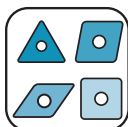


Turning indexable inserts



B

| | | |
|---|-----------------------------|-------------|
| Introduction | | B2 |
| Negative-Chipbreaker | | B4 |
| Positive-chipbreaker | | B12 |
| How to read pages of turning inserts | | B15 |
| Coated carbide / carbide / cermet lineup | | B16 |
| Negative inserts | CN type | B16 |
| | DN type | B24 |
| | KNMX | B32 |
| | RN type | B33 |
| | SN type | B34 |
| | TN type | B39 |
| | VN type | B47 |
| | WN type | B50 |
| | Small double sided tools | B55 |
| | Positive inserts | CC type |
| CP type | | B67 |
| DC type | | B68 |
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| JC type | | B80 |
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| SC / SP type | | B82 |
| TB type | | B84 |
| TC type | | B85 |
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| VP type | | B102 |
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| ZBMT | B108 | |
| Bearing machining | RCMT-BB / PRMT-BB / SNMF-21 | B109 |
| Inserts for back turning | TKFB | B110 |
| | TKF-GTP | B111 |
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| Ceramic lineup | | B113 |
| Negative inserts | CN type | B113 |
| | DN type | B114 |
| | EN type | B115 |
| | RN type | B116 |
| | SN type | B117 |
| | TN type | B118 |
| | VN type | B119 |
| Positive inserts | RP type | B120 |
| | SP type | B121 |
| | TB / TP type | B122 |
| Inserts for high hardened roll | RBG / RCGX / RPGX | B123 |
| Grooving inserts | GH | B124 |

B



Turning indexable inserts

Turning indexable inserts identification system

| Symbol | Shape |
|--------|-------------------|
| H | Hexagon |
| O | Octagon |
| P | Pentagon |
| S | Square |
| T | Triangle |
| C | 80° Rhombic |
| D | 55° Rhombic |
| E | 75° Rhombic |
| F | 50° Rhombic |
| M | 86° Rhombic |
| V | 35° Rhombic |
| W | 80° Trigon |
| L | Rectangle |
| A | 85° Parallelogram |
| B | 82° Parallelogram |
| K | 55° Parallelogram |
| R | Round |

Shown angle stands for acute angle for rhombic and parallelogram inserts.

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

| Symbol Class | Tolerance (mm) | | |
|--------------|----------------|---------------|---------------|
| | Corner Height | Thickness | I.C. Size |
| A | ±0.005 | ±0.025 | ±0.025 |
| F | | | ±0.013 |
| C | ±0.013 | | ±0.025 |
| H | | | ±0.013 |
| E | ±0.025 | ±0.13 | ±0.025 |
| G | | | ±0.025 |
| J | ±0.005 | ±0.05 - ±0.15 | ±0.025 |
| K* | ±0.013 | | |
| L* | ±0.025 | | |
| M* | ±0.08 - ±0.18 | | |
| N* | ±0.13 - ±0.38 | ±0.13 | ±0.08 - ±0.25 |
| U* | | ±0.025 | |

* Insert's periphery is as fired. Tolerance difference is depending on insert size.

| Symbol | Hole | Hole shape | Chipbreaker | Shape |
|--------|---|------------|--------------|-------|
| N | No | - | No | |
| R | | | Single sided | |
| F | | | Double sided | |
| A | With hole | - | No | |
| M | | | Single sided | |
| G | | | Double sided | |
| W | With hole and one countersink 40° - 60° | - | No | |
| T | | | Single sided | |
| Q | With hole and two countersink 40° - 60° | - | No | |
| U | | | Double sided | |
| B | With hole and one countersink 70° - 90° | - | No | |
| H | | | Single sided | |
| C | With hole and two countersink 70° - 90° | - | No | |
| J | | | Double sided | |
| X | - | - | - | - |

ISO
metric



ANSI
inch



| «5» Edge length symbol (ISO) | | | | | | | «5» I.C. size (ANSI) | | |
|------------------------------|----|----|----|----|----|----|----------------------|------------------|--------|
| C | D | R | S | T | V | W | I.C. size (mm) | I.C. size (inch) | Symbol |
| 03 | 04 | | 03 | 06 | | | 3.97 | 5/32 | 12 |
| 04 | 05 | | 04 | 08 | 08 | | 4.76 | 3/16 | 15 |
| | | 05 | | | | | 5 | | |
| 05 | 06 | | 05 | 09 | | | 5.56 | 7/32 | 18 |
| | | 06 | | | | | 6 | | |
| 06 | 07 | | 06 | 11 | 11 | 04 | 6.35 | 1/4 | 2 |
| 08 | 09 | | 07 | 13 | | 05 | 7.94 | 5/16 | 25 |
| | | 08 | | | | | 8 | | |
| 09 | 11 | 09 | 09 | 16 | 16 | 06 | 9.525 | 3/8 | 3 |
| | | 12 | | | | | 10 | | |
| | | 12 | | | | | 12 | | |
| 12 | 15 | 12 | 12 | 22 | 22 | 08 | 12.7 | 1/2 | 4 |
| 16 | 19 | 15 | 15 | 27 | 27 | 10 | 15.875 | 5/8 | 5 |
| | | 16 | | | | | 16 | | |
| 19 | 23 | 19 | 19 | 33 | 33 | 13 | 19.05 | 3/4 | 6 |
| | | 20 | | | | | 20 | | |
| 22 | 27 | 22 | 22 | 38 | | | 22.225 | 7/8 | 7 |
| | | 25 | | | | | 25 | | |
| 25 | 31 | 25 | 25 | 44 | 44 | 17 | 25.4 | 1 | 8 |
| 32 | 38 | 31 | 31 | 54 | 54 | 21 | 31.75 | 1-1/4 | 10 |
| | | 32 | | | | | 32 | | |

| «6» Thickness symbol | | | |
|----------------------|--------|------------------|--------|
| ISO | | ANSI | |
| Thickness (mm) | Symbol | Thickness (inch) | Symbol |
| 1.59 | 01 | 1/16 | 1 |
| 1.98 | T1 | 5/64 | 12 |
| 2.38 | 02 | 3/32 | 15 |
| 2.78 | T2 | - | - |
| 3.18 | 03 | 1/8 | 2 |
| 3.97 | T3 | 5/32 | 25 |
| 4.76 | 04 | 3/16 | 3 |
| 5.56 | 05 | 7/32 | 35 |
| 6.35 | 06 | 1/4 | 4 |
| 7.94 | 07 | 5/16 | 5 |
| 9.525 | 09 | 3/8 | 6 |

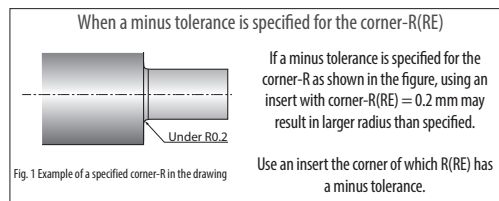
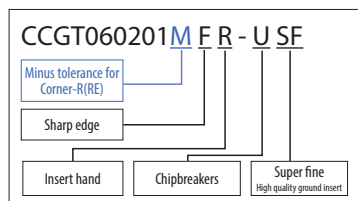
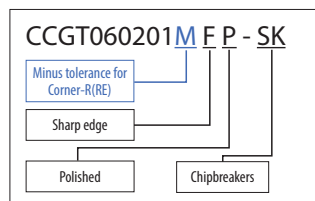
Thickness displayed as the distance between bottom surface and highest point on cutting edge.

| «7» Corner-R (RE) symbol | | | |
|--------------------------|--------------------------|---------------------|--------|
| ISO | | ANSI | |
| Corner-R(RE) (mm) | Symbol | Corner-R(RE) (inch) | Symbol |
| Sharp corner | 00 | .000 | 00 |
| 0.03 | 003 | .001 | 01 |
| 0.05 | 005 | .002 | 013 |
| 0.1 | 01 | .004 | 02 |
| 0.2 | 02 | .008 | 05 |
| 0.4 | 04 | 1/64 | 1 |
| 0.8 | 08 | 1/32 | 2 |
| 1.2 | 12 | 3/64 | 3 |
| 1.6 | 16 | 1/16 | 4 |
| 2.0 | 20 | 5/64 | 5 |
| 2.4 | 24 | 3/32 | 6 |
| 2.8 | 28 | 7/64 | 7 |
| 3.2 | 32 | 1/8 | 8 |
| Round insert | 00 (inch) or M0 (metric) | Round insert | 0 |

«8» Manufacturer's option
Hand symbol, chipbreaker symbol, etc.

- Expressed as edge length for ISO.
- ANSI expresses the inscribed circle diameter in inches.




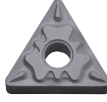

Positive inserts identification system






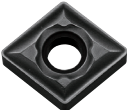

Insert colour

Red colour = New grade

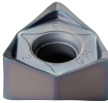

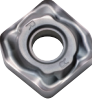
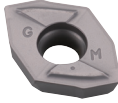
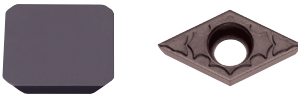
Cermet

| Grades | Cermet | | | | | | | | | CVD coated cermet | MEGACOAT NANO cermet | | | | MEGACOAT cermet | PVD coated cermet | |
|---------------|---|-------|-------|--------|--------|------|------|--------|-------|---|--|-------|-------|-------|---|---|--------|
| | | TN610 | TN620 | TN620M | TN6020 | TN60 | TN90 | TN100M | TC40N | TC60M | CCX | PV710 | PV720 | PV730 | PV60M | PV7005 | PV7040 |
| Insert colour |  | | | | | | | | |  |  | | | |  |  | |


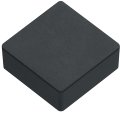

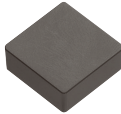
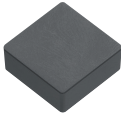
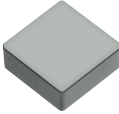
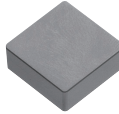
CVD coated carbide

| Grades | CVD coated carbide | | | | | | | | | | | | | | |
|---------------|---|-------|-------|---|---|---|--|-------------|-------|-------|--------|-------|-------|------------|------------|
| | | CA310 | CA315 | CA320 | CA415D | CA520D | CA420M | CA45 series | CA510 | CA515 | CA025P | CA525 | CA530 | CA5 series | CA6 series |
| Insert colour |  | | |  |  |  |  | | | | | | | | |

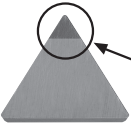
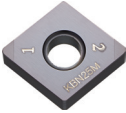

PVD coated carbide

| Grades | MEGACOAT NANO | | | | | MEGACOAT NANO PLUS | | MEGACOAT HARD | | MEGACOAT | | | | PVD coated carbide | | | | |
|---------------|---|--------|--------|--------|--------|---|--------|---|--------|---|--------|--------|--------|--|-------|-------|-------|--------|
| | | PR1510 | PR1515 | PR1525 | PR1535 | PR1625 | PR1705 | PR1725 | PR0055 | PR0155 | PR1210 | PR1215 | PR1225 | PR1230 | PR905 | PR915 | PR930 | PR1025 |
| Insert colour |  | | | | |  | |  | |  | | | |  | | | | |


Ceramic

| Grades | Aluminum oxide ceramic | | | PVD coated ceramic | | MEGACOAT ceramic | Silicon nitride ceramic | | CVD coated silicon nitride ceramic | | SiAlON ceramic | | |
|---------------|---|------|-----|---|------|---|---|---|------------------------------------|---|----------------|---|--------|
| | | KA30 | A65 | KT66 | A66N | | PT600M | KS6015 | KS6050 | CS7050 | | KS6030 | KS6040 |
| Insert colour |  | | |  | |  |  |  | |  | |  | |

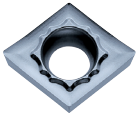
CBN & PCD

| Grades | CBN | | | | PCD | | | MEGACOAT TOUGH CBN / MEGACOAT CBN | | PVD coated CBN |
|---------------|---|--------|--------|--------|--------|--------|--------|---|---|----------------|
| | | KBN475 | KBN510 | KBN525 | KBN570 | KPD001 | KPD010 | KPD230 | KBN020 | KBN...M |
| Insert colour |  | | | | | | |  |  | |

DLC coated carbide

| Grades | DLC coated carbide | |
|---------------|---|--------|
| | | PDL010 |
| Insert colour |  | |

Uncoated carbide


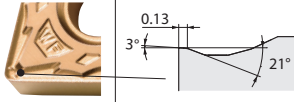

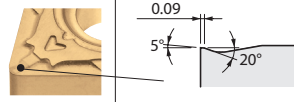

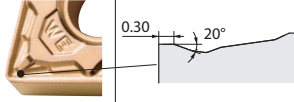

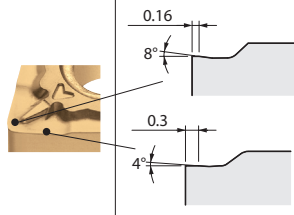

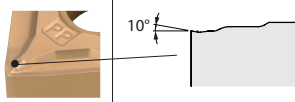

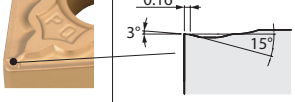
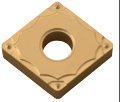
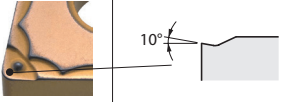

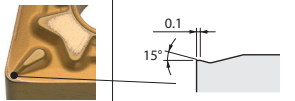

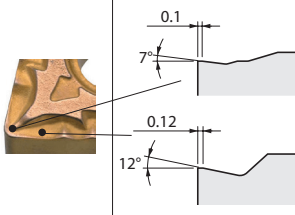
| Grades | Carbide | | | | |
|---------------|---|------|------|------|------|
| | | GW05 | GW15 | GW25 | KW10 |
| Insert colour |  | | | | |



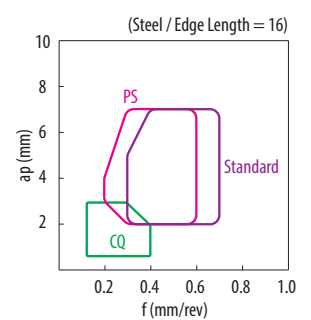
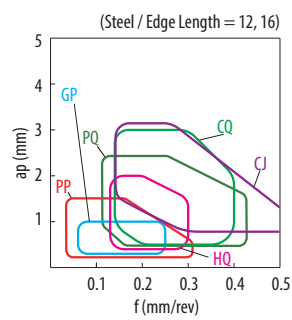
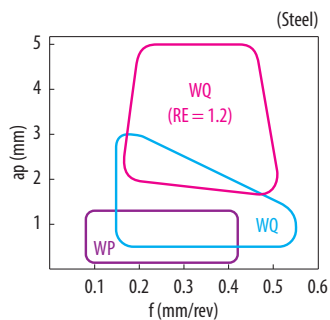
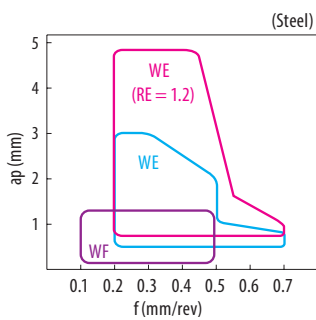
B

Turning indexable inserts

Steel (Molded chipbreaker)

| Cutting Range | Name | Design | | Advantages |
|--------------------|------|--|---|--|
| Finishing | WF |  |  | <ul style="list-style-type: none"> • Wiper insert • Good chip control in finishing operations • Excellent surface roughness by controlling adhesion • Less cutting force due to sharp cutting edge |
| Finishing | WP |  |  | <ul style="list-style-type: none"> • Wiper insert • Good chip control at small machining |
| Finishing - Medium | WE |  |  | <ul style="list-style-type: none"> • Wiper insert • Good surface finish at high feed machining • High productivity with smooth chip control in a wide range of applications |
| Finishing - Medium | WQ |  |  | <ul style="list-style-type: none"> • Wiper insert • Double feed rate possible while maintaining a smooth finish • High efficiency and good chip control |
| Finishing | PP |  |  | <ul style="list-style-type: none"> • 3-step dot structure realizes stable chip control at a wide range of feed rate • Less cutting force due to sharp cutting edge and smooth rake face |
| Finishing - Medium | PQ |  |  | <ul style="list-style-type: none"> • Stable chip control in a wide feed rate range by breaking chips effectively • Well-balanced edge sharpness and toughness |
| Finishing | GP |  |  | <ul style="list-style-type: none"> • Finishing to light machining • Good chip control |
| Finishing - Medium | HQ |  |  | <ul style="list-style-type: none"> • Sharp cutting performance with 3-D rake angle and double projection design |
| Finishing - Medium | CQ |  |  | <ul style="list-style-type: none"> • Good chip control for varied ap such as copying • Applicable to up facing |

Applicable chipbreaker range (ap indicates radius)

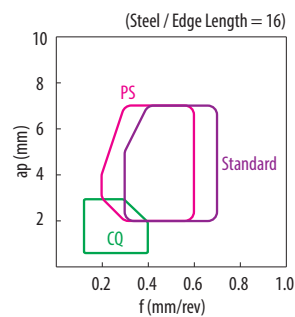
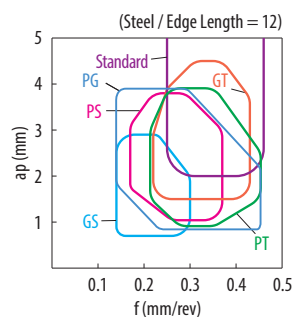
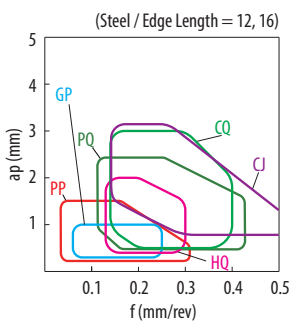


Steel (Molded chipbreaker)

| Cutting Range | Name | Design | Advantages |
|--------------------------------|------|--------|---|
| Finishing - Medium / up facing | CJ | | <ul style="list-style-type: none"> Improved chip curling at small machining and high feed rate machining Improved chip evacuation at copying and up facing |
| Medium - Roughing | PG | | <ul style="list-style-type: none"> Stable machining with good balance of edge sharpness and strength Prevent chip clogging at high feed rate Good chip control at low feed rate Stable machining with wide chip control range |
| Medium - Roughing | GS | | <ul style="list-style-type: none"> Strong edge chipbreaker Stable for continuous machining and light interrupted machining |
| Medium - Roughing | PS | | <ul style="list-style-type: none"> General purpose chipbreaker More stable due to large contact surface |

| Cutting Range | Name | Design | Advantages |
|---|------|--------|--|
| Medium - Roughing / High Feed Rate | PT | | <ul style="list-style-type: none"> Low cutting force at high feed machining Land support structure |
| Medium - Roughing / High Feed Rate | GT | | <ul style="list-style-type: none"> Strong edge chipbreaker Wide land design and smooth chip control even at high feed rate machining |
| Roughing Standard (without indication) | | | <ul style="list-style-type: none"> Low cutting force and applicable to large ap roughing |

Applicable chipbreaker range (ap indicates radius)



B

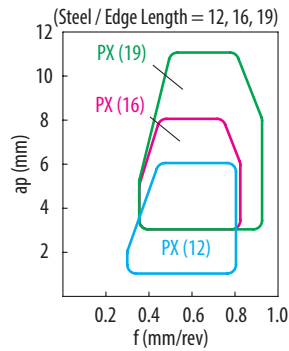
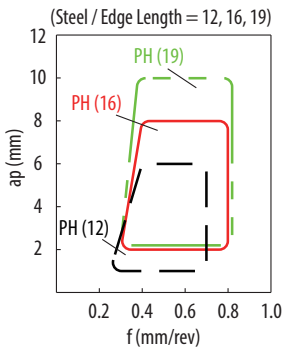


