | WCMX 050308 | | | ● | ● | | | | | | | 7.94 | 3.18 | 0.8 | 3.20 |
| | WCMX 06T308 | | | ● | ● | | | | | | | 9.53 | 3.97 | 0.8 | 3.70 |
| | WCMX 080412 | | | ● | ● | | | | | | | 12.70 | 4.76 | 1.2 | 4.30 |


■ WNMA

80° Trigon Negative (M class)

|  | WNMA | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|-------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | Cat. No. | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| | WNMA 080404 | ● | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| | WNMA 080408 | ● | ● | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| | WNMA 080412 | ● | ● | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |

■ WNMG

80° Trigon Negative (M class)

|  Depth (mm) 6 4 2 0 0.2 0.4 0.6 Feed (mm/rev) | WNMG | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|----------------|--------|--------|--------|--------|--------|--------|--------|-----|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | UA | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 |
| | WNMG 080404-UA | | ● | ○ | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 |
| | WNMG 080408-UA | | ● | ○ | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 |
| | WNMG 080412-UA | | | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 |

○ Will not be available after current stock exhausted.

“ ISO Turning Inserts ”

■ WNMG

80° Trigon Negative (M class)

| | WNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | | |
|----------------|------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|-----|------|--|
| | | SF | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | | | | | NIT | NAT | CX50 | |
| Cat. No. | | | | | | | | | | | | | | | | | | |
| WNMG 080404-SF | | | | | | | | | ● | ● | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| WNMG 080408-SF | | | | | | | | | ● | ● | | | | 12.70 | 4.76 | 0.8 | 5.16 | |

| | WNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | | |
|----------------|------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|------|------|--|
| | | UR | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | PX90 | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | | |
| WNMG 080404-UR | | ● | ● | ● | | | | | | | | ● | ○ | 12.70 | 4.76 | 0.4 | 5.16 | |
| WNMG 080408-UR | | ● | ● | ● | | | | | | | | ● | ○ | 12.70 | 4.76 | 0.8 | 5.16 | |
| WNMG 080412-UR | | | | ● | ● | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |

○ Will not be available after current stock exhausted.

| | WNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | | |
|----------------|------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|------|------|--|
| | | PG | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | | |
| WNMG 080404-PG | | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| WNMG 080408-PG | | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| WNMG 080412-PG | | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | |

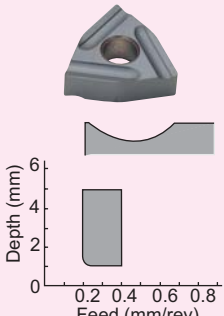
| | WNMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | | |
|----------------|------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|------|------|--|
| | | UB | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | |
| Cat. No. | | | | | | | | | | | | | | | | | | |
| WNMG 080404-UB | | | ● | ● | | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| WNMG 080408-UB | | | ● | ● | ● | | | | | | | | ○ | 12.70 | 4.76 | 0.8 | 5.16 | |
| WNMG 080412-UB | | | ● | ● | ● | | | | | | | | ○ | 12.70 | 4.76 | 1.2 | 5.16 | |

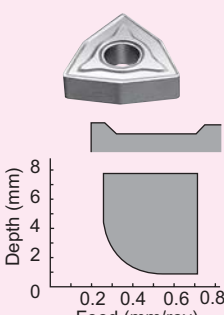
○ Will not be available after current stock exhausted.

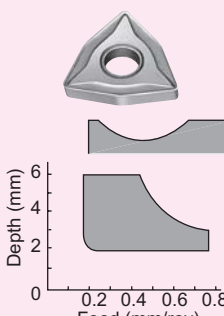
“ ISO Turning Inserts ”

WNUMG

80° Trigon Negative (M class)