Turning indexable inserts

Steel (Molded chipbreaker)

| Cutting Range | Name | Design | Advantages |
|---------------------------|------|--------|---|
| Roughing | PH | | <ul style="list-style-type: none"> Suitable for heavy interrupted machining and for workpieces with scale due to strong cutting edge |
| Roughing (high feed rate) | PX | | <ul style="list-style-type: none"> Roughing and high feed rate operation Low cutting force chipbreaker |

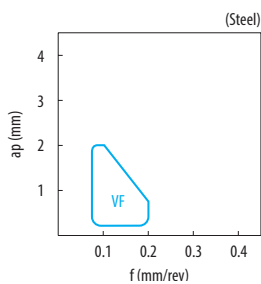
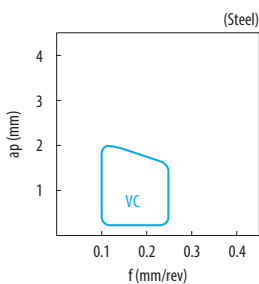
Applicable chipbreaker range (ap indicates radius)



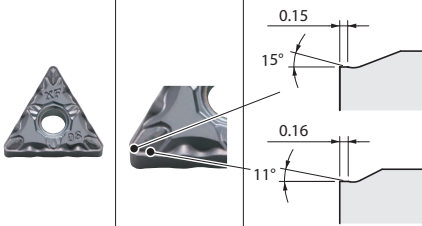
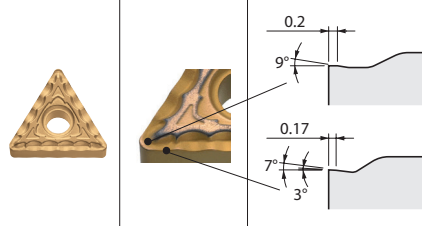
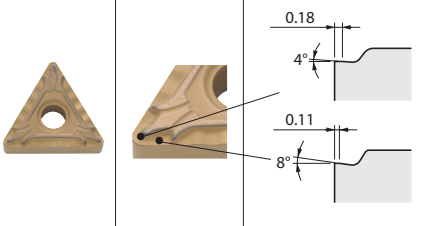
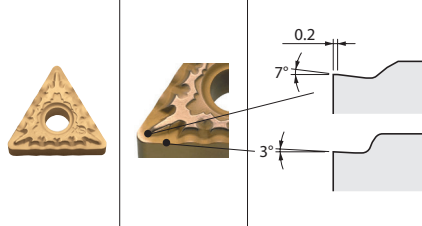
Steel (copying / undercutting , varied ap)

| Cutting Range | Name | Design | Advantages |
|--------------------|------|--------|---|
| Finishing - Medium | VC | | <ul style="list-style-type: none"> Handed chipbreaker for copying Good chip control at varied ap because of the large space on the main cutting edge side |
| Finishing - Medium | VF | | <ul style="list-style-type: none"> Good chip control at varied ap such as copying and undercutting |

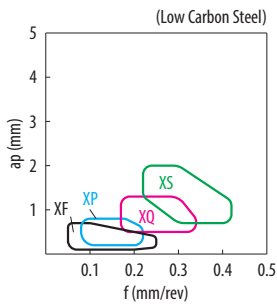
Applicable chipbreaker range (ap indicates radius)



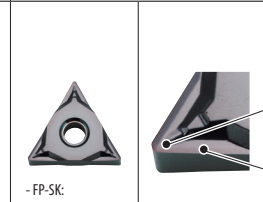
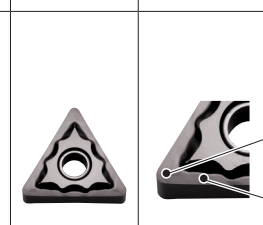
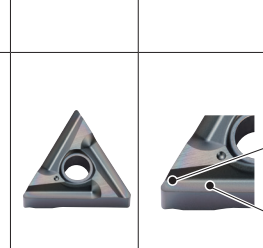
Low carbon steel (pipe / rolled plate / rolled steel)

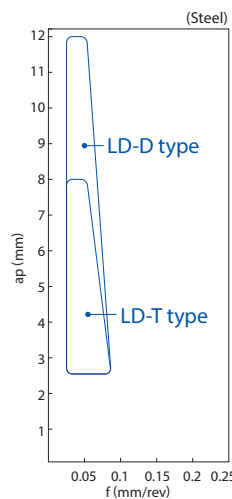
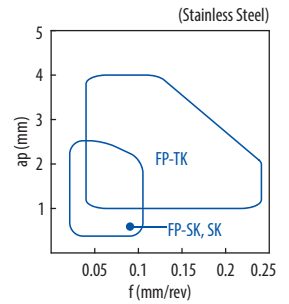
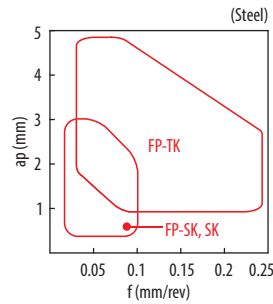
| Cutting Range | Name | Design | Advantages | Cutting Range | Name | Design | Advantages |
|---------------|------|---|---|---------------|------|--|---|
| Finishing | XF |  | • Excellent chip control at high speed and small ap machining of low carbon steel | Medium | XQ |  | • Consistent chip breaking due to moderate rake face and special design |
| Finishing | XP |  | • Short chips due to sharp cutting and special design | Roughing | XS |  | • Consistent chip breaking due to special rake face and rake angle design |

Applicable chipbreaker range (ap indicates radius)



Steel / stainless steel (for automatic lathe)

| Cutting Range | Name | Design | Advantages |
|--------------------|-------|--|---|
| Finishing - Medium | SK |  - FP-SK: Polished sharp edge - SK: Honed | • Machining in automatic lathes • Sharp cutting performance equivalent to positive inserts • 2-step dot design provides reliable chip control at various ap |
| Medium - Roughing | FP-TK |  | • Good in automatic lathes (When machining workpieces of medium to large diameter) • Superior cutting performance achieved by sharp edge and polished surface • Smooth chipbreaker geometry improves chip flow with less adhesion • Large curled chips |
| Large ap | LD |  | • Available for greater depths of cut than many conventional chipbreakers • Achieves high-precision machining in a single pass • Chipbreaker shape optimized for various depths of cut • Stable chip control in a wide range of machining applications |



B

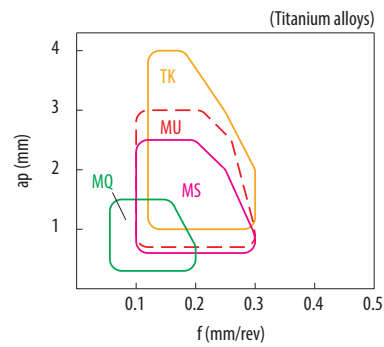
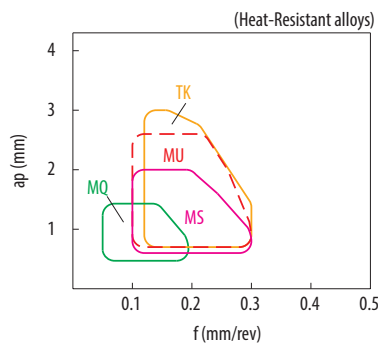
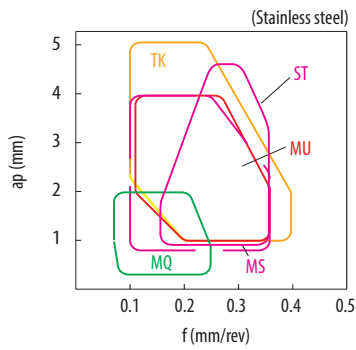
Turning indexable inserts

Stainless steel / heat-resistant alloys / titanium alloy

| Cutting Range | Name | Design | Advantages |
|-------------------|------|--------|--|
| Finishing | MQ | | <ul style="list-style-type: none"> Large rake angle Low cutting force and good chip control |
| Medium - Roughing | MS | | <ul style="list-style-type: none"> Superior cutting edge sharpness and strength achieved by a positive land Extra strength of cutting edge inhibits damage from wall shouldering |
| Medium - Roughing | MU | | <ul style="list-style-type: none"> Large rake angle reduces cutting force Less burring achieved by diminishing damage from notching |

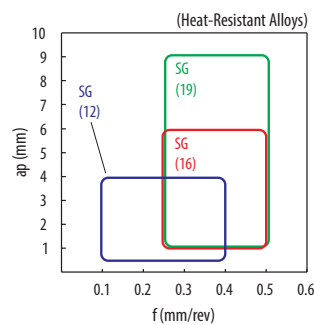
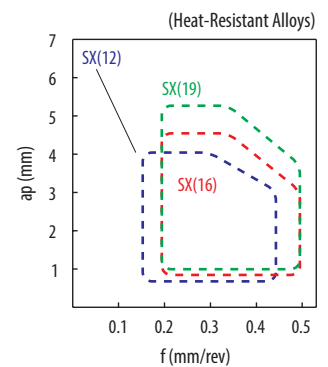
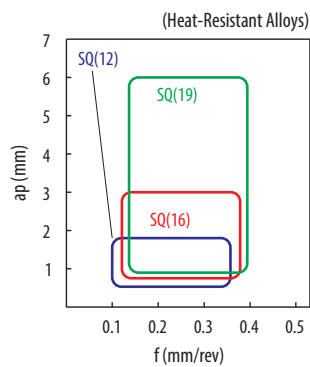
| Cutting Range | Name | Design | Advantages |
|-------------------|------|--------|---|
| Medium - Roughing | TK | | <ul style="list-style-type: none"> Smooth chipbreaker geometry improves chip flow with less adhesion Large curled chips |
| Medium - Roughing | ST | | <ul style="list-style-type: none"> Less cutting force due to large rake angle Less notching by special design |

Applicable chipbreaker range (ap indicates radius)


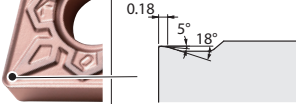

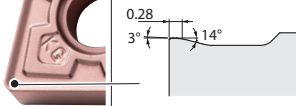

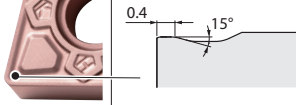


Heat-resistant alloys

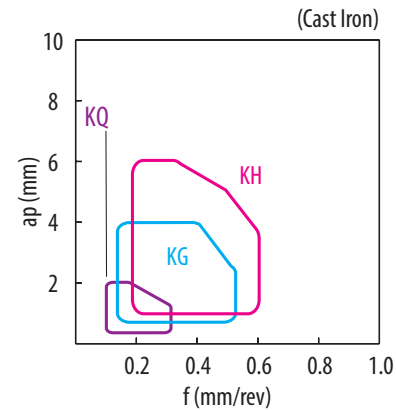
| Cutting Range | Name | Design | Advantages |
|--------------------|------|--------|---|
| Finishing - Medium | SQ | | <ul style="list-style-type: none"> Effective for burr suppression and reducing notching by slant cutting edge (inclined in (-) direction) |
| Roughing | SG | | <ul style="list-style-type: none"> Well-balanced edge strength Cutting force reduction for stable machining at high-load cutting Shallow and gently curved breaker controls chips smoothly |
| Roughing | SX | | <ul style="list-style-type: none"> Slant cutting edge reduces cutting force Less burring achieved by unique cutting edge design |



Cast iron (K series)

| Cutting Range | Name | Design | | Advantages |
|------------------------|------|---|---|--|
| Sharp cutting oriented | KQ |  |  | <ul style="list-style-type: none"> • Sharp cutting chipbreaker • Edge geometry is suitable for workpieces that require sharpness such as thin-walled |
| Roughing | KG |  |  | <ul style="list-style-type: none"> • Excellent balance of sharpness and strength • Realized stability at continuous machining |
| Roughing | KH |  |  | <ul style="list-style-type: none"> • Good for heavily interrupted machining • Strong edge chipbreaker • Improved locating / seating in the toolholder pocket, high reliability achieved |

Applicable chipbreaker range (ap indicates radius)

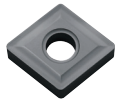
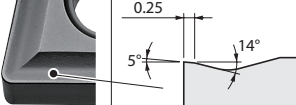
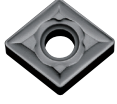
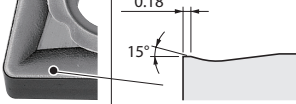

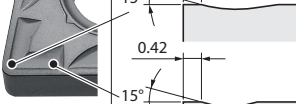
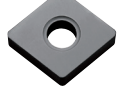



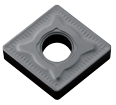
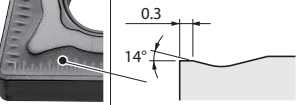
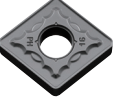
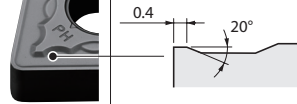
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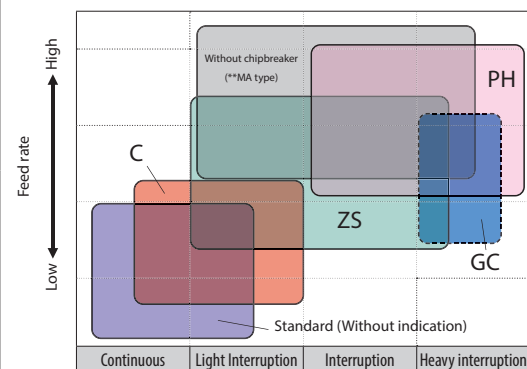


Turning indexable inserts

Cast iron

| Cutting Range | Name | Design | | Advantages |
|------------------------|-------------------------------|---|---|---|
| Sharp cutting oriented | Standard (Without Indication) |  |  | <ul style="list-style-type: none"> • Standard type for continuous to light interrupted cut (Low cutting force) |
| | C |  |  | <ul style="list-style-type: none"> • High feed rate chipbreaker for continuous to light interrupted cut |
| | ZS |  |  | <ul style="list-style-type: none"> • Standard type for light interrupted to interrupted cut (Stability oriented) |
| | Without chipbreaker |  |  | <ul style="list-style-type: none"> • High feed rate chipbreaker for light interrupted to interrupted cut |

| Cutting Range | Name | Design | | Advantages |
|--------------------|------|--|---|---|
| Stability oriented | GC |  |  | <ul style="list-style-type: none"> • For heavy interrupted cut (Tough edge chipbreaker) |
| | PH |  |  | <ul style="list-style-type: none"> • For roughing • Suitable for heavy interrupted cut and for workpieces with scale due to strong cutting edge |


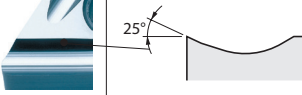
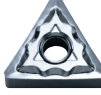
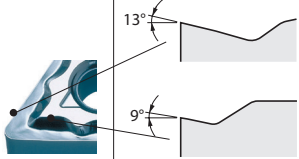


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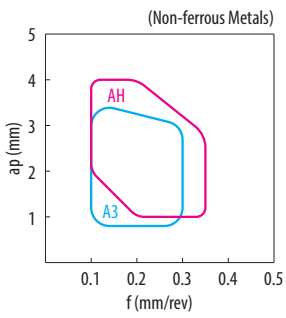




Turning indexable inserts



Non-ferrous metals

| Cutting Range | Name | Design | Advantages |
|--------------------|------|---|--|
| Finishing - Medium | A3 |  | <ul style="list-style-type: none"> • Large rake angle and smooth surface • Good chip control and less adhesion |
| | |  | |
| Cutting Range | Name | Design | Advantages |
| Medium - Roughing | AH |  | <ul style="list-style-type: none"> • Polished chipbreaker • Smooth chip control and less adhesion |
| | |  <p>13° 9°</p> <p>G class: Sharp edge M class: Horned edge prep.</p> | |

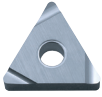
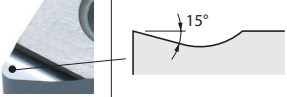
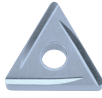
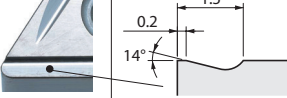

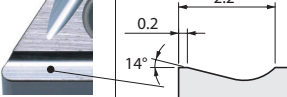


Applicable chipbreaker range (ap indicates radius)



| A3 chipbreaker | |
|---|-----------------------------|
|  | ap = 2 mm f = 0.2 mm/rev |
|  | ap = 2 mm f = 0.3 mm/rev |

| AH chipbreaker | |
|--|-----------------------------|
|  | ap = 2 mm f = 0.2 mm/rev |
|  | ap = 2 mm f = 0.3 mm/rev |

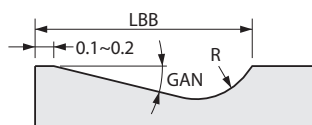
Steel (Ground chipbreaker)

| Cutting Range | Name | Design | | Advantages |
|---------------------------------------|------|--|---|---|
| Finishing | S |  |  | <ul style="list-style-type: none"> • Sharp edge and less cutting force • Good chip control and smooth chip evacuation |
| | |  |  | |
| Medium - Roughing | C |  |  | <ul style="list-style-type: none"> • Suitable for general purpose machining at feed rate 0.20 to 0.35 mm/rev |
| | |  |  | |
| Finishing - Medium | B | | | <ul style="list-style-type: none"> • Suitable for general purpose machining at feed rate 0.15 to 0.25mm/rev |
| Medium - Roughing / Low cutting force | 25R | | | <ul style="list-style-type: none"> • Applicable to sticky material such as low carbon steel • Large rake angle and suitable for stainless steel |

Effectiveness of ground chipbreaker

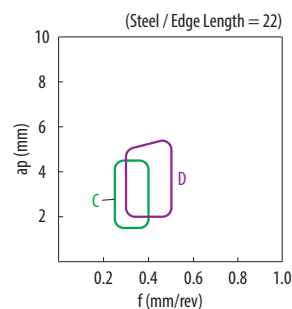
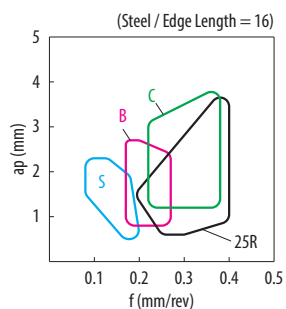
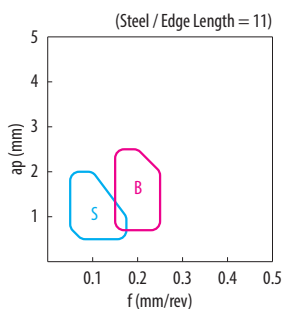
1. Lower cutting force and improve edge
2. Improved adhesion resistance
3. Improved dimension accuracy and finishing surface accuracy
4. Controlled chip evacuation direction

Specification of B, C and parallel ground chipbreaker



| Insert type | Size | Chipbreaker name | LBB | GAN | R |
|-------------|-------|-----------------------------------|-----|-----|-----|
| CNGG | 09,12 | Without indication (Similar to C) | 2.2 | 14° | 1.0 |
| WNGG | 06 | Without indication (Similar to C) | 2.2 | 14° | 1.0 |
| TNGG | 11,16 | B | 1.5 | 14° | 0.5 |
| | 16,22 | C | 2.2 | 14° | 1.0 |
| DNGG | 11,15 | Without indication (Similar to C) | 2.5 | 14° | 2.0 |
| VNGG | 16 | Without indication (Similar to B) | 1.5 | 14° | 0.5 |
| SNGG | 09,12 | B | 1.5 | 14° | 0.5 |
| | 12 | C | 2.2 | 14° | 1.0 |

Applicable chipbreaker range (ap indicates radius)



B

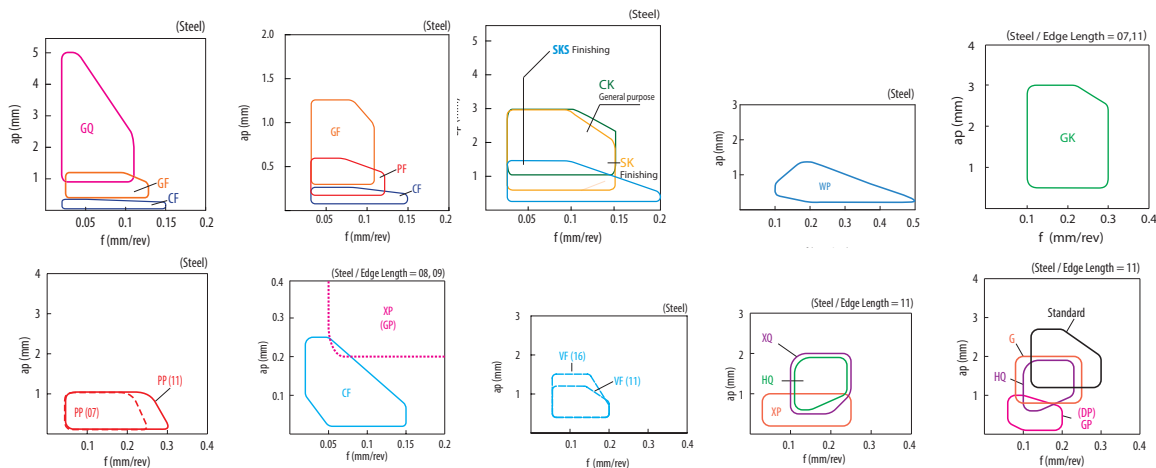
Turning indexable inserts

Steel (Molded chipbreaker)

| Name | Design | Advantages |
|--------------------------|--------|---|
| Minute ap CF | | • Available for minute ap (0.02 to 0.2 mm) finishing |
| Finishing PF | | • Chipbreaker for finishing boring available from ap 0.15~0.6 mm |
| Finishing GF | | • Chips fragmented in small pieces in machining of small ap |
| Finishing - Medium GQ | | • Wide range of conditions by using the optimum chipbreaker width according to the cutting depth |
| Finishing SKS | | • Chipbreaker for finishing available from 0.2~1.5mm • Rake face, bottom face and chipbreaker face provide stable chip control. |
| Finishing SK | | • Sharp cutting performance due to large rake angle • Large dot to the corner edge improved chip control in a wide feed rate range |
| Finishing CK | | • Good cutting performance • Applicable without hand for two direction machining on automatic lathe |
| Finishing WP | | • Wiper insert • Good surface finish and good chip control at high feeds • Reduces surface finish galling |

| Name | Design | Advantages |
|---|--------|--|
| Finishing - Medium GK | | • Good chip evacuation at wide range by breaker dot and wide chip pocket |
| Finishing PP | | • 1st. recommendation • Stable chip control in a wide feed rate range • Stable tool life due to special edge design with sharpness and improved strength |
| Finishing DP | | • Consistent chip breaking performance for finishing |
| Finishing GP | | • Good chip control |
| Finishing VF | | • Good chip control for varied ap such as copying and undercutting |
| Finishing - Medium HQ | | • General purpose chipbreaker for medium machining |
| Medium G | | • Chipbreaker for short chips |
| Medium Standard (without indication) | | • Strong edge chipbreaker |

Applicable chipbreaker range (ap indicates radius)

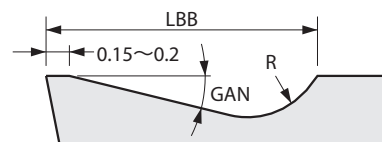


Steel (Ground chipbreaker)

| Cutting Range | Name | Design | Advantages |
|---------------|---------------------------|--------|--|
| Finishing | Lead (Without Indication) | | • Good chip control at finishing to light machining with low cutting force |
| Finishing | F | | • Good chip control at finishing to light machining with low cutting force |
| Finishing | P | | • Flows chips towards the inlet of hole • Sharp edge |
| Medium | Y | | • Sharp cutting performance and good surface finish |
| Low Feed | J | | • Slant chipbreaker width and chip control at various ap • Applicable to automatic lathes |
| Low Feed | U | | • Good chip control at low feed rate and varied ap with low cutting force |

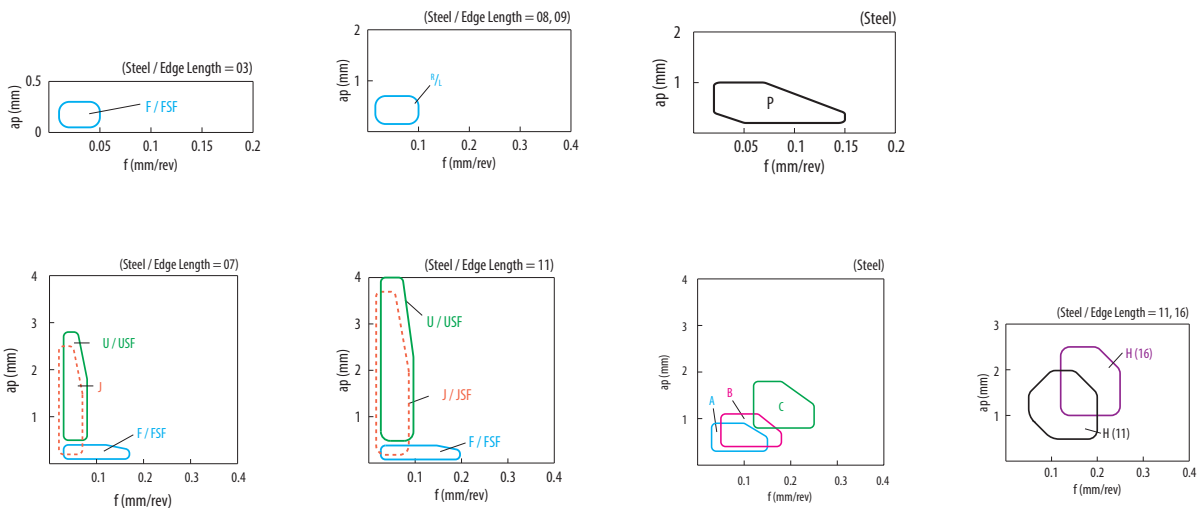
| Cutting Range | Name | Design | Advantages |
|--------------------|------|--------|---|
| Finishing | A | | • Large rake angle and low cutting force • Narrow chipbreaker width and consistent chip control |
| Finishing - Medium | B | | • General purpose chipbreaker for medium machining • Good balance between chip control and sharp cutting |
| Medium | C | | • Applicable to high load machining • Good chip flow and less resistance |
| Medium | H | | • Sharp cutting performance and small curled chips |

Specification of A, B, C and parallel ground chipbreaker



| Insert type | Size | Chipbreaker name | LBB | GAN | R |
|-------------|-------|-----------------------------------|-----|-----|-----|
| TPGR | 11 | A | 1.0 | 17° | 0.5 |
| | 11,16 | B | 1.5 | 14° | 0.5 |
| | 16 | C | 2.2 | 14° | 1.0 |
| SPGR | 09 | Without Indication (Similar to B) | 1.5 | 14° | 0.5 |
| | 12 | Without Indication (Similar to C) | 2.2 | 14° | 1.0 |

Applicable chipbreaker range (ap indicates radius)

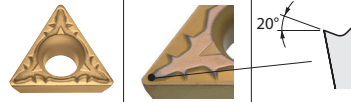


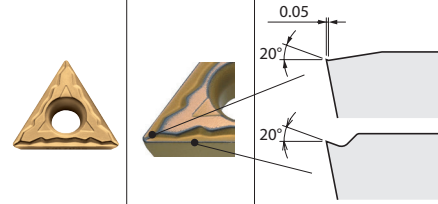
B



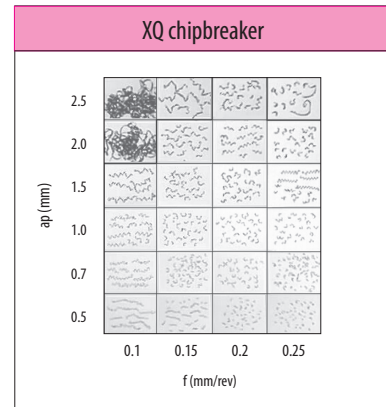
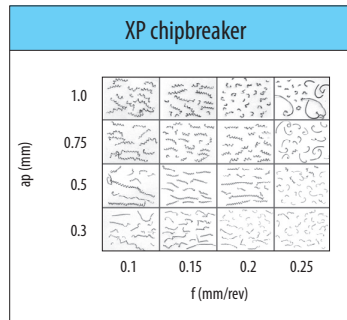
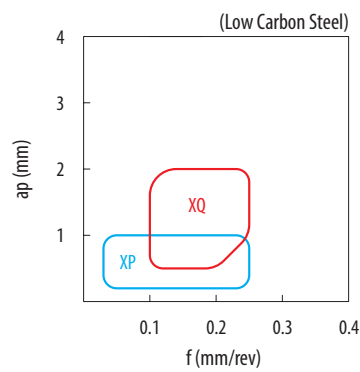
Turning indexable inserts

Low carbon steel (pipe / rolled plate / rolled steel)

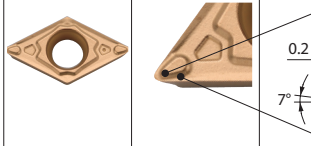
| Cutting Range | Name | Design | Advantages |
|---------------|------|---|--|
| Finishing | XP |  | <ul style="list-style-type: none"> Consistent chip breaking performance even for low carbon steel and sticky material |

| Cutting Range | Name | Design | Advantages |
|--------------------|------|--|--|
| Finishing - Medium | XQ |  | <ul style="list-style-type: none"> Wide chip control range and sharp cutting performance Suitable for low carbon steel and sticky material |

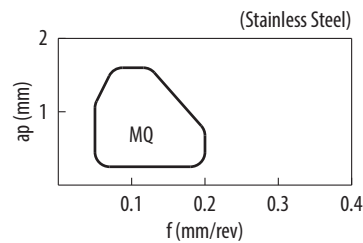
Applicable chipbreaker range (ap indicates radius)



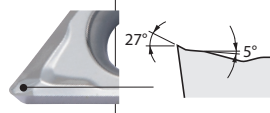
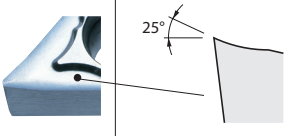
Stainless steel

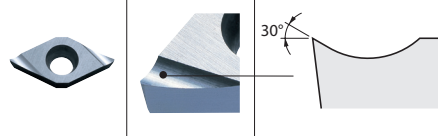
| Cutting Range | Name | Design | Advantages |
|---------------|------|---|---|
| Finishing | MQ |  | <ul style="list-style-type: none"> Good chip evacuation at internal turning Small curled chips Prevents chip entanglement with toolholder and stabilizes surface roughness |

Applicable chipbreaker range (ap indicates radius)

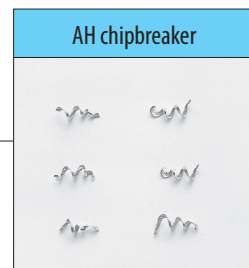
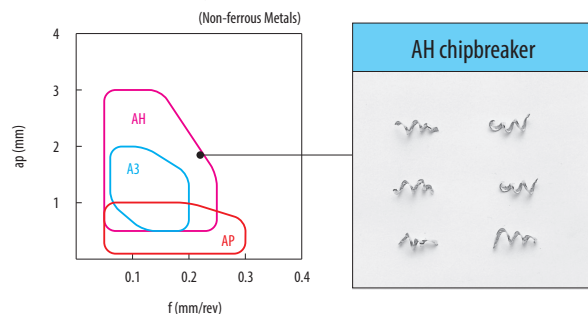


Non-ferrous metals

| Cutting Range | Name | Design | Advantages |
|--------------------|------|---|---|
| Finishing | AP |  | <ul style="list-style-type: none"> Curved edge and shape of chipbreaker lead good chip control Sharp cutting edge provides excellent surface finish Polished chipbreaker |
| Finishing - Medium | AH |  | <ul style="list-style-type: none"> Positive chip groove and good chip control with low cutting force Polished surface reduces adhesion |

| Cutting Range | Name | Design | Advantages |
|--------------------|------|--|---|
| Finishing - Medium | A3 |  | <ul style="list-style-type: none"> Large rake angle, smooth chip flow and less adhesion Superior cutting performance achieved by sharp edge |

Applicable chipbreaker range (ap indicates radius)



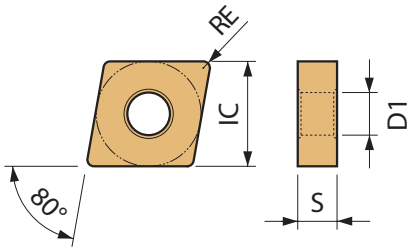
80° Rhombic

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

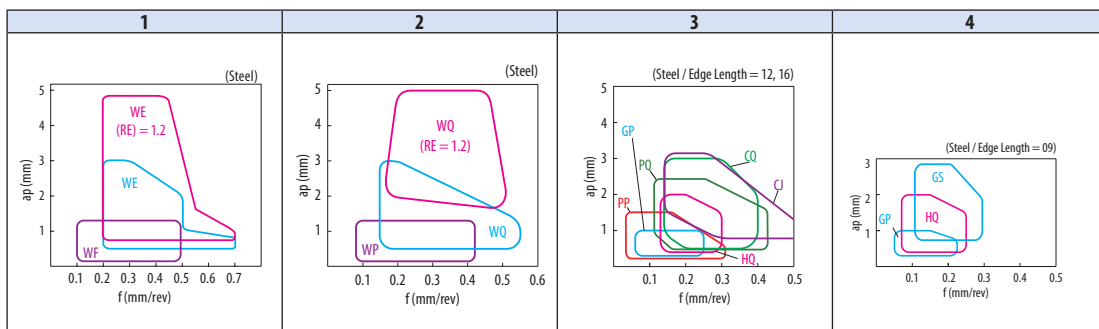


| Material | CA02SP | CA310 | CA315 | CA370 | CA4505 | CA4515 | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5525 | CA5535 | CA6515 | CA6525 | PR1535 | CCX | PV710 | PV720 | PV730 | PV90 | TN60 | TN610 | TN620 | |
|----------------------------|--------|-------|-------|-------|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-----|-------|-------|-------|------|------|-------|-------|---|
| Free-cutting steel | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carbon steel / Alloy steel | ● | | | ○ | | | | | ⊕ | | | ⊕ | ⊕ | ⊕ | | | | | ● | ● | ● | ● | ● | | ● | ● |
| Stainless steel | | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | | |
| Gray cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Nodular cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Non-ferrous metals | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat-resistant alloy | | | | | | | | | | | | | | | | | | | ○ | ○ | ○ | | | | | |
| Titanium alloy | | | | | | | | | | | | | | | | | | | ● | | | | | | | |
| Hard materials | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Insert | Description | Applicable chipbreaker range | No. of edges | Dimension (mm) | | | | Carbide | | | | | | | | | | Cermet | | | | Applicable toolholder | | | | | |
|---------------------------------------|---|------------------------------|--------------|----------------|------|------|--------------------------|---------|-------|-------|-------|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|-----------------------|--------|--------|--------|-----|--------------------------------|
| | | | | IC | S | D1 | RE | CVD | | | | | | | | | | PVD | | - | | | | | | | |
| | | | | | | | | CA02SP | CA310 | CA315 | CA370 | CA4505 | CA4515 | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5525 | CA5535 | | CA6515 | CA6525 | PR1535 | CCX | PV710 |
| Finishing With Wiper Edge | CNMG 120404WF 120408WF | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● | | | | | | | | | | | | | | | | | | | D8~D10 F116 F125 F126 |
| Finishing With Wiper Edge | CNMG 120404WP 120408WP | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● | | | | | | | | | | | | | | | | | | | |
| Finishing - Medium With Wiper Edge | CNMG 120404WE 120408WE 120412WE | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | | | | | | | | | | | | | | | | | | | |
| Finishing - Medium With Wiper Edge | CNMG 120404WQ 120408WQ 120412WQ | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | | | | | | | | | | | | | | | | | | | |
| Finishing | CNMG 120402PP 120404PP 120408PP 120412PP | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.2 0.4 0.8 1.2 | ● | | | | | | | | | | | | | | | | | | | |
| Finishing | CNMG 090404GP 090408GP | 4 | 4 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | | | | | | | | | | | | | | | | | | | | D10 F126 |
| Finishing | CNMG 120402GP 120404GP 120408GP | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.2 0.4 0.8 | ● | | | | | | | | | | | | | | | | | | | D8~D10 F116 F125 F126 |
| Finishing - Medium | CNMG 120404PQ 120408PQ 120412PQ | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | | | | | | | | | | | | | | | | | | | |

See "Precautions when using Wiper inserts" in the R34 and R35 for WF/WE chipbreakers.

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

80° Rhombic

How to read pages of "Turning inserts" See page B15

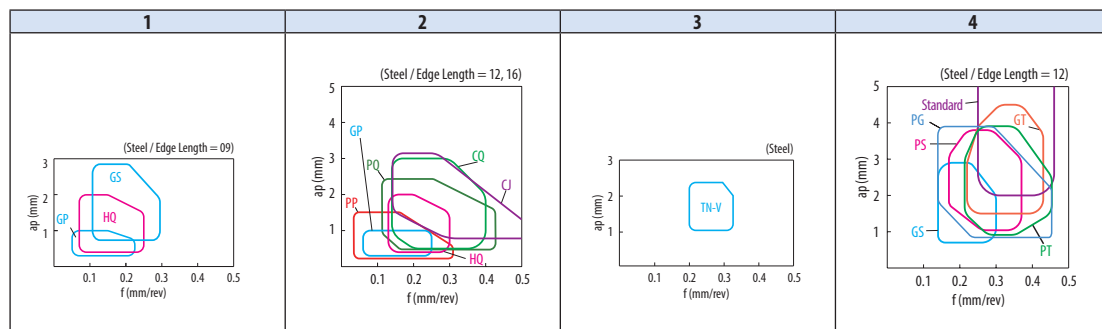
B



Turning indexable inserts

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Material | | | | | | | | | | Applicable toolholder | | | | | | | | |
|---------------------------------|---|------------------------------|----------------|--------|------|------|--------------------------|---------|-------|-------|-------|-------|--------|--------|--------|--------|-----------------------|--------|--------|-----|-------|-------|-------|------|--------------------------------|
| | | | No. of edges | IC | S | D1 | RE | Carbide | | | | | Cermet | | | | | | | | | | | | |
| | | | | | | | | CA023P | CA510 | CA515 | CA525 | CA530 | CA550S | CA551S | CA553S | CA651S | | CA652S | PR1535 | CCX | PV710 | PV720 | PV730 | PV90 | TN60 |
| Finishing - Medium | CNMG 090404HQ 090408HQ | 1 | 4 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | | | | | | | | | | | | | | | | | | D10 F126 |
| | CNMG 120404HQ 120408HQ 120412HQ | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | | | | | | | | | | | | | | | | | | D8~D10 F116 F125 F126 |
| | CNGG 120408HQ 120412HQ | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | | | | | | | | | | | | | | | | | | D8~D10 F116 F125 F126 |
| Finishing - Medium Up facing | CNMG 120404CQ 120408CQ 120412CQ | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | | | | | | | | | | | | | | | | | | D10 |
| | CNMG 160608CQ 160612CQ | 2 | 4 | 15.875 | 6.35 | 6.35 | 0.8 1.2 | | | | | | | | | | | | | | | | | | D10 |
| Finishing - Medium Up facing | CNMG 120408CJ 120412CJ | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | | | | | | | | | | | | | | | | | | D8~D10 F116 F125 F126 |
| | CNMG 160612CJ 160616CJ | 2 | 4 | 15.875 | 6.35 | 6.35 | 1.2 1.6 | | | | | | | | | | | | | | | | | | D10 |
| Medium | CNMG 120404TN-V 120408TN-V | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | | | | | | | | | | | | | | D8~D10 F116 F125 F126 |
| Medium - Roughing | CNMG 090404GS 090408GS | 1 | 4 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | | | | | | | | | | | | | | | | | | D10 F126 |
| | CNMG 120404GS 120408GS 120412GS | 4 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | | | | | | | | | | | | | | | | | | D8~D10 F116 F125 F126 |
| | CNMG 120404PG 120408PG 120412PG 120416PG | 4 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 1.6 | | | | | | | | | | | | | | | | | | D8~D10 F116 F125 F126 |