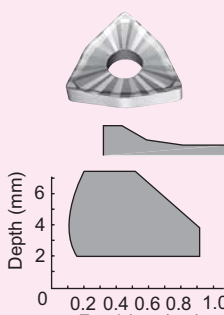
|  | WNUMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | | |
|---|-------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|-----|------|--|
| | | SG | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | JC8015 | LN10 | | | | | NIT | NAT | CX50 | |
| Cat. No. | | | | | | | | | | | | | | | | | | |
| WNUMG 080404L-SG | | ● | | | | | | ● | ● | | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| WNUMG 080404R-SG | | ● | | | | | | ● | ● | | | | | 12.70 | 4.76 | 0.4 | 5.16 | |
| WNUMG 080408L-SG | | ● | | | | | | ● | ● | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |
| WNUMG 080408R-SG | | ● | | | | | | ● | ● | | | | | 12.70 | 4.76 | 0.8 | 5.16 | |

|  | WNUMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | | | |
|--|-------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|------|------|--|--|
| | | UD | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | | |
| Cat. No. | | | | | | | | | | | | | | | | | | | |
| WNUMG 080408-UD | | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | | |
| WNUMG 080412-UD | | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | | |
| WNUMG 080416-UD | | | | | ● | ● | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | | |

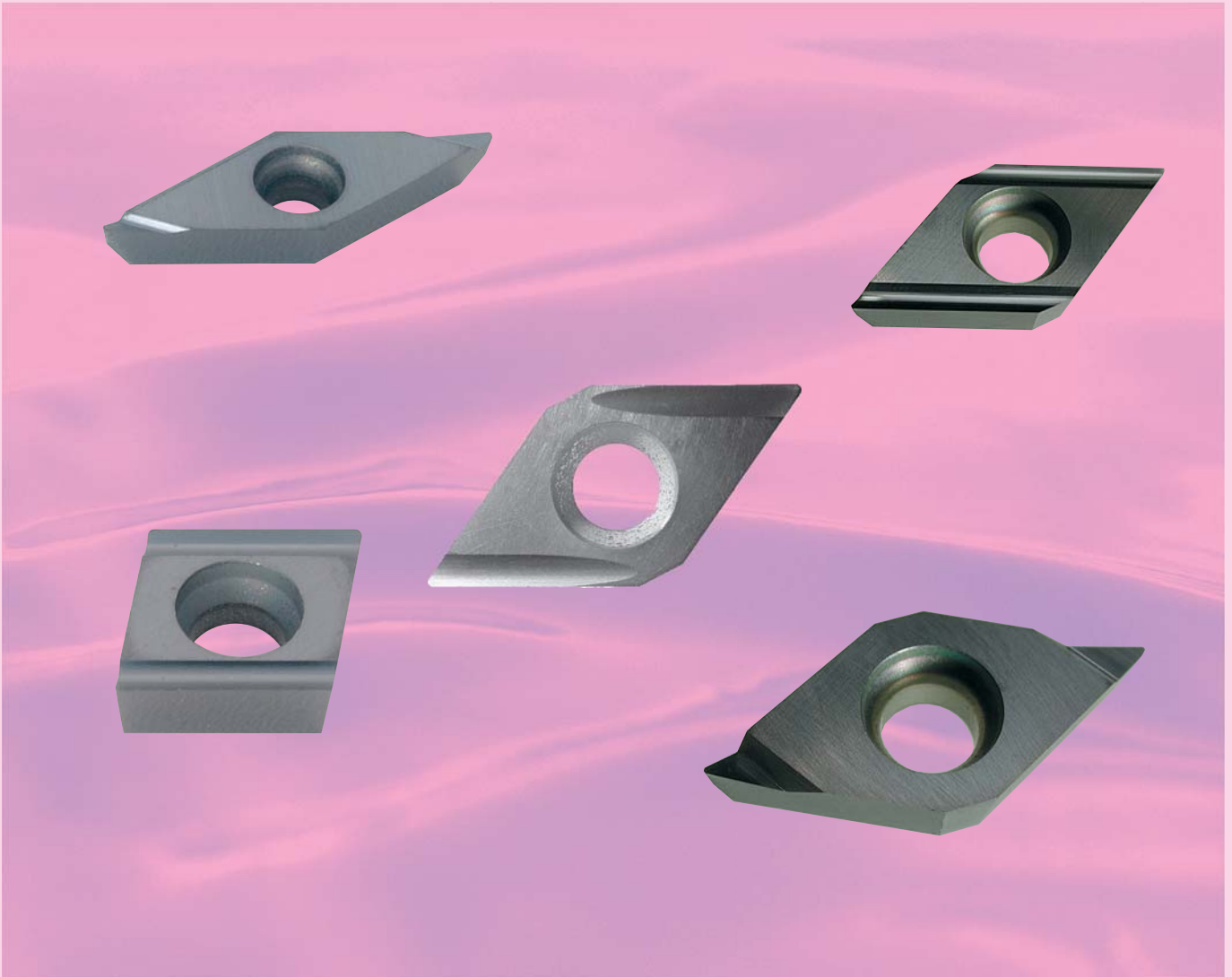
|  | WNUMG | Grade | | | | | | | | Dimensions (mm) | | | | | | | | | |
|---|-------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|------|------|--|--|
| | | GG | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | | |
| Cat. No. | | | | | | | | | | | | | | | | | | | |
| WNUMG 080404-GG | | ● | ● | ● | ● | | | | | | | | | 12.70 | 4.76 | 0.4 | 5.16 | | |
| WNUMG 080408-GG | | ● | ● | ● | ● | ● | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | | |
| WNUMG 080412-GG | | ● | | ● | ● | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | | |

WNMM

80° Trigon Negative (M class)

|  | WNMM | Grade | | | | | | | | Dimensions (mm) | | | | | | | | | |
|---|------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|------|------|--|--|
| | | UC | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | | | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5015 | LN10 | NIT | | | | | NAT | CX50 | | | |
| Cat. No. | | | | | | | | | | | | | | | | | | | |
| WNMM 080408-UC | | | | ● | ● | | | | | | | | | 12.70 | 4.76 | 0.8 | 5.16 | | |
| WNMM 080412-UC | | | | ● | ● | | | | | | | | | 12.70 | 4.76 | 1.2 | 5.16 | | |
| WNMM 080416-UC | | | | | | | | | | | | | | 12.70 | 4.76 | 1.6 | 5.16 | | |

“ ISO Turning ”



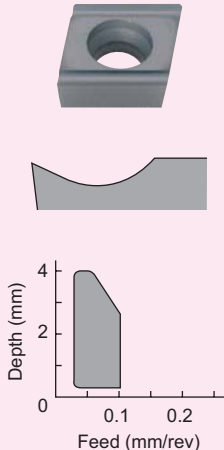
ISO Turning Inserts

“ Small Components Inserts ”

“ ISO Turning Inserts ”

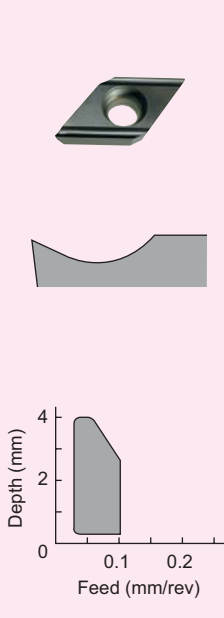
■ CCET

80° Rhombic Positive 7° (E class)

|  | CCET | Grade | | | | | | | | | | Dimensions (mm) | | | | |
|---|-----------------|-------|--------|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-------|-----------|-------------|-----------|
| | | MF | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | NIT | NAT | | | | |
| Cat. No. | | | | | | | | | | | | | | | | |
| | CCET 060201L-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| | CCET 060201R-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| | CCET 060202L-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.2 | 2.80 |
| | CCET 060202R-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.2 | 2.80 |
| | CCET 09T301L-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.1 | 4.40 |
| | CCET 09T301R-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.1 | 4.40 |
| | CCET 09T302L-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.2 | 4.40 |
| | CCET 09T302R-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.2 | 4.40 |

■ DCET

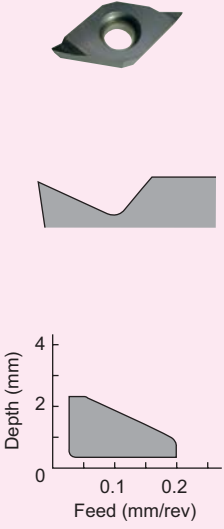
55° Rhombic Positive 7° (E class)