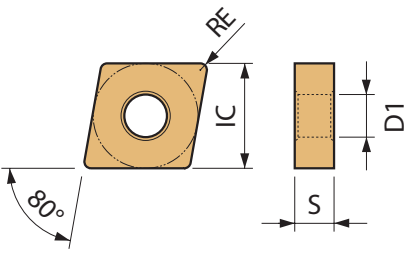
Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

80° Rhombic

How to read pages of "Turning inserts" See page B15



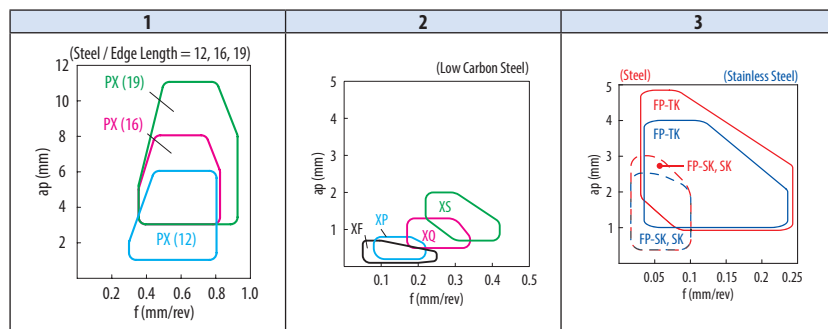
| | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Free-cutting steel | | | | | | | | | | | | | | | | | | | | | |
| Carbon steel / Alloy steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Gray cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Nodular cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Non-ferrous metals | | | | | | | | | | | | | | | | | | | | | |
| Heat-resistant alloy | | | | | | | | | | | | | | | | | | | | | |
| Titanium alloy | | | | | | | | | | | | | | | | | | | | | |
| Hard materials | | | | | | | | | | | | | | | | | | | | | |

B
Turning indexable inserts

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | | | | | Cermet | | | | | | | Applicable toolholder | | | | | | | | | | | | |
|---|---|-----------------------------------|----------------|------|------|------|-------------------|---------------------------|-------|--------|-------|-------|-------------------|------------|--------|--------|--------|--------|--------------------------|------------|-----------------------|-------|-------|------|------|-------|-------|---|---|---|---|---|--|
| | | | No. of edges | IC | S | D1 | RE | CVD | | | PVD | | | | CVD | | | PVD | | | | | | | | | | | | | | | |
| | | | | | | | | CA023P | CA510 | CA515 | CA525 | CA530 | CA551S | CA552S | CA553S | PR1225 | PR1535 | PR1725 | CCX | PV710 | | PV720 | PV730 | PV90 | TN60 | TN610 | TN620 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roughing High feed / Single-sided | CNMM 120408PX 120412PX 120416PX | 1 | 2 | 12.7 | 4.76 | 5.16 | 0.8 1.2 1.6 | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | CNMM 160608PX 160612PX 160616PX | | | | | | | 1 | 2 | 15.875 | 6.35 | 6.35 | 0.8 1.2 1.6 | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | |
| | CNMM 190608PX 190612PX 190616PX 190624PX | | | | | | | | | | | | | 1 | 2 | 19.05 | 6.35 | 7.94 | 0.8 1.2 1.6 2.4 | ● | ● | ● | ● | ● | ● | | | | | | | | |
| Low carbon steel Finishing / Minute ap | CNMG 120404XF 120408XF | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | | | | | | | | | | | | | | | | | ● | ● | ● | ● | | |
| | Low carbon steel Finishing | | | | | | | CNMG 120404XP 120408XP | 2 | 4 | 12.7 | 4.76 | 5.16 | | | | | | | 0.4 0.8 | ● | ● | ● | ● | ● | | | | ● | ● | ● | ● | |
| Low carbon steel Medium | | CNMG 120404XQ 120408XQ | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | | ● | ● | ● | ● | ● | | | | | ● | ● | ● | ● | | ● | ● | | | | |
| | Low carbon steel Roughing | CNMG 120408XS | | | | | | | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | ● | | | | |
| Finishing - Medium Polished / Sharp edge | | CNGG 120402MFP-SK 120404MFP-SK | 3 | 4 | 12.7 | 4.76 | 5.16 | <0.2 <0.4 | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| | Medium - Roughing Polished / Sharp Edge | CNGG 120404FP-TK 120408FP-TK | | | | | | | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | | | | | | | | | ● | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

80° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Negative

C

D

R

S

T

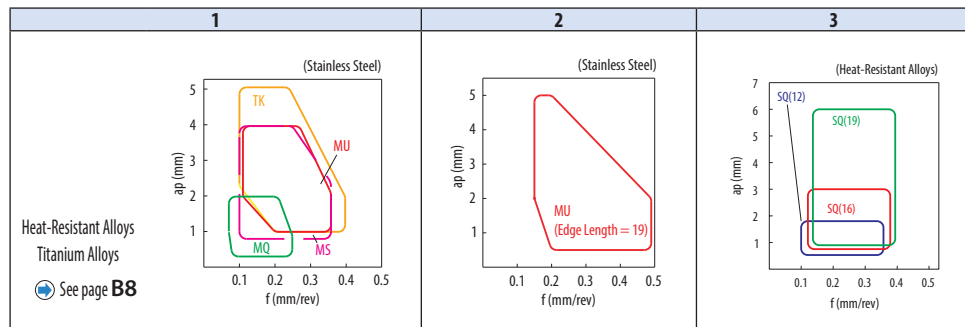
V

W

Ceramic

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | | Applicable toolholder | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|--|----------------------|----------------------------------|--------|------|---------|--------------------------|------------|-------------------|-----------------------|--------|--------------------------------|------|-----|--|--|--|--|--|--|---|----------------------------|--|--|--|--|--|--|--|--|--|--|---|-----------------|---|---|---|---|---|---|---|---|---|---|---|----------------|--|--|--|--|--|--|--|--|--|--|---|-------------------|--|--|--|--|--|--|--|--|--|--|---|--------------------|--|--|--|--|--|--|--|--|--|--|---|----------------------|---|---|---|---|---|---|---|---|---|---|---|----------------|--|--|--|--|--|--|--|--|--|--|---|----------------|--|--|--|--|--|--|--|--|--|--|---|
| | | | No. of edges | IC | S | D1 | RE | CVD | | PVD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | CA6515 | CA6525 | PR005S | | PR015S | PR153S | SW05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Free-cutting steel</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>P</td> </tr> <tr> <td>Carbon steel / Alloy steel</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>P</td> </tr> <tr> <td>Stainless steel</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>M</td> </tr> <tr> <td>Gray cast iron</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>K</td> </tr> <tr> <td>Nodular cast iron</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>K</td> </tr> <tr> <td>Non-ferrous metals</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>N</td> </tr> <tr> <td>Heat-resistant alloy</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>S</td> </tr> <tr> <td>Titanium alloy</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>S</td> </tr> <tr> <td>Hard materials</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>H</td> </tr> </table> | | | | | | | | | | | Free-cutting steel | | | | | | | | | | | P | Carbon steel / Alloy steel | | | | | | | | | | | P | Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | M | Gray cast iron | | | | | | | | | | | K | Nodular cast iron | | | | | | | | | | | K | Non-ferrous metals | | | | | | | | | | | N | Heat-resistant alloy | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | S | Titanium alloy | | | | | | | | | | | S | Hard materials | | | | | | | | | | | H |
| Free-cutting steel | | | | | | | | | | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carbon steel / Alloy steel | | | | | | | | | | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gray cast iron | | | | | | | | | | | K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nodular cast iron | | | | | | | | | | | K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-ferrous metals | | | | | | | | | | | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat-resistant alloy | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Titanium alloy | | | | | | | | | | | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hard materials | | | | | | | | | | | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium - Roughing / Sharp edge | CNGG | 120404TK 120408TK | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | D8~D10 F116 F125 F126 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Medium - Roughing | CNMG | 120404TK 120408TK | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | CNMG | 120404MQ 120408MQ | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● | ● | ● | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing - Medium | CNMG | 120404SQ 120408SQ 120412SQ | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 160612SQ 160616SQ | 3 | 4 | 15.875 | 6.35 | 6.35 | 1.2 1.6 | ● | ● | ● | | | D10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 190612SQ 190616SQ | 3 | 4 | 19.05 | 6.35 | 7.94 | 1.2 1.6 | ● | ● | ● | | | D10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium - Roughing | CNMG | 120404MS 120408MS 120412MS 120416MS | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 1.6 | ● | ● | ● | ● | D8~D10 F116 F125 F126 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Medium - Roughing | CNMG | 120404MU 120408MU 120412MU | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | CNMG | 160608MU 160612MU 160616MU | 1 | 4 | 15.875 | 6.35 | 6.35 | 0.8 1.2 1.6 | ● | ● | ● | | D10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing - Medium | CNMG | 190612MU 190616MU | 2 | 4 | 19.05 | 6.35 | 7.94 | 1.2 1.6 | ● | ● | ● | | D10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Applicable chipbreaker range



● : Standard item

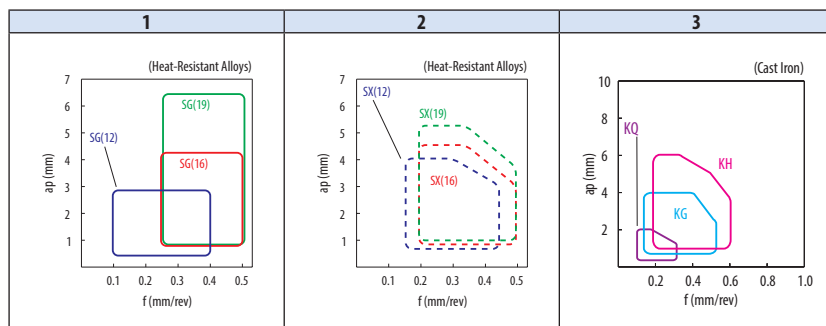
80° Rhombic

How to read pages of "Turning inserts" See page B15

| | | Material Compatibility | | | | | | | | | |
|--|--|------------------------|----------------------------|-----------------|----------------|-------------------|--------------------|----------------------|----------------|----------------|---|
| | | Free-cutting steel | Carbon steel / Alloy steel | Stainless steel | Gray cast iron | Nodular cast iron | Non-ferrous metals | Heat-resistant alloy | Titanium alloy | Hard materials | |
| | | | | | | | | | | | P |
| | | | | | | | | | | | M |
| | | | | | ● | ● | | | | | K |
| | | | | | ○ | ○ | | | | | K |
| | | | | | | | | | | | N |
| | | | | | | | | ● | ● | | S |
| | | | | | | | | | ● | | S |
| | | | | | | | | | | | H |

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Carbide | | | | | Applicable toolholder | | |
|--|---------------------------------------|------------------------------|---------------------|----------------|------|------|-------------------|---------|-------|-------|--------|--------|-----------------------|------|--------------------------------|
| | | No. of edges | No. of chipbreakers | IC | S | D1 | RE | | | | | | | | |
| | | | | | | | | CVD | PVD | - | | | | | |
| | | | | | | | | CA310 | CA315 | CA320 | PRO055 | PRO155 | PRO1535 | SW05 | |
| Heat-resistant alloys Roughing | CNMG 120408SG 120412SG | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | | ● | ● | ● | ● | ● | ● | D8~D10 F116, F125 F126 |
| | CNMG 160612SG 160616SG | 1 | 4 | 15.875 | 6.35 | 6.35 | 1.2 1.6 | | ● | ● | ● | ● | ● | ● | D10 |
| | CNMG 190612SG 190616SG | 1 | 4 | 19.05 | 6.35 | 7.94 | 1.2 1.6 | | ● | ● | ● | ● | ● | ● | D10 |
| Heat-resistant alloys Roughing / Single-sided | CNMM 1204XR-SX 1204XL-SX | 2 | 2 | 12.7 | 4.42 | 5.16 | - | | ● | ● | ● | ● | ● | ● | D8~D10 |
| | CNMM 1606XR-SX 1606XL-SX | 2 | 2 | 15.875 | 5.96 | 6.35 | - | | ● | ● | ● | ● | ● | ● | D10 |
| | CNMM 1906XR-SX 1906XL-SX | 2 | 2 | 19.05 | 5.93 | 7.94 | - | | ● | ● | ● | ● | ● | ● | D10 |
| Cast iron Sharp cutting oriented | CNMG 120404KQ 120408KQ 120412KQ | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | ● | ● | ● | ● | D8~D10 F116 F125 F126 |
| | CNMG 120404KG 120408KG 120412KG | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | ● | ● | ● | ● | D8~D10 F116 F125 F126 |
| | CNMG 120408KH 120412KH 120416KH | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 1.6 | ● | ● | ● | ● | ● | ● | ● | D8~D10 F116 F125 F126 |

Applicable chipbreaker range



● : Standard item



80° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Negative

C

D

R

S

T

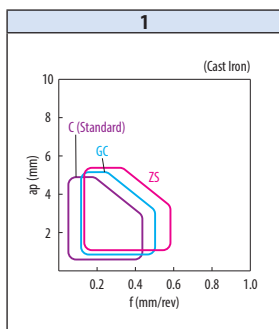
V

W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Carbide | | | | | | Cermet | Applicable toolholder | | |
|----------------------------------|---|------------------------------|----|----------------|------|------|--------------------------|---------|-------|--------|--------|--------|------|--------|--------------------------------|------|-----|
| | | No. of edges | IC | S | D1 | RE | CVD | | | | | | CVD | PVD | | | |
| | | | | | | | CA310 | CA315 | CA320 | CA450S | CA451S | CA550S | | | | KW10 | CCX |
| | | | | | | | | | | | | | | | | | |
| Cast iron Roughing | CNMG 120404C 120408C 120412C 120416C | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 1.6 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D8~D10 F116 F125 F126 | | |
| | CNMG 160612C | 1 | 4 | 15.875 | 6.35 | 6.35 | 1.2 | ●●●● | ● | | | | | | D10 | | |
| Cast iron Roughing | CNMG 120408ZS 120412ZS | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | | | |
| Cast iron Roughing | CNMG 120408GC 120412GC | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D8~D10 F116 F125 F126 | | |
| Cast iron Without Chipbreaker | CNGA 120404 120408 | - | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | | ●●●● | ●●●● | | | |
| | CNMA 120404 120408 120412 120416 | - | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 1.6 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | | | |








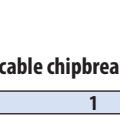
Applicable chipbreaker range



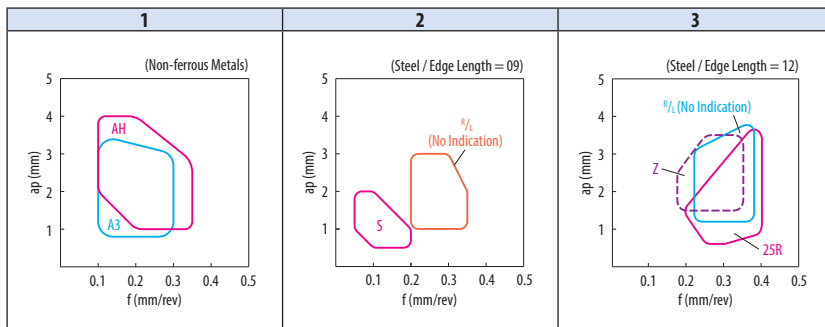
● : Standard item

80° Rhombic

How to read pages of "Turning inserts" See page B15

| | | Material Compatibility | | | | | | | | | | | | | | | |
|--------------------|--|------------------------------|----------------------------|-----------------|----------------|-------------------|--|----------------------|----------------|----------------|---------|---------|---------|-----------------------|---------|---------|--------------------------------|
| | | Free-cutting steel | Carbon steel / Alloy steel | Stainless steel | Gray cast iron | Nodular cast iron | Non-ferrous metals | Heat-resistant alloy | Titanium alloy | Hard materials | | | | | | | |
| | | | | | | | ● ● ● ● | | ● ● | | P | | | | | | |
| | | | | | | | | | | | M | | | | | | |
| | | | | | | | | | | | K | | | | | | |
| | | | | | | | | | | | N | | | | | | |
| | | | | | | | | | | | S | | | | | | |
| | | | | | | | | | | | H | | | | | | |
| Insert | Description | Applicable chipbreaker range | No. of edges | Dimension (mm) | | | | Carbide | | | | Cermet | | Applicable toolholder | | | |
| | | | | IC | S | D1 | RE | DLC | | PVD | | | | | | | |
| | | | | | | | | PDL010 | PDL025 | KW10 | PV710 | PV720 | PV730 | TN60 | TN610 | TN620 | |
| Non-Ferrous Metals |  Finishing - Medium / Sharp edge CNGG 120404R-A3 120404L-A3 120408R-A3 120408L-A3 | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.4 0.8 0.8 | ● ● ● ● | ● ● ● ● | | | | | | | | |
| Non-Ferrous Metals |  Finishing - Medium / Sharp edge CNGG 120404AH 120408AH | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● ● ● ● | ● ● ● ● | | | | | | | | D8~D10 F116 F125 F126 |
| Non-Ferrous Metals |  Medium - Roughing CNMG 120404AH 120408AH | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● ● ● ● | ● ● ● ● | | | | | | | | |
| Finishing |  Sharp edge / Surface finish oriented CNGG 090402R-S 090402L-S 090404R-S 090404L-S 090408R-S 090408L-S | 2 | 4 | 9.525 | 4.76 | 3.81 | 0.2 0.2 0.4 0.4 0.8 0.8 | | | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | D10 F126 |
| Medium |  CNGG 090404L 090408L | 2 | 4 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | ● | ● | | | | | | | | |
| Medium |  CNGG 120404R 120404L 120408R 120408L | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.4 0.8 0.8 | | | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | D8~D10 F116 F125 F126 |
| Medium - Roughing |  Low cutting force CNGG 120404R-25R 120404L-25R 120408R-25R 120408L-25R | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.4 0.8 0.8 | | | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | D8~D10 F116 F125 F126 |
| Medium - Roughing |  CNGG 120404Z | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | ● | | | |

Applicable chipbreaker range



● : Standard item

55° Rhombic

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Negative

C

D

R

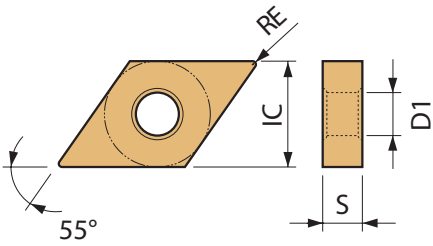
S

T

V

W

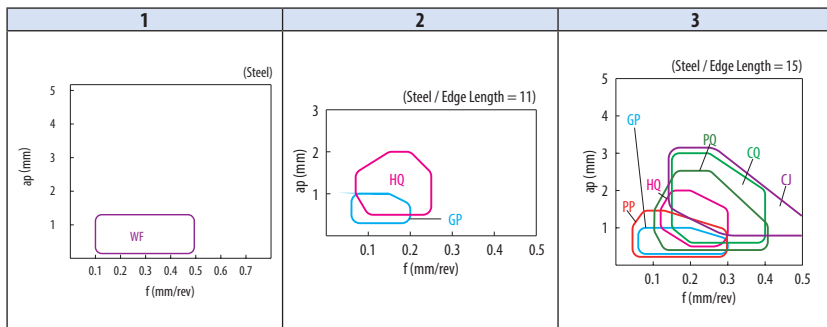
Ceramic



| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | | | | Cermet | | | | Applicable toolholder | | | | | | | | |
|------------------------------|---|------------------------------|----------------|-------|------|------|---------|--------|-------|-------|-----|-----|--------|---|-------|-------|-----------------------|--------|--------|--------|-----|-------|-------|-------------|------------------------------------|
| | | | No. of edges | IC | S | D1 | RE | CVD | | | CVD | PVD | - | | | | | | | | | | | | |
| | | | | | | | | CA02SP | CA510 | CA515 | | | | | CA525 | CA530 | | CA550S | CA551S | CA552S | CCX | PV770 | PV720 | PV730 | PI90 |
| Finishing With Wiper Edge | DNMX 150404WF 150408WF 150412WF | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 | 0.8 | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D13~D17 F118, F130 F132~F134 |
| | DNMX 150604WF 150608WF 150612WF | 1 | 4 | 12.7 | 6.35 | 5.16 | 0.4 | 0.8 | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D13~D17 F118 |
| Finishing | DNMG 150402PP 150404PP 150408PP 150412PP | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.2 | 0.4 | 0.8 | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150602PP 150604PP 150608PP 150612PP | 3 | 4 | 12.7 | 6.35 | 5.16 | 0.2 | 0.4 | 0.8 | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D13~D17 F118 |
| Finishing | DNMG 110404GP 110408GP | 2 | 4 | 9.525 | 4.76 | 3.81 | 0.4 | 0.8 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D16 F128 | |
| | DNMG 150402GP 150404GP 150408GP | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.2 | 0.4 | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150602GP 150604GP 150608GP | 3 | 4 | 12.7 | 6.35 | 5.16 | 0.2 | 0.4 | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D13~D17 F118 |
| Finishing - Medium | DNMG 150404PQ 150408PQ 150412PQ | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 | 0.8 | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150604PQ 150608PQ 150612PQ | 3 | 4 | 12.7 | 6.35 | 5.16 | 0.4 | 0.8 | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D13~D17 F118 |

See "Precautions when using Wiper inserts" in the R34 and R35 for WF chipbreaker.