|  | DCET | Grade | | | | | | | | | | Dimensions (mm) | | | | |
|---|-----------------|-------|--------|--------|--------|--------|--------|--------|--------|------|-----|-----------------|-------|-----------|-------------|-----------|
| | | MF | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | NIT | NAT | | | | |
| Cat. No. | | | | | | | | | | | | | | | | |
| | DCET 0702005-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.05 | 2.80 |
| | DCET 070201L-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| | DCET 070201R-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| | DCET 070202L-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.2 | 2.80 |
| | DCET 070202R-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.2 | 2.80 |
| | DCET 070204L-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.4 | 2.80 |
| | DCET 070204R-MF | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.4 | 2.80 |
| | DCET 11T3005-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.05 | 4.40 |
| | DCET 11T301L-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.1 | 4.40 |
| | DCET 11T301R-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.1 | 4.40 |
| | DCET 11T302L-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.2 | 4.40 |
| | DCET 11T302R-MF | | | | | | ● | ● | | | | | 9.525 | 3.97 | 0.2 | 4.40 |
| | DCET 11T304L-MF | | | | | | | ● | | | | | 9.525 | 3.97 | 0.4 | 4.40 |
| | DCET 11T304R-MF | | | | | | | ● | | | | | 9.525 | 3.97 | 0.4 | 4.40 |

“ ISO Turning Inserts ”

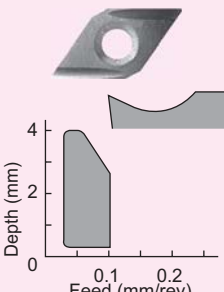
■ DCET

55° Rhombic Positive 7° (E class)

|  | DCET | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|--|------------------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|------|------|
| | | MM | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | | | | | NIT | NAT |
| Cat. No. | | | | | | | | | | | | | | | | |
| | DCET 0702005R-MM | | | | | | | ● | ● | | | | 6.35 | 2.38 | 0.05 | 2.80 |
| | DCET 070201L-MM | | | | | | | ● | ● | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| | DCET 070201R-MM | | | | | | | ● | ● | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| | DCET 070202L-MM | | | | | | | ● | ● | | | | 6.35 | 2.38 | 0.2 | 2.80 |
| | DCET 070202R-MM | | | | | | | ● | ● | | | | 6.35 | 2.38 | 0.2 | 2.80 |
| | DCET 070204L-MM | | | | | | | ● | ● | | | | 6.35 | 2.38 | 0.4 | 2.80 |
| | DCET 070204R-MM | | | | | | | ● | ● | | | | 6.35 | 2.38 | 0.4 | 2.80 |
| | DCET 11T3005R-MM | | | | | | | ● | ● | | | | 9.525 | 3.97 | 0.05 | 4.40 |
| | DCET 11T301L-MM | | | | | | | ● | ● | | | | 9.525 | 3.97 | 0.1 | 4.40 |
| | DCET 11T301R-MM | | | | | | | ● | ● | | | | 9.525 | 3.97 | 0.1 | 4.40 |
| | DCET 11T302L-MM | | | | | | | ● | ● | | | | 9.525 | 3.97 | 0.2 | 4.40 |
| | DCET 11T302R-MM | | | | | | | ● | ● | | | | 9.525 | 3.97 | 0.2 | 4.40 |
| | DCET 11T304L-MM | | | | | | | | ● | | | | 9.525 | 3.97 | 0.4 | 4.40 |
| | DCET 11T304R-MM | | | | | | | | ● | | | | 9.525 | 3.97 | 0.4 | 4.40 |

■ DCGT

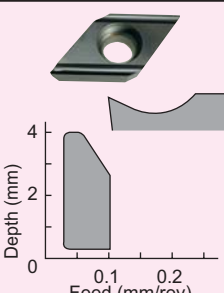
55° Rhombic Positive 7° (G class)

|  | DCGT | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|--------------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|-----|------|
| | | - | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | | | | | NIT | NAT |
| Cat. No. | | | | | | | | | | | | | | | | |
| | DCGT 070200R | | | | | | | | ○ | | | | 6.35 | 2.38 | 0 | 2.80 |
| | DCGT 070201R | | | | | | | | ○ | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| | DCGT 070202R | | | | | | | | ○ | | | | 6.35 | 2.38 | 0.2 | 2.80 |

○ Will not be available after current stock exhausted.

■ DPET

55° Rhombic Positive 11° (E class)

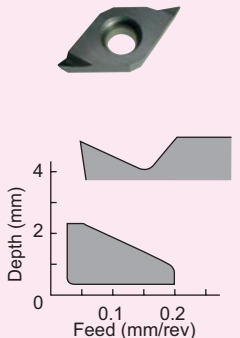
|  | DPET | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|-----------------|-------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------|-----------|-------------|-----------|-----|------|
| | | MF | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | | | | | NIT | NAT |
| Cat. No. | | | | | | | | | | | | | | | | |
| | DPET 070201R-MF | | | | | | | | ● | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| | DPET 11T301R-MF | | | | | | | | ● | | | | 9.525 | 3.97 | 0.1 | 4.40 |
| | DPET 11T302R-MF | | | | | | | | ● | | | | 9.525 | 3.97 | 0.2 | 4.40 |

● Stock in Japan

“ ISO Turning Inserts ”

DPET

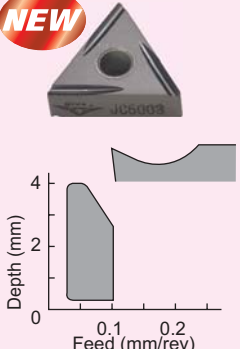
55° Rhombic Positive 11° (E class)

|  | DPET | | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|----------|--|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----|-------|-----------|-------------|-----------|------|
| | MM | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. | |
| | Cat. No. | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | NIT | NAT | | | | | CX50 |
| DPET 0702005R-MM | | | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.05 | 2.80 |
| DPET 070201R-MM | | | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.1 | 2.80 |
| DPET 070202R-MM | | | | | | | | ● | ● | | | | | 6.35 | 2.38 | 0.2 | 2.80 |
| DPET 11T301R-MM | | | | | | | | | ● | | | | | 9.525 | 3.97 | 0.1 | 4.40 |
| DPET 11T302R-MM | | | | | | | | | ● | | | | | 9.525 | 3.97 | 0.2 | 4.40 |

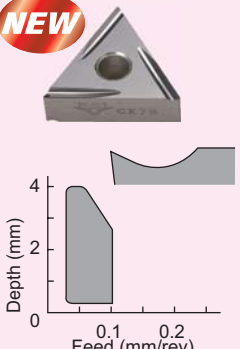
● Stock in Japan

TNEG NEW

60° Triangular Negative (E class)

|  | TNEG | | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|----------|--|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----|-------|-----------|-------------|-----------|------|
| | MF | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. | |
| | Cat. No. | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | NIT | NAT | | | | | CX75 |
| TNEG 160401L-MF | | | | | | | | ● | | | | | | 9.525 | 4.672 | 0.1 | 3.81 |
| TNEG 160401R-MF | | | | | | | | ● | | | | | | 9.525 | 4.672 | 0.1 | 3.81 |
| TNEG 160402L-MF | | | | | | | | ● | | | | | | 9.525 | 4.672 | 0.2 | 3.81 |
| TNEG 160402R-MF | | | | | | | | ● | | | | | | 9.525 | 4.672 | 0.2 | 3.81 |
| TNEG 160404L-MF | | | | | | | | ● | | | | | | 9.525 | 4.672 | 0.4 | 3.81 |
| TNEG 160404R-MF | | | | | | | | ● | | | | | | 9.525 | 4.672 | 0.4 | 3.81 |

● Stock in Japan

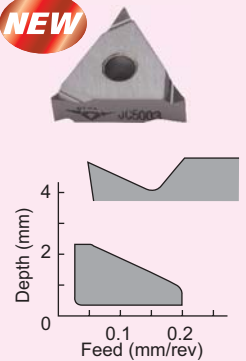
|  | TNEG | | Grade | | | | | | | | Dimensions (mm) | | | | | | |
|---|----------|--|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----|-------|-----------|-------------|-----------|------|
| | MF2 | | Coated | | | | | | Cermet | | | | I. C. | Thickness | Nose Radius | Hole Dia. | |
| | Cat. No. | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | NIT | NAT | | | | | CX75 |
| TNEG 160401L-MF2 | | | | | | | | | | | | | ● | 9.525 | 4.672 | 0.1 | 3.81 |
| TNEG 160401R-MF2 | | | | | | | | | | | | | ● | 9.525 | 4.672 | 0.1 | 3.81 |
| TNEG 160402L-MF2 | | | | | | | | | | | | | ● | 9.525 | 4.672 | 0.2 | 3.81 |
| TNEG 160402R-MF2 | | | | | | | | | | | | | ● | 9.525 | 4.672 | 0.2 | 3.81 |
| TNEG 160404L-MF2 | | | | | | | | | | | | | ● | 9.525 | 4.672 | 0.4 | 3.81 |
| TNEG 160404R-MF2 | | | | | | | | | | | | | ● | 9.525 | 4.672 | 0.4 | 3.81 |