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

55° Rhombic

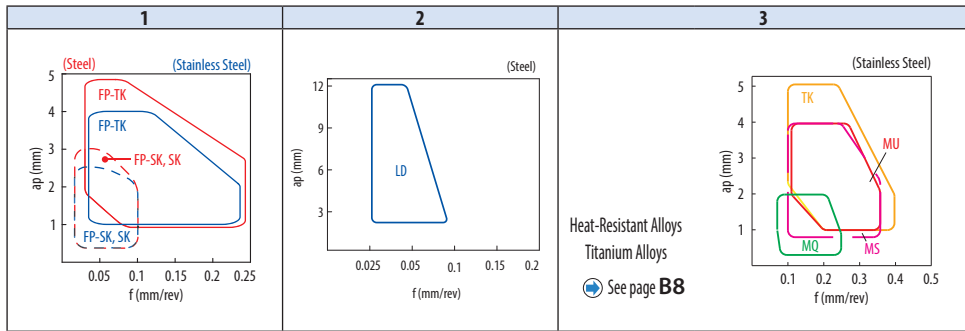
How to read pages of "Turning inserts" See page B15

- B
- Turning indexable inserts
- Chip breakers
- Negative
- C
- D
- R
- S
- T
- V
- W
- Ceramic

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | | | | | Carbide | | | | Applicable toolholder | |
|---|---------------------------|------------------------------|----------------|------|------|------|----------------|------------|---------|---------|---------|---------|---------|---------|-----------------------|--------|
| | | | No. of edges | | | | | | | | CVD | | PVD | | | Cermet |
| | | | IC | S | D1 | RE | CA6515 | CA6525 | PR0055 | PR0155 | PR1225 | PR1535 | PR1725 | SV05 | | |
| | | | IC | S | D1 | RE | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Finishing - Medium | | 1 | 4 | 12.7 | 4.76 | 5.16 | < 0.2 < 0.4 | | | | | ● ● ● ● | | ● ● ● ● | | |
| | | | | | | | | | | | | ● ● ● ● | | | ● ● ● ● | |
| Large-ap | | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.2 0.4 | | | | | ● ● ● ● | | ● ● ● ● | | |
| | | | | | | | | | | | | ● ● ● ● | | | ● ● ● ● | |
| Medium - Roughing | | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | ● ● ● ● | | ● ● ● ● | | |
| | | | | | | | | | | | | ● ● ● ● | | | ● ● ● ● | |
| Stainless steel / Heat-resistant alloys | | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | ● ● ● ● | | ● ● ● ● | | |
| | | | | | | | | | | | | ● ● ● ● | | | ● ● ● ● | |
| | | DNMG 150404TK 150408TK | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● ● ● ● | | ● ● ● ● | | ● ● ● ● | | | |
| | | | | | | | | | ● ● ● ● | | ● ● ● ● | | | ● ● ● ● | | |
| | | DNMG 150604TK 150608TK | 3 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 | ● ● ● ● | | ● ● ● ● | | ● ● ● ● | | | |
| | | | | | | | | | ● ● ● ● | | ● ● ● ● | | | ● ● ● ● | | |
| | DNMG 150404MQ 150408MQ | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● ● ● ● | | ● ● ● ● | | ● ● ● ● | | | | |
| | | | | | | | | ● ● ● ● | | ● ● ● ● | | | ● ● ● ● | | | |
| | DNMG 150604MQ 150608MQ | 3 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 | ● ● ● ● | | ● ● ● ● | | ● ● ● ● | | | | |
| | | | | | | | | ● ● ● ● | | ● ● ● ● | | | ● ● ● ● | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

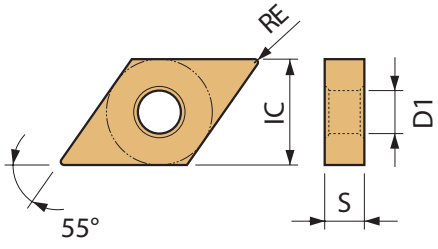
Applicable chipbreaker range



● : Standard item

55° Rhombic

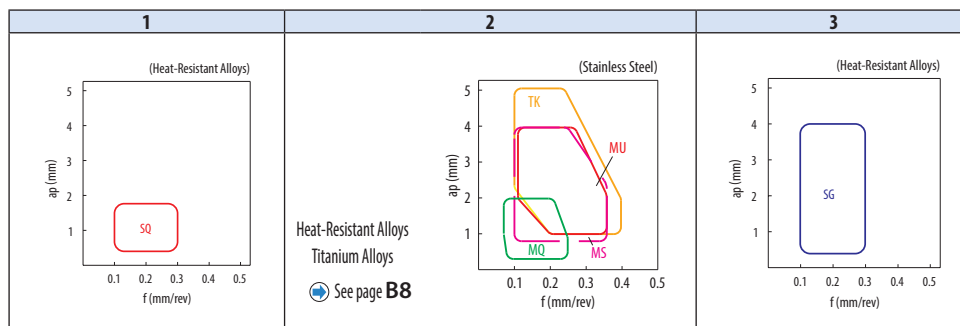
How to read pages of "Turning inserts" See page B15



| | | Material Compatibility | | | | | | | | | |
|--|--|------------------------|----------------------------|-----------------|----------------|-------------------|--------------------|----------------------|----------------|----------------|----------|
| | | Free-cutting steel | Carbon steel / Alloy steel | Stainless steel | Gray cast iron | Nodular cast iron | Non-ferrous metals | Heat-resistant alloy | Titanium alloy | Hard materials | |
| | | | | ● | ● | ● | | ○ | ● | | P |
| | | | | ● | | | | | | | M |
| | | | | | ● | | | | | | K |
| | | | | | | | | | | | N |
| | | | | | | | | ○ | ● | | S |
| | | | | | | | | | ● | | H |

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Carbide | | | | Applicable toolholder |
|--|---------------------------------------|------------------------------|----|----------------|------|------|-------------------|-------------|-------------|-------------|-------------|------------------------------------|
| | | No. of edges | IC | S | D1 | RE | | | | | | |
| | | | | | | | CVD | PVD | - | | | |
| Heat-resistant alloys Finishing - Medium | DNMG 150404SQ 150408SQ 150412SQ | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● ● ● | ● ● ● | ● ● ● | | D13~D17 F118, F130 F132~F134 |
| | DNMG 150604SQ 150608SQ 150612SQ | 1 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 1.2 | ● ● ● | ● ● ● | ● ● ● | | D13~D17 F118 |
| Stainless steel / Heat-resistant alloys Medium - Roughing | DNMG 150404MS 150408MS 150412MS | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● ● ● | ● ● ● | ● ● ● | ● ● ● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150604MS 150608MS 150612MS | 2 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 1.2 | ● ● ● | ● ● ● | ● ● ● | | D13~D17 F118 |
| Stainless steel / Heat-resistant alloys Medium - Roughing | DNMG 150404MU 150408MU | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● ● | ● ● | ● ● | ● ● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150604MU 150608MU | 2 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 | ● ● | ● ● | ● ● | | D13~D17 F118 |
| Heat-resistant alloys Roughing | DNMG 150408SG 150412SG | 3 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ● ● | ● ● | ● ● | ● ● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150608SG 150612SG | 3 | 4 | 12.7 | 6.35 | 5.16 | 0.8 1.2 | ● ● | ● ● | ● ● | | D13~D17 F118 |

Applicable chipbreaker range



● : Standard item



55° Rhombic

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Negative

C

D

R

S

T

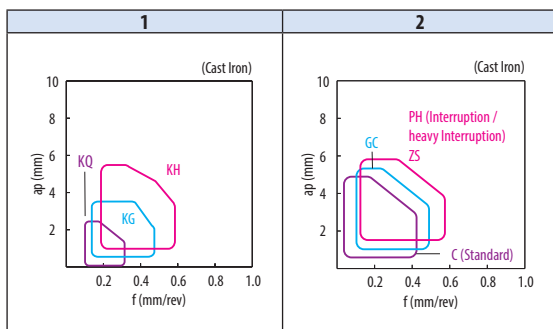
V

W

Ceramic

| Insert | Description | Applicable chipbreaker range | No. of edges | Dimension (mm) | | | | Carbide | | | | | Applicable toolholder |
|-------------------------------------|---------------------------------------|------------------------------|--------------|----------------|------|------|-------------------|---------|-------|-------|--------|--------|------------------------------------|
| | | | | IC | S | D1 | RE | CVD | | | | | |
| | | | | | | | | CA310 | CA315 | CA320 | CA4505 | CA4515 | |
| Cast iron Sharp cutting oriented | DNMG 150404KQ 150408KQ | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150604KQ 150608KQ | 1 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118 |
| Cast iron Roughing | DNMG 150404KG 150408KG 150412KG | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150604KG 150608KG 150612KG | 1 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118 |
| Cast iron Roughing | DNMG 150408KH 150412KH | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150608KH 150612KH | 1 | 4 | 12.7 | 6.35 | 5.16 | 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118 |
| Cast iron Roughing | DNMG 150404C 150408C 150412C | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150604C 150608C 150612C | 2 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118 |
| Cast iron Roughing | DNMG 150408ZS 150412ZS | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150608ZS 150612ZS | 2 | 4 | 12.7 | 6.35 | 5.16 | 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118 |
| Cast iron Roughing | DNMG 150408GC 150412GC | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118, F130 F132~F134 |
| | DNMG 150608GC 150612GC | 2 | 4 | 12.7 | 6.35 | 5.16 | 0.8 1.2 | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | D13~D17 F118 |

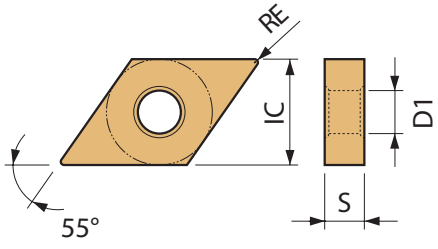
Applicable chipbreaker range



● : Standard item

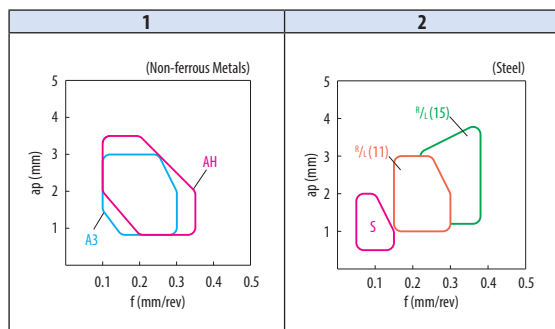
55° Rhombic

How to read pages of "Turning inserts" See page B15



| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Material | | | | | | | | | | Applicable toolholder | | | | | | | | | | | | | |
|---|---|------------------------------|----------------|-------|------|------|------------|---------|-------|-------|--------|--------|--------|--------|--------|-------|-----------------------|------|-----|--------|-------|-------|------------------------------------|------------------------------------|------|-------|-------|----|----|----|
| | | | No. of edges | IC | S | D1 | RE | Carbide | | | | | Cermet | | | | | | | | | | | | | | | | | |
| | | | | | | | | CA310 | CA315 | CA320 | CA4505 | CA4515 | CA5505 | POL010 | POL025 | PR930 | | KW10 | CCX | PV7005 | PV710 | PV720 | PV730 | PV90 | TN60 | TN610 | TN620 | | | |
| Cast Iron Without Chipbreaker | DNMA 150404 150408 | - | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | D13~D17 F118, F130 F132~F134 | | | | | | |
| | DNMA 150604 150608 | - | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | D13~D17 F118 | | | | | | |
| Non-Ferrous Metals Finishing - Medium / Sharp edge | DNMG 150404R-A3 150404L-A3 150408R-A3 150408L-A3 | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | D13~D17 F118, F130 F132~F134 | | | | | | |
| | | | | | | | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | | | |
| | | | | | | | 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | |
| | | | | | | | 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | ●● |
| Non-Ferrous Metals Medium - Roughing / Sharp edge | DNMG 150404AH 150408AH | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | D13~D17 F118 | | | | | | | |
| | | | | | | | 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | | |
| Non-Ferrous Metals Medium - Roughing | DNMG 150404AH 150408AH | 1 | 4 | 12.7 | 4.76 | 5.16 | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | D13~D17 F118, F130 F132~F134 | | | | | | | |
| | | | | | | | 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | | |
| Finishing Sharp edge / Surface finish oriented | DNMG 110402R-S 110402L-S 110404R-S 110404L-S 110408R-S 110408L-S | 2 | 4 | 9.525 | 4.76 | 3.81 | 0.2 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | D16 F128 | | | | | | | |
| | | | | | | | 0.2 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | | | |
| | | | | | | | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | ●● | |
| | | | | | | | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | ●● | ●● |
| | | | | | | | 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | ●● | ●● |
| Medium | DNMG 110404R 110404L 150404R 150404L 150408R 150408L | 2 | 4 | 9.525 | 4.76 | 3.81 | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | D13~D17 F118, F130 F132~F134 | | | | | | | |
| | | | | | | | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | | | |
| | | | | | | | 0.4 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | | |
| | | | | | | | 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | ●● | |
| | | | | | | | 0.8 | ●●●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | ●● | ●● | ●● | ●● | ●● | ●● | ●● |

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

55° Parallelogram

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

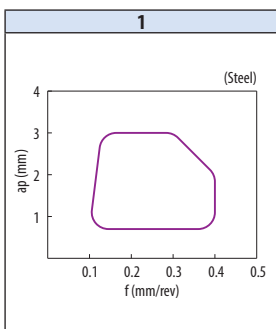
Negative



Ceramic

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | Carbide | Applicable toolholder | |
|-------------------|---|------------------------------|----------------|-------|------|----------------------|--|----|
| | | | No. of edges | IC | S | | | RE |
| | | | | | | | | |
| Medium - Roughing | KNMX 160405R-1 160405L-1 160410R-1 160410L-1 | 1 | 2 | 9.525 | 4.76 | 0.5 0.5 1 1 | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● | - |

Applicable chipbreaker range




● : Standard item

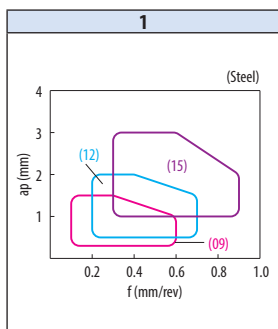
B32

Round

How to read pages of "Turning inserts" See page B15

| Insert | | Description | Applicable chipbreaker range | Dimension (mm) | | | Carbide | | | | | | Cermet | | Applicable toolholder | | | | |
|-------------------|---|-------------|------------------------------|----------------|------|------|---------|-------|-------|-------|-------|-------|--------|--------|-----------------------|--------|--------|-------|------|
| | | | | IC | S | D1 | CA02SP | CA310 | CA315 | CA320 | CA515 | CA525 | CA530 | CA5515 | | CA5525 | PV7005 | PV720 | TN60 |
| Medium - Roughing |  | RNMG 090300 | 1 | 9.525 | 3.18 | 3.81 | ● | | ● | ● | | | | ● | | ● | ● | | D42 |
| | | RNMG 120400 | 1 | 12.7 | 4.76 | 5.16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | | RNMG 150600 | 1 | 15.875 | 6.35 | 6.35 | ● | ● | ● | ● | | ● | | ● | | | | | |

Applicable chipbreaker range



● : Standard item

B



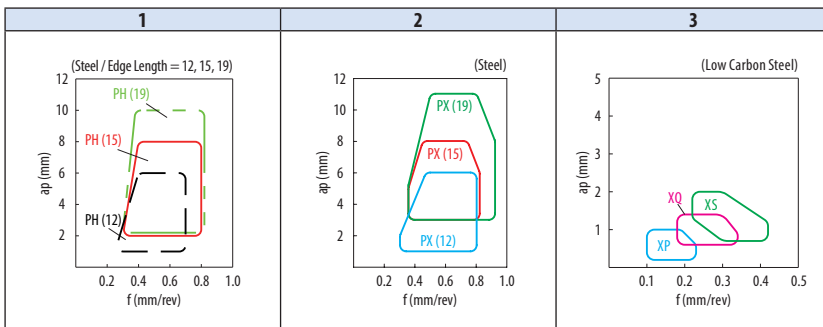
Turning indexable inserts

90° Square

How to read pages of "Turning inserts" See page B15

| Insert | | Description | | Applicable chipbreaker range | Dimension (mm) | | | | Material | | | | | | | | | | | | Applicable toolholder | | | | | | | |
|--------------------------------------|----------------------|---------------------------------------|----|------------------------------|----------------|---------|------|-------------------|----------|-------|-------|---------|-------|-------|-------|-------|-------|--------|--------|-----|-----------------------|-------|-------|------|-------|-------|-----------------|-----------------|
| No. of edges | IC | S | D1 | | RE | Carbide | | | | | | Cermets | | | | | | | | | | | | | | | | |
| | | | | | | CVD | | | | | | CVD | PVD | | | | | | | | | | | | | | | |
| | | | | | | | | CA023P | CA310 | CA315 | CA320 | CA4505 | CA510 | CA515 | CA525 | CA530 | CA535 | CA5525 | CA5535 | CCX | PV710 | PV720 | PV730 | PV90 | TN610 | TN620 | | |
| | | | | | | | | ● | | | | | | ● | | | | | | P | | | | | | | | |
| | | | | | | | | ● | | | | | | ● | | | | | | M | | | | | | | | |
| | | | | | | | | ● | | | | | | ● | | | | | | K | | | | | | | | |
| | | | | | | | | ● | | | | | | ● | | | | | | N | | | | | | | | |
| | | | | | | | | ● | | | | | | ● | | | | | | S | | | | | | | | |
| | | | | | | | | ● | | | | | | ● | | | | | | H | | | | | | | | |
| Roughing | [Image] | SNMG 120408PH 120412PH 120416PH | 1 | 8 | 12.7 | 4.76 | 5.16 | 0.8 1.2 1.6 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D19~D21 F136 |
| | | SNMG 150612PH 150616PH | 1 | 8 | 15.875 | 6.35 | 6.35 | 1.2 1.6 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | | SNMG 190612PH 190616PH | 1 | 8 | 19.05 | 6.35 | 7.94 | 1.2 1.6 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Roughing High feed / Single-sided | [Image] | SNMM 120408PX 120412PX 120416PX | 2 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 1.6 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D19~D21 F136 | |
| | | SNMM 150612PX 150616PX | 2 | 4 | 15.875 | 6.35 | 6.35 | 1.2 1.6 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | | SNMM 190612PX 190616PX 190624PX | 2 | 4 | 19.05 | 6.35 | 7.94 | 1.2 1.6 2.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| Low carbon steel | [Image] Finishing | SNMG 120408XP | 3 | 8 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| Low carbon steel | [Image] Medium | SNMG 120408XQ | 3 | 8 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D19~D21 F136 | |
| Low carbon steel | [Image] Roughing | SNMG 120408XS | 3 | 8 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