● Stock in Japan

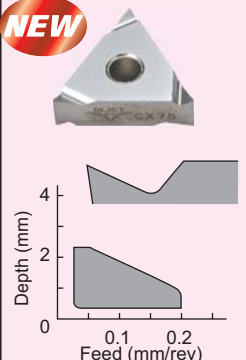
“ ISO Turning Inserts ”

TNEG NEW

60° Triangular Negative (E class)

|  | TNEG MM Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | | | | | NIT | NAT |
| TNEG 160401L-MM | | | | | | | ● | | | | | 9.525 | 4.672 | 0.1 | 3.81 |
| TNEG 160401R-MM | | | | | | | ● | | | | | 9.525 | 4.672 | 0.1 | 3.81 |
| TNEG 160402L-MM | | | | | | | ● | | | | | 9.525 | 4.672 | 0.2 | 3.81 |
| TNEG 160402R-MM | | | | | | | ● | | | | | 9.525 | 4.672 | 0.2 | 3.81 |
| TNEG 160404L-MM | | | | | | | ● | | | | | 9.525 | 4.672 | 0.4 | 3.81 |
| TNEG 160404R-MM | | | | | | | ● | | | | | 9.525 | 4.672 | 0.4 | 3.81 |

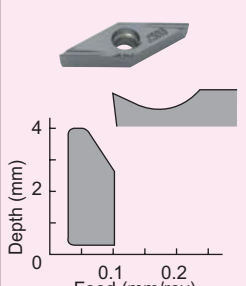
● Stock in Japan

|  | TNEG MM2 Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | | | | | NIT | NAT |
| TNEG 160401L-MM2 | | | | | | | | | | | ● | 9.525 | 4.672 | 0.1 | 3.81 |
| TNEG 160401R-MM2 | | | | | | | | | | | ● | 9.525 | 4.672 | 0.1 | 3.81 |
| TNEG 160402L-MM2 | | | | | | | | | | | ● | 9.525 | 4.672 | 0.2 | 3.81 |
| TNEG 160402R-MM2 | | | | | | | | | | | ● | 9.525 | 4.672 | 0.2 | 3.81 |
| TNEG 160404L-MM2 | | | | | | | | | | | ● | 9.525 | 4.672 | 0.4 | 3.81 |
| TNEG 160404R-MM2 | | | | | | | | | | | ● | 9.525 | 4.672 | 0.4 | 3.81 |

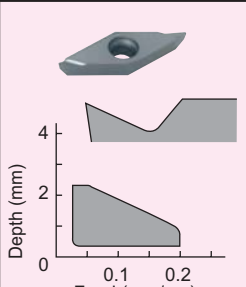
● Stock in Japan

VBET

35° Rhombic Positive 5° (E class)

|  | VBET MF Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | | | | | NIT | NAT |
| VBET 110301R-MF | | | | | | | ● | ● | | | | 6.35 | 3.18 | 0.1 | 2.80 |
| VBET 110302R-MF | | | | | | | ● | ● | | | | 6.35 | 3.18 | 0.2 | 2.80 |

● Stock in Japan

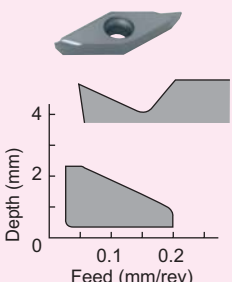
|  | VBET MM Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|---|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | | | | | NIT | NAT |
| VBET 110301R-MM | | | | | | | ● | ● | | | | 6.35 | 3.18 | 0.1 | 2.80 |
| VBET 110302R-MM | | | | | | | ● | ● | | | | 6.35 | 3.18 | 0.2 | 2.80 |

● Stock in Japan

“ ISO Turning Inserts ”

VPET

35° Rhombic Positive 11° (E class)

|  Depth (mm) Feed (mm/rev) | VPET MM Cat. No. | Grade | | | | | | | | Dimensions (mm) | | | | | |
|--|--|--------|--------|--------|--------|--------|--------|--------|------|-----------------|-----------|-------------|-----------|-----|------|
| | | Coated | | | | | | Cermet | | I. C. | Thickness | Nose Radius | Hole Dia. | | |
| | | JC105V | JC110V | JC215V | JC325V | JC450V | JC5003 | JC5015 | LN10 | | | | | NIT | NAT |
| VPET 080201L-MF | | | | | | ● | ● | | | | | 4.762 | 2.38 | 0.1 | 2.30 |
| VPET 080201R-MF | | | | | | ● | ● | | | | | 4.762 | 2.38 | 0.1 | 2.30 |
| VPET 080202L-MF | | | | | | ● | ● | | | | | 4.762 | 2.38 | 0.2 | 2.30 |
| VPET 080202R-MF | | | | | | ● | ● | | | | | 4.762 | 2.38 | 0.2 | 2.30 |

● Stock in Japan

Feature for Small Components Inserts

1. Mirror surface finish and optimum chip control.
2. Inserts provide fine surface finish and longer tool life.
3. For small components machining.
4. For small CNC lathe machine

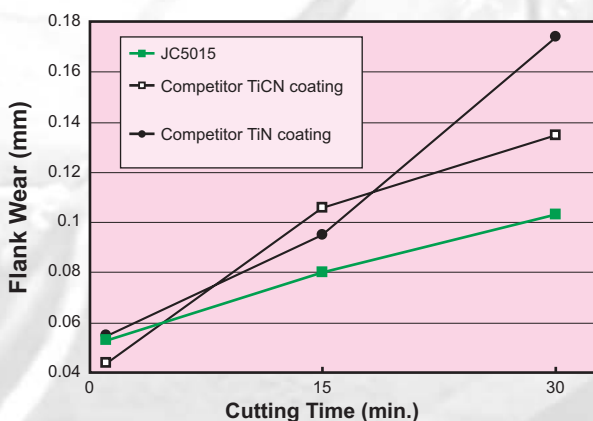


Mirror Surface finish and JC 5000 series carbide grade can improve surface finish and tool life.

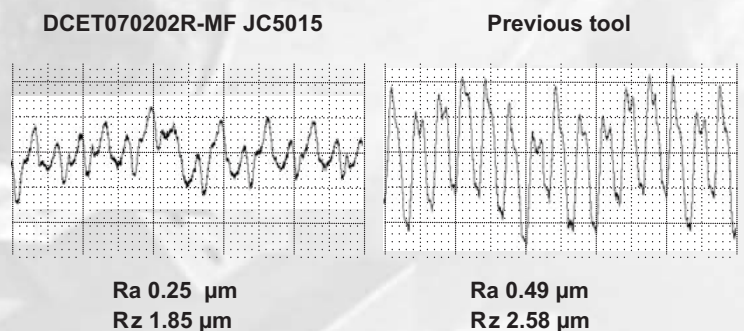
Performance

Work Material: AISI 420
 Insert: DCET070202R
 Cutting Condition: Vc=300m/min
 f=0.03mm/rev
 d=0.05mm. WET

Insert flank wear comparison



Comparison of work surface finish

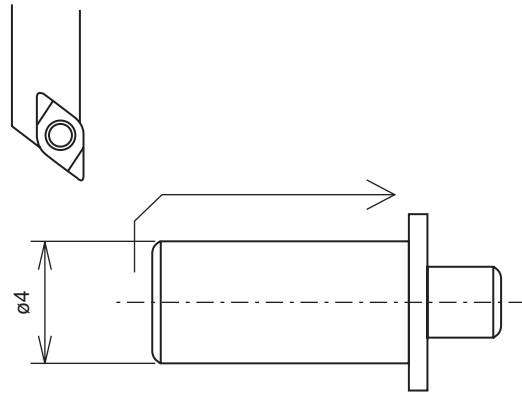


“ ISO Turning Inserts ”