90° Square

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

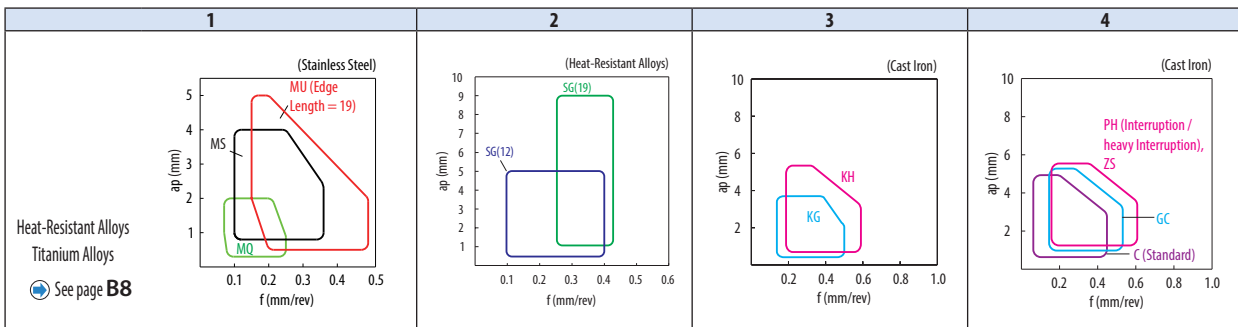
Negative



Ceramic

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | | | | | Applicable toolholder | | | | | |
|---|--------------------|------------------------------|----------------|-------|------|------|--------------------------|-------|-------|-------|--------|--------|---|-----------------------|--------|--------|--------|------|-----------------|
| | | | No. of edges | IC | S | D1 | RE | CVD | | | PVD | | - | | | | | | |
| | | | | | | | | CA310 | CA315 | CA320 | CA4515 | CA6515 | | | CA6525 | PR0055 | PR1535 | SW05 | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Stainless steel / Heat-resistant alloys | Finishing - Medium | 1 | 8 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | ●●●● | | | | | | | D19~D21 F136 |
| | Medium - Roughing | 1 | 8 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 1.6 | | | | | ●●●● | | | | | | | |
| | Medium - Roughing | 1 | 8 | 19.05 | 6.35 | 7.94 | 1.2 1.6 | | | | | ●●●● | | | | | | | |
| Heat-resistant alloys | Roughing | 2 | 8 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | | | | | ●●●● | | | | | | | D19~D21 F136 |
| | Roughing | 2 | 8 | 19.05 | 6.35 | 7.94 | 1.2 1.6 | | | | | ●●●● | | | | | | | |
| Cast iron | Roughing | 3 | 8 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ●●●● | | | | | | | | | | | |
| Cast iron | Roughing | 3 | 8 | 12.7 | 4.76 | 5.16 | 0.8 1.2 1.6 | ●●●● | | | | | | | | | | | D19~D21 F136 |
| Cast iron | Roughing | 4 | 8 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ●●●● | | | | | | | | | | | |

Applicable chipbreaker range



● : Standard item

90° Square

How to read pages of "Turning inserts" See page B15

Turning indexable inserts

B

Chip breakers

Negative

C

D

R

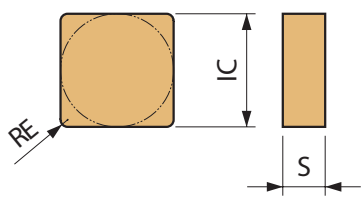
S

T

V

W

Ceramic



| | | | | | |
|----------------------------|---|---|---|---|---|
| Free-cutting steel | | | | | P |
| Carbon steel / Alloy steel | | | | | P |
| Stainless steel | | | | | M |
| Gray cast iron | ● | ● | ● | ● | K |
| Nodular cast iron | ○ | ○ | ○ | ○ | K |
| Non-ferrous metals | | | | | N |
| Heat-resistant alloy | | | | | S |
| Titanium alloy | | | | | S |
| Hard materials | | | | | H |

| Insert | Description | Applicable chipbreaker range | No. of edges | Dimension (mm) | | | Carbide | Applicable toolholder |
|---------------------|-----------------------|------------------------------|--------------|----------------|------|------------|--------------------------------|-----------------------|
| | | | | IC | S | RE | | |
| Cast iron | SNMN 120408 120412 | - | 8 | 12.7 | 4.76 | 0.8 1.2 | CVD CA310 CA315 CA320 | D52~D54 D63 D64 |
| Without Chipbreaker | | | | | | | | |

● : Standard item

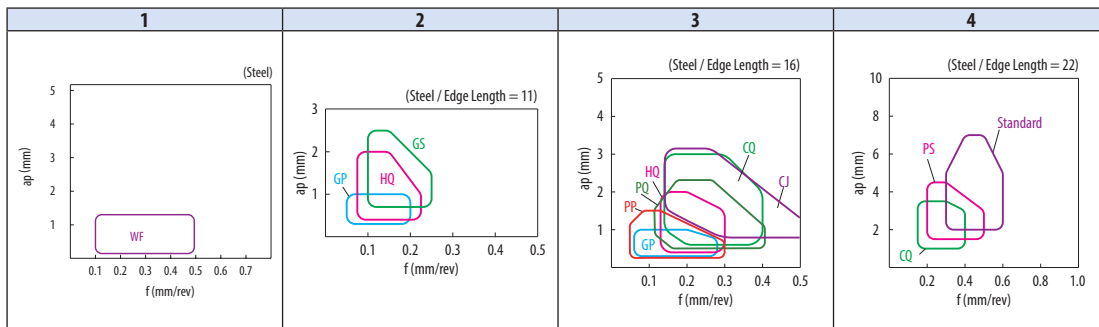
60° Triangle

How to read pages of "Turning inserts" See page B15

| Insert | | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Material | | | | | | | | | | Applicable toolholder | | | | | | | | | | | | | | | | | |
|--------------------|---------------------------|---------------------------------------|------------------------------|---|----------------|------|------|-------------------|---|--------------------|----------------------------|-----------------|----------------|-------------------|--------------------------|---------------------------------------|----------------|----------------|-----------------------|-------|------------|-------------------|--------|--------|--------|--------|--------|-----------------|--------|--------|--------|--------|--------|-------|-------|---|
| | | | | | No. of edges | IC | S | D1 | RE | Material | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | Free-cutting steel | Carbon steel / Alloy steel | Stainless steel | Gray cast iron | Nodular cast iron | Non-ferrous metals | Heat-resistant alloy | Titanium alloy | Hard materials | | P | M | K | N | S | H | | | | | | | | | | | |
| Finishing | With Wiper Edge | TNMX 160404WF 160408WF 160412WF | 1 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 | CA023P | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5535 | CA6515 | CA6525 | PRI535 | CCX | PV710 | PV720 | PV730 | PV90 | TN60 | TN610 | TN620 | D22~D25 F137 | | | | | | | | |
| | | Finishing | | | | | | | TNMG 160402PP 160404PP 160408PP 160412PP | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.2 0.4 0.8 1.2 | CA023P | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5535 | CA6515 | CA6525 | PRI535 | CCX | | PV710 | PV720 | PV730 | PV90 | TN60 | TN610 | TN620 | D22~D25 D27, D28 F120 F137 F138 |
| | | Finishing | | | | | | | TNMG 110404GP 110408GP | | | | | | | 2 | 6 | 6.35 | 4.76 | 2.26 | 0.4 0.8 | CA023P | CA510 | CA515 | CA525 | CA530 | CA5505 | | CA5515 | CA5535 | CA6515 | CA6525 | PRI535 | CCX | PV710 | |
| Finishing - Medium | Up facing | TNMG 160404PQ 160408PQ 160412PQ | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 | CA023P | | | | | | | | | | | | | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5535 | CA6515 | CA6525 | PRI535 | CCX | PV710 | PV720 | PV730 | |
| | | Finishing - Medium | | | | | | | TNMG 110404HQ 110408HQ | 2 | 6 | 6.35 | 4.76 | 2.26 | 0.4 0.8 | | | | | | | CA023P | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5535 | CA6515 | CA6525 | PRI535 | CCX | PV710 | PV720 | PV730 |
| | | Finishing - Medium | | | | | | | Up facing | | | | | | | TNMG 160404CQ 160408CQ 160412CQ | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 | CA023P | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5535 | CA6515 | CA6525 | PRI535 | CCX | PV710 | PV720 |
| Finishing - Medium | TNMG 220408CQ 220412CQ | | 4 | 6 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | | | | | | | | CA023P | | | | | | | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5535 | CA6515 | CA6525 | PRI535 | CCX | PV710 | PV720 | PV730 |

See "Precautions when using Wiper inserts" in the R34 and R35 for WF chipbreaker.

Applicable chipbreaker range



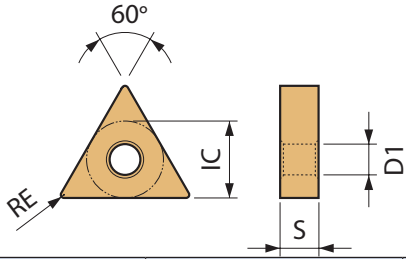
● : Standard item □ : Deleted from the next catalog



60° Triangle

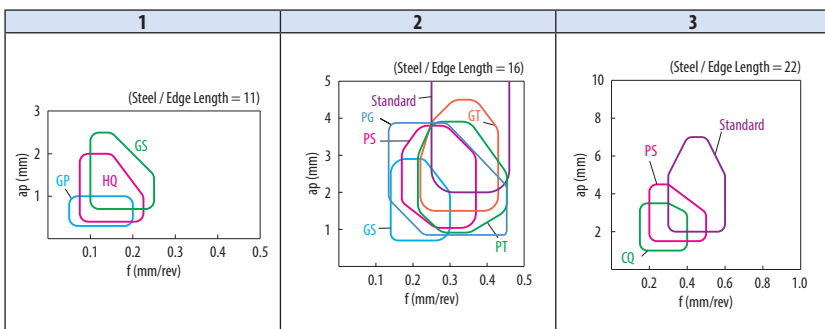
How to read pages of "Turning inserts" See page B15

- B
- Turning indexable inserts
- Chip breakers
- Negative
- C
- D
- R
- S
- T
- V
- W
- Ceramic



| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Material | | | | | | | | | | | | | | | | Applicable toolholder | |
|--------|-------------|------------------------------|----------------|----|---|----|----------------------------|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----------------------|--|
| | | | No. of edges | IC | S | D1 | RE | Material | | | | | | | | | | | | | | | | |
| | | | | | | | | Material | | | | | | | | | | | | | | | | |
| | | | | | | | Free-cutting steel | | | | | | | | | | | | | | | | P | |
| | | | | | | | Carbon steel / Alloy steel | | | | | | | | | | | | | | | | P | |
| | | | | | | | Stainless steel | | | | | | | | | | | | | | | | M | |
| | | | | | | | Gray cast iron | | | | | | | | | | | | | | | | K | |
| | | | | | | | Nodular cast iron | | | | | | | | | | | | | | | | K | |
| | | | | | | | Non-ferrous metals | | | | | | | | | | | | | | | | N | |
| | | | | | | | Heat-resistant alloy | | | | | | | | | | | | | | | | S | |
| | | | | | | | Titanium alloy | | | | | | | | | | | | | | | | S | |
| | | | | | | | Hard materials | | | | | | | | | | | | | | | | H | |
| | | | | | | | CVD | | | | | | | | | | | | | | | | CVD | |
| | | | | | | | PVD | | | | | | | | | | | | | | | | PVD | |
| | | | | | | | Cermet | | | | | | | | | | | | | | | | Cermet | |
| | | | | | | | CA023P | | | | | | | | | | | | | | | | | |
| | | | | | | | CA310 | | | | | | | | | | | | | | | | | |
| | | | | | | | CA315 | | | | | | | | | | | | | | | | | |
| | | | | | | | CA370 | | | | | | | | | | | | | | | | | |
| | | | | | | | CA450S | | | | | | | | | | | | | | | | | |
| | | | | | | | CA451S | | | | | | | | | | | | | | | | | |
| | | | | | | | CA510 | | | | | | | | | | | | | | | | | |
| | | | | | | | CA515 | | | | | | | | | | | | | | | | | |
| | | | | | | | CA525 | | | | | | | | | | | | | | | | | |
| | | | | | | | CA530 | | | | | | | | | | | | | | | | | |
| | | | | | | | CA550S | | | | | | | | | | | | | | | | | |
| | | | | | | | CA551S | | | | | | | | | | | | | | | | | |
| | | | | | | | CA552S | | | | | | | | | | | | | | | | | |
| | | | | | | | CA553S | | | | | | | | | | | | | | | | | |
| | | | | | | | CA651S | | | | | | | | | | | | | | | | | |
| | | | | | | | CA652S | | | | | | | | | | | | | | | | | |
| | | | | | | | PR1535 | | | | | | | | | | | | | | | | | |
| | | | | | | | CCX | | | | | | | | | | | | | | | | | |
| | | | | | | | PV7005 | | | | | | | | | | | | | | | | | |
| | | | | | | | PV710 | | | | | | | | | | | | | | | | | |
| | | | | | | | PV720 | | | | | | | | | | | | | | | | | |
| | | | | | | | PV730 | | | | | | | | | | | | | | | | | |
| | | | | | | | PV90 | | | | | | | | | | | | | | | | | |
| | | | | | | | TN60 | | | | | | | | | | | | | | | | | |
| | | | | | | | TN610 | | | | | | | | | | | | | | | | | |
| | | | | | | | TN620 | | | | | | | | | | | | | | | | | |

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

60° Triangle

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Negative

C

D

R

S

T

V

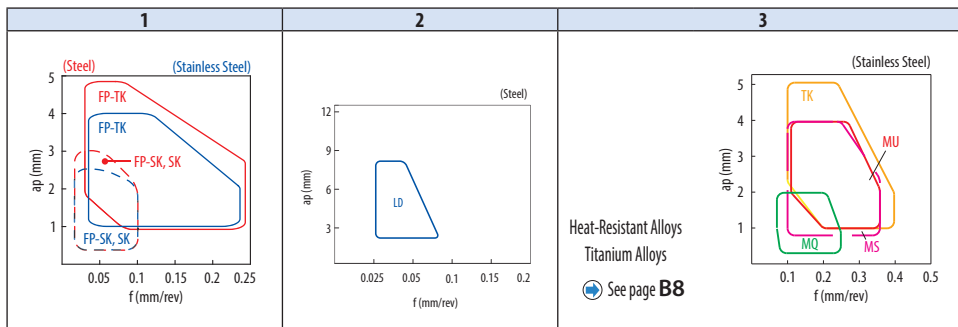
W

Ceramic

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | | | | | Cermet | Applicable toolholder | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|--|----------------|----|-------|------|---------|-------------------------|--------|--------|--------|--------|--------|--|-----------------------|--------------------|--|-------|-------|--|--|--|--|--|--|--|--|--|--|--|--|---|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| | | | No. of edges | IC | S | D1 | RE | CVD | | | PVD | | | | | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | CA6515 | CA6525 | PRO05S | PRO15S | PR1225 | PR1535 | PR1725 | | | SW05 | PV770 | PV730 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | <table border="1"> <tr><td>Free-cutting steel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>P</td></tr> <tr><td>Carbon steel / Alloy steel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Stainless steel</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>M</td></tr> <tr><td>Gray cast iron</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Nodular cast iron</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>K</td></tr> <tr><td>Non-ferrous metals</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>N</td></tr> <tr><td>Heat-resistant alloy</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>S</td></tr> <tr><td>Titanium alloy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Hard materials</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td></tr> </table> | | Free-cutting steel | | | | | | | | | | | | | | | | P | Carbon steel / Alloy steel | | | | | | | | | | | | | | | | | Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | M | Gray cast iron | | | | | | | | | | | | | | | | | Nodular cast iron | | | | | | | | | | | | | | | | K | Non-ferrous metals | | | | | | | | | | | | | | | | N | Heat-resistant alloy | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | S | Titanium alloy | | | | | | | | | | | | | | | | | Hard materials | | | | | | | | | | | | | | | | H |
| Free-cutting steel | | | | | | | | | | | | | | | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carbon steel / Alloy steel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gray cast iron | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nodular cast iron | | | | | | | | | | | | | | | | K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-ferrous metals | | | | | | | | | | | | | | | | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat-resistant alloy | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Titanium alloy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hard materials | | | | | | | | | | | | | | | | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing - Medium | | TNGG 160401MFP-SK 160402MFP-SK 160404MFP-SK | 1 | 6 | 9.525 | 4.76 | 3.81 | < 0.1 < 0.2 < 0.4 | | | | ● | ● | ● | ● | ● | D22~D25 D27, D28 E64 F120 F137 F138 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | TNGG 160402M-SK 160404M-SK | 1 | 6 | 9.525 | 4.76 | 3.81 | < 0.2 < 0.4 | | | | | | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Large ap | | TNMG 160402R-LD 160404R-LD | 2 | 6 | 9.525 | 4.76 | 3.81 | 0.2 0.4 | | | | ● | ● | | | | D22~D25 D27, D28 E64 F120 F137 F138 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium - Roughing | | TNGG 160404FP-TK 160408FP-TK | 2 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat-resistant alloys | | TNGG 160404TK 160408TK | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | | | | | | ● | | | D22~D25 D27, D28 E64 F120 F137 F138 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | TNMG 160404TK 160408TK | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | ● | ● | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel / Heat-resistant alloys | | TNMG 160404MQ 160408MQ | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | ● | ● | ● | ● | ● | ● | ● | | D22~D25 D27, D28 E64 F120 F137 F138 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | TNMG 160404MS 160408MS 160412MS | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | TNMG 160404MU 160408MU | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

60° Triangle

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Negative

C

D

R


S

T

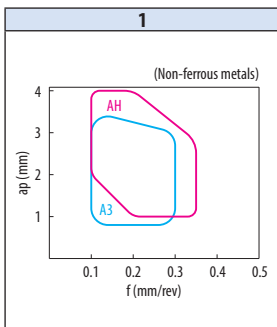
V

W

Ceramic

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | | Cermet | | | | Applicable toolholder | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|------------------------------|----------------|-------|------|------|-------------------------------|-------|-------|-----|--------|-------|--------|-----|-----------------------|--------------------|---|--------|---------|---------|------|-----|--------|-------|------|-------|--|--|--|--|--|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| | | | No. of edges | IC | S | D1 | RE | CVD | | DLC | - | CVD | | PVD | | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | CA310 | CA315 | | | CA320 | CA4505 | | | | CA4515 | CA5505 | POL1010 | POL1025 | KW10 | CCX | PV7005 | PV720 | TN60 | TN620 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | ● | ● | | | ● | ● | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr><td>Free-cutting steel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Carbon steel / Alloy steel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>P</td></tr> <tr><td>Stainless steel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>M</td></tr> <tr><td>Gray cast iron</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td rowspan="2">K</td></tr> <tr><td>Nodular cast iron</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>Non-ferrous metals</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>N</td></tr> <tr><td>Heat-resistant alloy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td rowspan="2">S</td></tr> <tr><td>Titanium alloy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Hard materials</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td></tr> </table> | | | | | | | | | | | | | | | | Free-cutting steel | | | | | | | | | | | | | | | | Carbon steel / Alloy steel | | | | | | | | | | | | | ● | ● | P | Stainless steel | | | | | | | | | | | | | | | M | Gray cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | K | Nodular cast iron | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Non-ferrous metals | | | | | | | | | ● | ● | ● | ● | ● | ● | N | Heat-resistant alloy | | | | | | | | | | | | | | | S | Titanium alloy | | | | | | | | | | | | | | | Hard materials | | | | | | | | | | | | | | | H |
| Free-cutting steel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carbon steel / Alloy steel | | | | | | | | | | | | | ● | ● | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gray cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nodular cast iron | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-ferrous metals | | | | | | | | | ● | ● | ● | ● | ● | ● | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat-resistant alloy | | | | | | | | | | | | | | | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Titanium alloy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hard materials | | | | | | | | | | | | | | | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  Cast Iron Without Chipbreaker | TNGA 110304 | - | 6 | 6.35 | 3.18 | 2.26 | 0.4 | | | | | | | | | D24 D25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TNGA 160404 160408 | - | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TNMA 160404 160408 160412 160416 160420 | - | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 1.6 2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TNGG 160404R-A3 160404L-A3 160408R-A3 160408L-A3 | 1 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.4 0.8 0.8 | | | | | ● | ● | ● | ● | ● | D22~D25 D27, D28 F120 F137 F138 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TNGG 160404AH 160408AH | 1 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | | | | | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TNMG 160404AH 160408AH | 1 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | | | | | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Applicable chipbreaker range