■ Cutting data for small components inserts

● Motor shaft for hard disk drive

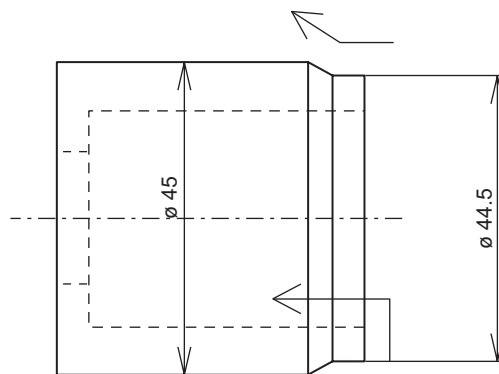
Work Material:
Stainless steel AISI 420F



| | Items | Previous tool | Dijet |
|-------------------|-------------------------|---------------|-----------------|
| Tool No. | Insert | DCGT 070202 | DCET 070202R-MM |
| | Grade | Competitor's | JC5015 |
| Cutting Condition | Cutting speed | 70m/min | 70m/min |
| | feed rate | 0.035mm/rev | 0.035mm/rev |
| | Deep of cut | 0.03~1.6mm | 0.03~1.6mm |
| | Coolant | Oil fluid | Oil fluid |
| Result | Tool life No. of pcs | 900/Corner | 2,000/Corner |

● Small part for camera

Work Material:
Stainless steel AISI 410S



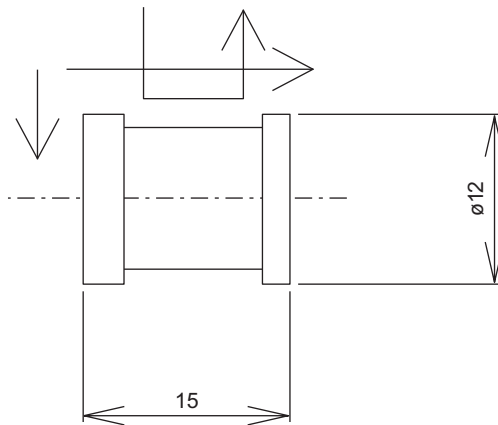
| | Items | Previous tool | Dijet |
|-------------------|-------------------------|---------------|---|
| Tool No. | Insert | DCMT 11T302 | DCET 11T302R-MM |
| | Grade | Competitor's | JC 5015 |
| Cutting Condition | Cutting speed | 140m/min | 140m/min |
| | feed rate | 0.05mm/rev | 0.05mm/rev |
| | Deep of cut | 0.5~3.0mm | 0.5~3.0mm |
| | Coolant | Oil fluid | Oil fluid |
| Result | Tool life No. of pcs | 600/Corner | 1160/Corner Excellent surface finish at Rz 2 µm. |

“ ISO Turning Inserts ”

■ Cutting data for small components inserts

● Motor sleeve for hard disk drive

Work Material:
Stainless steel AISI 303



| | Items | Previous tool | Dijet |
|-------------------|-------------------------|---------------|----------------|
| Tool No. | Insert | DCMT 070202 | DCMT 070202-FT |
| | Grade | Competitor's | JC110V |
| Cutting Condition | Cutting speed | 150m/min | 150m/min |
| | feed rate | 0.1mm/rev | 0.1mm/rev |
| | Deep of cut | 0.4mm | 0.4mm |
| | Coolant | Oil fluid | Oil fluid |
| Result | Tool life No. of pcs | 2,000/Corner | 5,000/Corner |

■ Recommended cutting conditions for small components inserts

| Work Materials | Cutting speed Vc (m/min.) | | | |
|---|---------------------------|--------|--------|------|
| | JC5015 | JC5003 | JC110V | CX75 |
| Stainless steel Austenitic (AISI 303, 304 etc.) | ~150 | ~180 | ~200 | ~250 |
| Stainless steel Ferritics/Martensitic (AISI 420J2, 430etc.) | ~200 | ~250 | ~250 | ~300 |
| Low alloy steel Free machining steel | ~180 | ~200 | ~300 | ~350 |

“ ISO Turning Inserts ”

■ **Note**