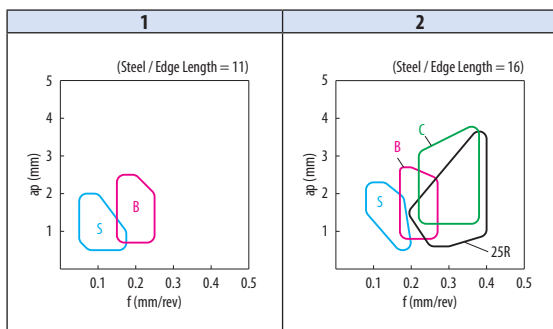
● : Standard item

60° Triangle

How to read pages of "Turning inserts" See page B15

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | Cermet | | Applicable toolholder | | | | | |
|---|--|------------------------------|----------------|-------|------|------|---------|--------|--------|-------|-----------------------|------|--------------------|---|-------|-------|
| | | | No. of edges | IC | S | D1 | RE | PVD | | - | | | | | | |
| | | | | | | | | PR1535 | PR1725 | PR830 | | KW10 | PV705 | PV710 | PV720 | PV730 |
| Finishing Precision / Sharp edge | TNEG 160402R-SSF 160402L-SSF 160404R-SSF 160404L-SSF | 2 | 6 | 9.525 | 4.76 | 3.81 | 0.2 | ● | ● | ● | ● | ● | ● | D22~D25 D27, D28 F120 F137 F138 | | |
| | | | | | | | 0.2 | ● | ● | ● | ● | ● | ● | | ● | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | | ● | ● |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | | ● | ● |
| Finishing Sharp edge / Surface finish oriented | TNGG 110402R-S 110402L-S 110404R-S 110404L-S 110408R-S 110408L-S | 1 | 6 | 6.35 | 4.76 | 2.26 | 0.2 | ● | ● | ● | ● | ● | D24 D25 F138 | | | |
| | | | | | | | 0.2 | ● | ● | ● | ● | ● | | ● | | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | | ● | ● | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | | ● | ● | |
| | | | | | | | 0.8 | ● | ● | ● | ● | ● | | ● | ● | |
| | TNGG 160401R-S 160401L-S 160402R-S 160402L-S 160404R-S 160404L-S 160408R-S 160408L-S | 2 | 6 | 9.525 | 4.76 | 3.81 | 0.1 | ● | ● | ● | ● | ● | ● | D22~D25 D27, D28 F120 F137 F138 | | |
| | | | | | | | 0.1 | ● | ● | ● | ● | ● | ● | | ● | |
| | | | | | | | 0.2 | ● | ● | ● | ● | ● | ● | | ● | ● |
| | | | | | | | 0.2 | ● | ● | ● | ● | ● | ● | | ● | ● |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | | ● | ● |
| Finishing - Medium | TNGG 110302R-B 110302L-B 110304R-B 110304L-B | 4 | 6 | 6.35 | 3.18 | 2.26 | 0.2 | ● | ● | ● | ● | ● | D24 D25 | | | |
| | | | | | | | 0.2 | ● | ● | ● | ● | ● | | ● | | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | | ● | ● | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | | ● | ● | |
| | TNGG 160304R-B | 3 | 6 | 9.525 | 3.18 | 3.81 | 0.4 | ● | ● | ● | ● | ● | - | | | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | | ● | | |
| | TNGG 160402R-B 160402L-B 160404R-B 160404L-B 160408R-B 160408L-B | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.2 | ● | ● | ● | ● | ● | ● | D22~D25 D27, D28 F120 F137 F138 | | |
| | | | | | | | 0.2 | ● | ● | ● | ● | ● | ● | | ● | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | | ● | ● |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | | ● | ● |

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog



60° Triangle

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

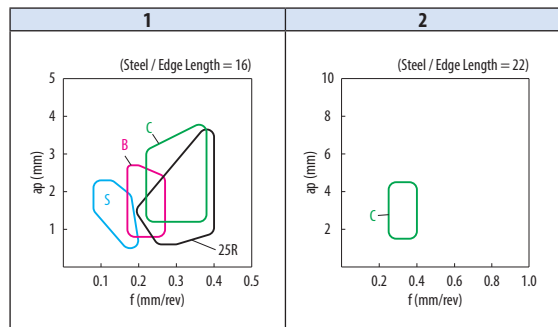
Negative



Ceramic

| Insert | | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Carbide | | | | | | Cermet | | Applicable toolholder | | | | | | | |
|-------------------|-------------------|------------------|------------------------------|---|----------------|------|------|------|---------|--------|-------|--------|--------|-------|--------|-------|-----------------------|-------|-------|-------|-------|---|---|---|
| | | | | | No. of edges | IC | S | D1 | RE | PVD | | PVD | | - | | - | | | | | | | | |
| | | | | | | | | | | PR1535 | PR930 | KW10 | PV7005 | PV710 | PV720 | PV730 | | PR930 | TNG0 | TNG10 | TNG20 | | | |
| | | | | | | | | | | PR930 | KW10 | PV7005 | PV710 | PV720 | PV730 | PR930 | | TNG0 | TNG10 | TNG20 | | | | |
| Medium - Roughing | | TNGG 160402R-C | 1 | 6 | 9.525 | 4.76 | 3.81 | 0.2 | | | | | | | | | | | | | | | | |
| | | TNGG 160402L-C | | | | | | 0.2 | | | | | | | | | | | | | | | | |
| | | TNGG 160404R-C | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | TNGG 160404L-C | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | TNGG 160408R-C | | | | | | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | TNGG 160408L-C | | | | | | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | TNGG 160412R-C | | | | | | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | TNGG 160412L-C | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| | Medium - Roughing | | TNGG 220404R-C | 2 | 6 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | |
| | | | TNGG 220404L-C | | | | | | 0.4 | | | | | | | | | | | | | | | |
| TNGG 220408R-C | | | 0.8 | | | | | | | | | | | | | | | | | | | | | |
| TNGG 220408L-C | | | 0.8 | | | | | | | | | | | | | | | | | | | | | |
| Medium - Roughing | | TNMG 160404R-C | 1 | 6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | | | | | | | |
| | | TNMG 160404L-C | | | | | | 0.4 | | | | | | | | | | | | | | | | |
| | | TNMG 160408R-C | | | | | | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | | TNMG 160408L-C | | | | | | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | | TNMG 160412R-C | | | | | | 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Medium - Roughing | | TNGG 110402R | 1 | 6 | 6.35 | 4.76 | 2.26 | 0.2 | | | | | | | | | | | | | | | | |
| | | TNGG 110404R | | | | | | 0.4 | | | | | | | | | | | | | | | | |
| | | TNGG 110404L | | | | | | 0.4 | | | | | | | | | | | | | | | | |
| | | TNGG 110408R | | | | | | 0.8 | | | | | | | | | | | | | | | | |
| | | TNGG 110408L | | | | | | 0.8 | | | | | | | | | | | | | | | | |
| Medium - Roughing | | TNGG 160404R-25R | 1 | 6 | 9.525 | 4.76 | 3.81 | 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| | | TNGG 160404L-25R | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | | TNGG 160408R-25R | | | | | | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | | TNGG 160408L-25R | | | | | | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | | TNGG 160408L-25R | | | | | | 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |

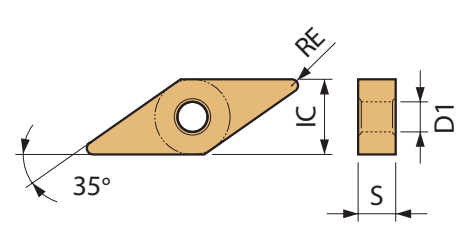
Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

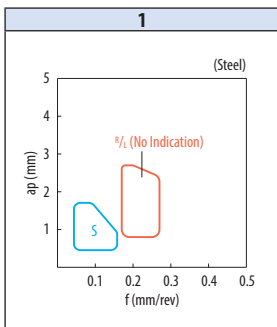
35° Rhombic

How to read pages of "Turning inserts" See page B15



| | | Material | | | | | | | | | | | Applicable toolholder | | | | |
|-----------|--------------------------------------|------------------------------|----------------------------|-----------------|----------------|-------------------|--------------------|----------------------|----------------|----------------|--------|---|-----------------------|-------|---------|-------|------|
| | | Free-cutting steel | Carbon steel / Alloy steel | Stainless steel | Gray cast iron | Nodular cast iron | Non-ferrous metals | Heat-resistant alloy | Titanium alloy | Hard materials | | | | | | | |
| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | Cermet | | | Applicable toolholder | | | | |
| | | | No. of edges | IC | S | D1 | RE | PVD | | PVD | | - | | | | | |
| | | | | | | | | PR1535 | PR930 | KW10 | PV7005 | | | PV710 | PV720 | PV730 | PV90 |
| Cast iron | Without Chipbreaker | - | 4 | 9.525 | 4.76 | 3.81 | 0.4 | ● | ● | ● | ● | ● | ● | ● | D30~D39 | | |
| | | | | | | | | ● | ● | ● | ● | ● | ● | ● | | ● | ● |
| Finishing | Sharp edge / Surface finish oriented | 1 | 4 | 9.525 | 4.76 | 3.81 | 0.2 | ● | ● | ● | ● | ● | ● | ● | D30~D39 | | |
| | | | | | | | 0.2 | ● | ● | ● | ● | ● | ● | ● | | ● | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | ● | | ● | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | ● | | ● | |
| Medium | VNGG | 1 | 4 | 9.525 | 4.76 | 3.81 | 0.2 | ● | ● | ● | ● | ● | ● | ● | D30~D39 | | |
| | | | | | | | 0.2 | ● | ● | ● | ● | ● | ● | ● | | ● | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | ● | | ● | |
| | | | | | | | 0.4 | ● | ● | ● | ● | ● | ● | ● | | ● | |
| | | | | | | | 0.8 | ● | ● | ● | ● | ● | ● | ● | | ● | |
| 0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | |

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

80° Trigon

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Negative

C

D

R

S

T

V

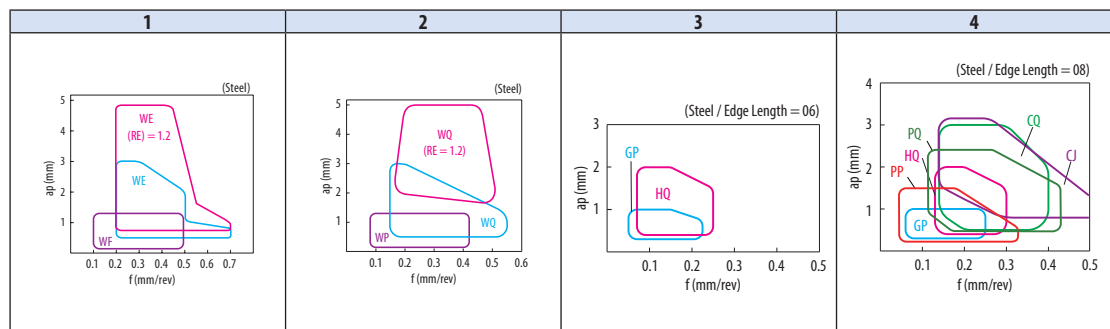
W

Ceramic

| | | Free-cutting steel | | | | | | | | | | Carbon steel / Alloy steel | | | | | | | | | | Stainless steel | | | | | | | | | | Gray cast iron | | | | | | | | | | Nodular cast iron | | | | | | | | | | Non-ferrous metals | | | | | | | | | | Heat-resistant alloy | | | | | | | | | | Titanium alloy | | | | | | | | | | Hard materials | | | | | | | | | |
|--------------------|-----------------|------------------------------|----------------|--------|-------|-------|---------|----------------|----------------|----------------|----------------|----------------------------|-------|-------|-------|------|-----------------------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|--|---------------------------------|---------------------------------|--|--|----------------|--|--|--|--|--|--|--|--|--|-------------------|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--|--|--|----------------------|--|--|--|--|--|--|--|--|--|----------------|--|--|--|--|--|--|--|--|--|----------------|--|--|--|--|--|--|--|--|--|
| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | | | Cermet | | | | | Applicable toolholder | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | No. of edges | IC | S | D1 | RE | CVD | | | | | CVD | | | | | PVD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | CA023P | CA510 | CA515 | CA525 | CA530 | CA550S | CA5515 | CA5525 | CCX | PV770 | PV770 | PV730 | PV90 | TNG0 | TNG10 | TNG20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | With Wiper Edge | 1 | 6 | 12.7 | 4.76 | 5.16 | 0.4 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 0.8 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | With Wiper Edge | 2 | 6 | 12.7 | 4.76 | 5.16 | 0.4 | | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 0.8 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing - Medium | With Wiper Edge | 1 | 6 | 12.7 | 4.76 | 5.16 | 0.4 | | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | D43~D46 F140 F142 F143 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 0.8 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 1.2 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing - Medium | With Wiper Edge | 2 | 6 | 12.7 | 4.76 | 5.16 | 0.4 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | D43~D46 F140 F142 F143 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 0.8 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 1.2 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | With Wiper Edge | 4 | 6 | 12.7 | 4.76 | 5.16 | 0.2 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | D45 F140 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 0.4 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.8 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 1.2 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | With Wiper Edge | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | D43~D46 F140 F142 F143 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 0.8 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | With Wiper Edge | 4 | 6 | 12.7 | 4.76 | 5.16 | 0.4 | | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | D43~D46 F140 F142 F143 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 0.8 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing - Medium | With Wiper Edge | 4 | 6 | 12.7 | 4.76 | 5.16 | 0.4 | | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | D43~D46 F140 F142 F143 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 0.8 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 1.2 | ●●●●●●●●●●●●●● | | | | | | | | | | ●●●●● | | | | | ●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

See "Precautions when using Wiper inserts" in the R34 and R35 for WF / WE chipbreakers.

Applicable chipbreaker range



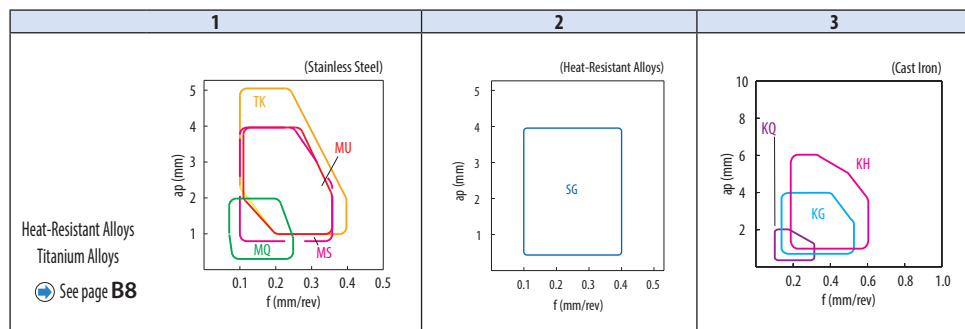
● : Standard item □ : Deleted from the next catalog

80° Trigon

How to read pages of "Turning inserts" See page B15

| | | <table border="1"> <tr><td>Free-cutting steel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Carbon steel / Alloy steel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>P</td></tr> <tr><td>Stainless steel</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>M</td></tr> <tr><td>Gray cast iron</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td rowspan="2">K</td></tr> <tr><td>Nodular cast iron</td><td>○</td><td>○</td><td>○</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Non-ferrous metals</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>N</td></tr> <tr><td>Heat-resistant alloy</td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td></td><td></td><td></td><td rowspan="2">S</td></tr> <tr><td>Titanium alloy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td></td></tr> <tr><td>Hard materials</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td></tr> </table> | | | | | | | | | | Free-cutting steel | | | | | | | | | | | | | | Carbon steel / Alloy steel | | | | | | | | | | | | | P | Stainless steel | | | ● | ● | | | | | | | | | M | Gray cast iron | ● | ● | ● | ● | | | | | | | | | K | Nodular cast iron | ○ | ○ | ○ | ○ | | | | | | | | | Non-ferrous metals | | | | | | | | | | | | | N | Heat-resistant alloy | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | S | Titanium alloy | | | | | | | | | | ○ | ○ | | Hard materials | | | | | | | | | | | | | H |
|---|-----------------------|--|---------------------------------------|----|------|------|---------|-------------------|-------------------|-------|--------|--------------------|-----------------------|--------|---------------------------------|--------|--------|------|--|--|--|--|--|--|--|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|---|-----------------|--|--|---|---|--|--|--|--|--|--|--|--|---|----------------|---|---|---|---|--|--|--|--|--|--|--|--|---|-------------------|---|---|---|---|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|---|----------------------|--|--|---|---|---|---|---|---|---|--|--|--|---|----------------|--|--|--|--|--|--|--|--|--|---|---|--|----------------|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Free-cutting steel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carbon steel / Alloy steel | | | | | | | | | | | | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel | | | ● | ● | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gray cast iron | ● | ● | ● | ● | | | | | | | | | K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nodular cast iron | ○ | ○ | ○ | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-ferrous metals | | | | | | | | | | | | | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat-resistant alloy | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Titanium alloy | | | | | | | | | | ○ | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hard materials | | | | | | | | | | | | | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | | | | Applicable toolholder | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | No. of edges | IC | S | D1 | RE | CVD | | PVD | | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | CA310 | CA315 | CA320 | CA6515 | | | CA6525 | PR0055 | PR0155 | PR1535 | SW05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel / Heat-resistant alloys | Finishing - Medium | WNMG 080404MQ 080408MQ | 1 | 6 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Medium - Roughing | WNMG 080404MS 080408MS 080412MS | 1 | 6 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Medium - Roughing | WNMG 080404MU 080408MU | 1 | 6 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Heat-resistant alloys | Roughing | WNMG 080408SG 080412SG | 2 | 6 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | | | ● | ● | ● | D43~D46 F140 F142 F143 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cast iron | Sharp cutting oriented | WNMG 080404KQ 080408KQ 080412KQ | 3 | 6 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cast iron | Roughing | WNMG 080404KG 080408KG 080412KG | 3 | 6 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cast iron | Roughing | WNMG 080408KH 080412KH 080416KH | 3 | 6 | 12.7 | 4.76 | 5.16 | 0.8 1.2 1.6 | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Applicable chipbreaker range

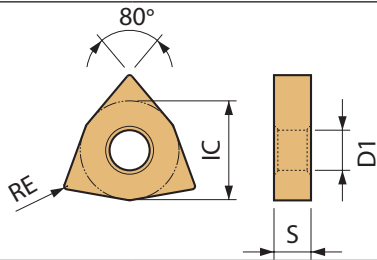


● : Standard item

80° Trigon

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Negative

C

D

R

S

T

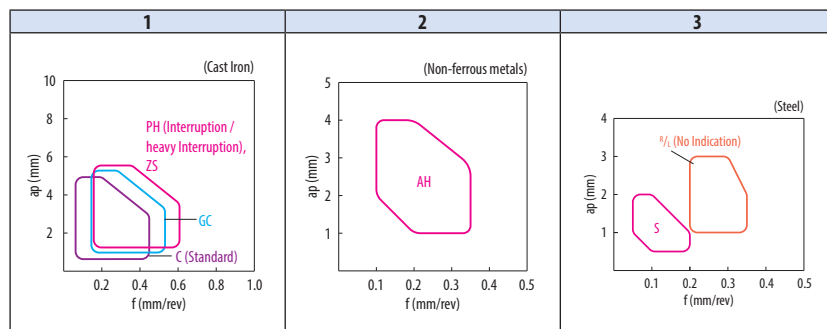
V

W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Carbide | | | | | | Cermet | | Applicable toolholder | |
|----------------------------|---|------------------------------|----|----------------|------|------|--|---------|-------|-----|---|-----|-----|--------|--------|-----------------------|---------------------------------|
| | | No. of edges | IC | S | D1 | RE | CVD | | | DLC | - | CVD | PVD | - | | | |
| | | | | | | | CA310 | CA315 | CA320 | | | | | | CA4505 | | CA4515 |
| Free-cutting steel | | | | | | | | | | | | | | | | | P |
| Carbon steel / Alloy steel | | | | | | | | | | | | | | | | | M |
| Stainless steel | | | | | | | | | | | | | | | | | K |
| Gray cast iron | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | K |
| Nodular cast iron | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | K |
| Non-ferrous metals | | | | | | | | | | | | | | | | | N |
| Heat-resistant alloy | | | | | | | | | | | | | | | | | S |
| Titanium alloy | | | | | | | | | | | | | | | | | H |
| Hard materials | | | | | | | | | | | | | | | | | H |
| Cast Iron | WNGM 080404C 080408C 080412C | 1 | 6 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Cast Iron | WNGM 080408ZS 080412ZS | 1 | 6 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Cast Iron | WNGM 080408GC 080412GC | 1 | 6 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | D43~D46 F140 F142 F143 |
| Cast Iron | WNMA 080408 080412 | - | 6 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Non-Ferrous Metals | WNGG 080404AH 080408AH | 2 | 6 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | | | | | ● | ● | ● | ● | ● | |
| Finishing | WNGG 060402R-S 060402L-S 060404R-S 060404L-S 060408R-S 060408L-S | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.2 0.2 0.4 0.4 0.8 0.8 | | | | | | | | | | D45 F140 |
| Medium | WNGG 060404R 060404L | 3 | 6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | |

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

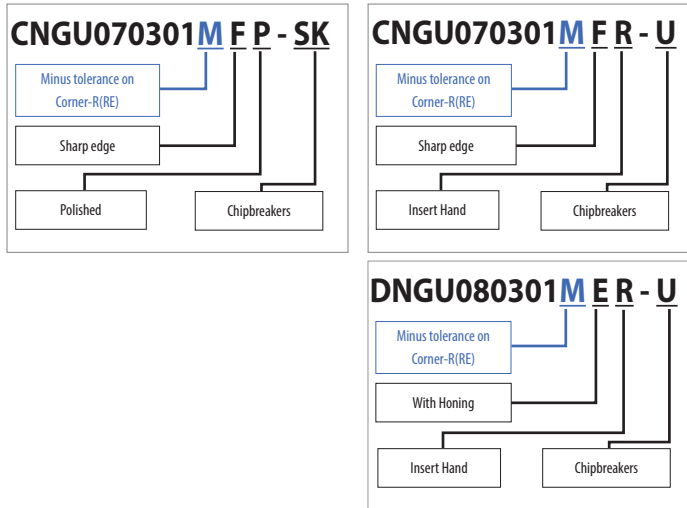
Small double sided tools

How to read pages of "Turning inserts" See page B15

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Carbide | | | Applicable toolholder | | | | |
|--------------------|----------------------------|------------------------------|----------------|-------------------|--------------------|----------------------|-----------------------------------|----------------|---------|-----------------------|---------|---|---|---|
| | | | No. of edges | IC | S | D1 | RE | PVD | | | | | | |
| | | | | | | | | PRI1225 | PRI1535 | | PRI1705 | | | |
| | | | | | | | | PRI1725 | | | | | | |
| Free-cutting steel | Carbon steel / Alloy steel | Stainless steel | Gray cast iron | Nodular cast iron | Non-ferrous metals | Heat-resistant alloy | Titanium alloy | Hard materials | P | M | K | N | S | H |
| Finishing - Medium | Polished / Sharp edge | 1 | 4 | 7.5 | 3.18 | 3.6 | < 0.1 < 0.2 | ● ● ● ● | ● ● ● ● | E60 | | | | |
| Medium - Roughing | With honing | 1 | 4 | 7.5 | 3.18 | 3.6 | 0.2 0.4 | ● ● ● ● | ● ● ● ● | | | | | |
| Finishing | Sharp edge | 1 | 4 | 7.5 | 3.18 | 3.6 | < 0.05 < 0.1 < 0.2 < 0.4 | ● ● ● ● | ● ● ● ● | | | | | |
| Low feed | Sharp edge | 1 | 4 | 7.5 | 3.18 | 3.6 | < 0.05 < 0.1 < 0.2 < 0.4 | ● ● ● ● | ● ● ● ● | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Small Double Sided Tools Identification System



When a minus tolerance is specified for the corner-R(RE)

If a minus tolerance is specified for the corner-R(RE) as shown in the Fig. 1, using an insert with corner-R(RE)=0.2 mm may result in larger radius than specified. Use an insert the corner of which R(RE) has a minus tolerance.

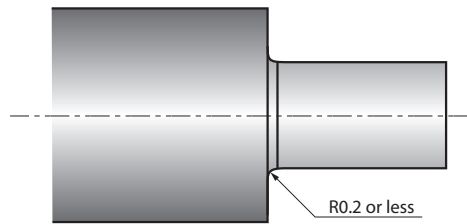
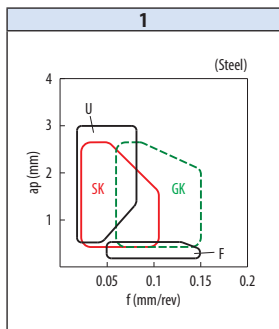


Fig. 1 Example of a specified corner-R in the drawing

Applicable chipbreaker range



● : Standard item



Small double sided tools

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Negative



Ceramic

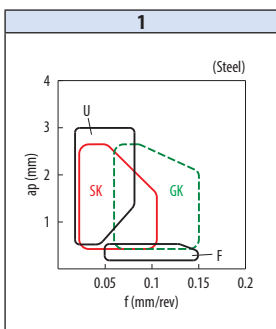
| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Carbide | | | Applicable toolholder |
|---|---|------------------------------|----|----------------|------|-----|-------------------------|---------|--------|-------|-----------------------|
| | | No. of edges | IC | S | D1 | RE | PVD | | | | |
| | | | | | | | PR1225 | PR1535 | PR1705 | | |
| Finishing - Medium Polished / Sharp edge | DNGU 080301MFP-SK 080302MFP-SK 080304MFP-SK | 1 | 4 | 7 | 3.18 | 3.6 | < 0.1 < 0.2 < 0.4 | ● ● ● | ● ● ● | ● ● ● | E61 |
| Medium - Roughing With honing | DNMU 080302E-GK 080304E-GK | 1 | 4 | 7 | 3.18 | 3.6 | 0.2 0.4 | ● ● ● | ● ● ● | ● ● ● | |
| Finishing Sharp edge | DNGU 080301MFR-F 080302MFR-F 080304MFR-F | 1 | 4 | 7 | 3.18 | 3.6 | < 0.1 < 0.2 < 0.4 | ● ● ● | ● ● ● | ● ● ● | |
| Low feed Sharp edge | DNGU 080301MFR-U 080302MFR-U 080304MFR-U | 1 | 4 | 7 | 3.18 | 3.6 | < 0.1 < 0.2 < 0.4 | ● ● ● | ● ● ● | ● ● ● | |
| Low feed With honing | DNGU 080301MER-U 080302MER-U 080304MER-U | 1 | 4 | 7 | 3.18 | 3.6 | < 0.1 < 0.2 < 0.4 | ● ● ● | ● ● ● | ● ● ● | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Chipbreaker Selection (Negative Inserts)

| Cutting Range | Name | Cross-section | Advantages |
|--------------------|------|---------------|--|
| Finishing - Medium | SK | | A low cutting force chipbreaker designed for chip control in steel and stainless steel. Cutting performance is similar to comparable sized positive inserts. |
| Medium - Roughing | GK | | Good chip evacuation at wide range by breaker dot and wide chip pocket. |
| Finishing | F | | Good chip control at finishing with low cutting force. |
| Low Feed | U | | Good chip control at low feed rate and varied ap with low cutting force. |

Applicable chipbreaker range



● : Standard item

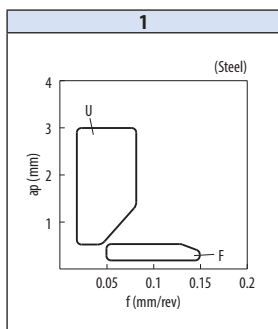
Small double sided tools

How to read pages of "Turning inserts" See page B15

| Insert | | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Carbide | | | Applicable toolholder | |
|-----------|--|--|------------------------------|---|----------------|------|---|-----------------------------------|---------|--------|--------|-----------------------|--------|
| | | | | | No. of edges | IC | S | D1 | RE | PVD | | | |
| | | | | | | | | | | PR1225 | PR1535 | | PR1705 |
| Finishing | | TNGU 0903005MFR-F 090301MFR-F 090302MFR-F 090304MFR-F | 1 | 6 | 5.56 | 3.18 | 3 | < 0.05 < 0.1 < 0.2 < 0.4 | ● | ● | ● | E62 | |
| | | | | | | | | | ● | ● | ● | | |
| | | | | | | | | | ● | ● | ● | | |
| Low feed | | TNGU 090301MFR-U 090302MFR-U 090304MFR-U | 1 | 6 | 5.56 | 3.18 | 3 | < 0.1 < 0.2 < 0.4 | ● | ● | ● | E62 | |
| | | | | | | | | | ● | ● | ● | | |
| | | | | | | | | | ● | ● | ● | | |
| Low feed | | TNGU 090304MER-U | 1 | 6 | 5.56 | 3.18 | 3 | < 0.4 | ● | ● | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

80° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Positive

C

D

R

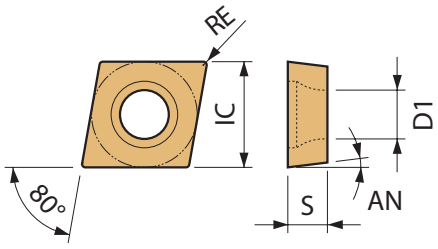
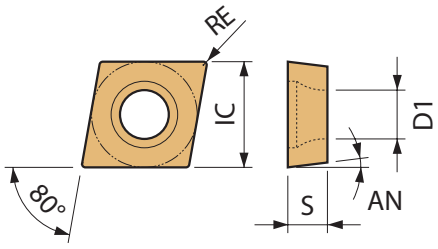
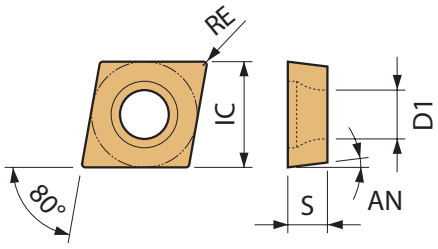
S

T

V

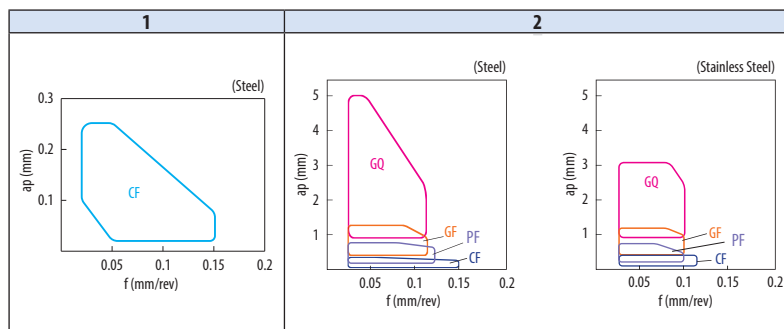
W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | | Angle (°) | Carbide | | | | Applicable toolholder |
|---|---|------------------------------|---------------------|----------------|------|-----|-------------------------|----|-----------|---------|--------|--------|-----------------------------------|--------------------------|
| | | No. of edges | No. of chipbreakers | IC | S | D1 | RE | AN | | DLC | | PVD | | |
| | | | | | | | | | PDL010 | PDL025 | PR1725 | PR1535 | PR1705 | |
|  | CCGT 030101MP-CF 030102MP-CF | 1 | 2 | 3.5 | 1.4 | 2 | < 0.1 < 0.2 | 7 | | ● | ● | ● | ● | F31 F32 F60 F62 |
| | CCGT 040101MP-CF 040102MP-CF | 1 | 2 | 4.3 | 1.8 | 2.4 | < 0.1 < 0.2 | 7 | ● | ● | ● | ● | | |
|  | CCGT 030101MFP-PF 030102MFP-PF | 2 | 2 | 3.5 | 1.4 | 2 | < 0.1 < 0.2 | 7 | | | ● | ● | F31 F32 F60 F62 | |
| | CCGT 040101MFP-PF 040102MFP-PF | 2 | 2 | 4.3 | 1.8 | 2.4 | < 0.1 < 0.2 | 7 | | | ● | ● | | |
| | CCGT 060201MFP-PF 060202MFP-PF 060204MFP-PF | 2 | 2 | 6.35 | 2.38 | 3 | < 0.1 < 0.2 < 0.4 | 7 | | | ● | ● | | |
|  | CCGT 060201MFP-GF 060202MFP-GF 060204MFP-GF | 2 | 2 | 6.35 | 2.38 | 3 | < 0.1 < 0.2 < 0.4 | 7 | | | ● | ● | E26~E28 E54 F60~F62 F122 | |
| | CCGT 09T301MFP-GF 09T302MFP-GF 09T304MFP-GF | 2 | 2 | 9.525 | 3.97 | 4.7 | < 0.1 < 0.2 < 0.4 | 7 | | | ● | ● | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

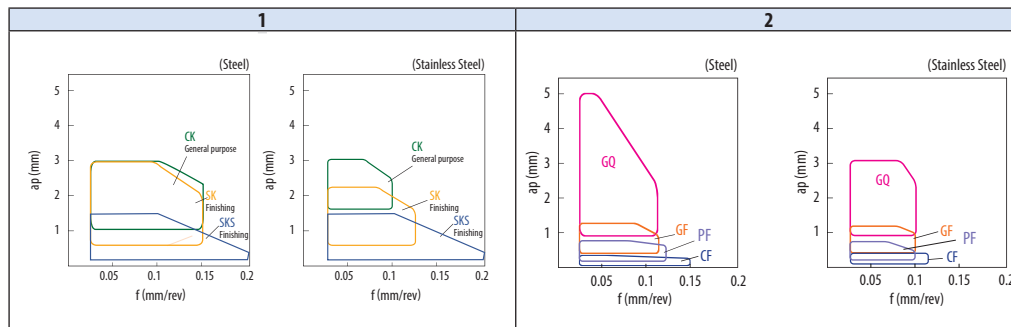
80° Rhombic

How to read pages of "Turning inserts" See page B15

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | | Angle (°) | Carbide | | | | Applicable toolholder | |
|---|--|------------------------------|----------------|------|-----|-----------------------------------|----|-----------|---------|-----|-----|-----|--|--------|
| | | | No. of edges | IC | S | D1 | RE | | AN | DLC | PVD | PVD | | Cermet |
| | | | | | | | | | | | | | | |
| Finishing Polished / Sharp Edge | CCGT 0602005MFP-SKS 060201MFP-SKS 060202MFP-SKS | 1 2 | 6.35 | 2.38 | 3 | < 0.05 < 0.1 < 0.2 | 7 | | | ● | ● | ● | E26, E28 E54 F31, F32 F60~F62 | |
| | CCGT 09T3005MFP-SKS 09T301MFP-SKS 09T302MFP-SKS 09T304MFP-SKS | 1 2 | 9.525 | 3.97 | 4.7 | < 0.05 < 0.1 < 0.2 < 0.4 | 7 | | | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |
| Finishing Polished / Sharp edge | CCGT 060201MFP-SK 060202MFP-SK 060204MFP-SK | 1 2 | 6.35 | 2.38 | 3 | < 0.1 < 0.2 < 0.4 | 7 | ● | ● | ● | ● | ● | E26, E28 E54 F31, F32 F60~F62 | |
| | CCGT 09T301MFP-SK 09T302MFP-SK 09T304MFP-SK | 1 2 | 9.525 | 3.97 | 4.7 | < 0.1 < 0.2 < 0.4 | 7 | ● | ● | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |
| Finishing Polished / Sharp edge | CCGT 060201MP-CK 060202MP-CK | 1 2 | 6.35 | 2.38 | 3 | < 0.1 < 0.2 | 7 | ● | ● | ● | ● | ● | E26, E28 E54 F31, F32 F60~F62 | |
| | CCGT 09T301MP-CK 09T302MP-CK | 1 2 | 9.525 | 3.97 | 4.7 | < 0.1 < 0.2 | 7 | ● | ● | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |
| Finishing - Medium Polished / Sharp edge | CCGT 060201MFP-GQ 060202MFP-GQ 060204MFP-GQ | 2 2 | 6.35 | 2.38 | 3 | < 0.1 < 0.2 < 0.4 | 7 | ● | ● | ● | ● | ● | E26, E28 E54 F31, F32 F60~F62 | |
| | CCGT 09T301MFP-GQ 09T302MFP-GQ 09T304MFP-GQ | 2 2 | 9.525 | 3.97 | 4.7 | < 0.1 < 0.2 < 0.4 | 7 | ● | ● | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item



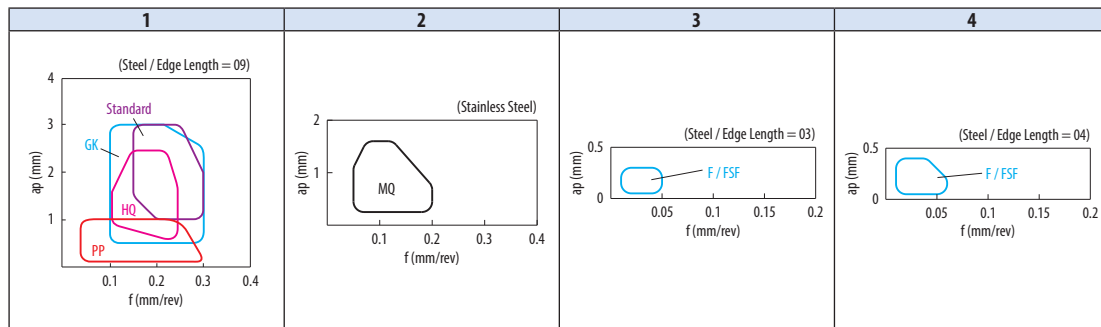
80° Rhombic

How to read pages of "Turning inserts" See page B15

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | | | Cermet | Applicable toolholder | |
|---|---|------------------------------|----------------|----------------|------|-----|--|-----------|---------|--------|--------|--------|--------|--------|--------|-----------------------|---------------------------------------|
| | | No. of edges | No. of inserts | IC | S | D1 | RE | | CVD | | PVD | | | | | | |
| | | | | | | | | CA6515 | CA6525 | PR0055 | PR0155 | PR1225 | PR1535 | PR1705 | PR1725 | | PR930 |
| Medium Sharp edge | CCGT 0602005MF 060201MF 060202MF 060204MF | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 < 0.1 < 0.2 < 0.4 | 7 | | | ● | ● | ● | ● | | | E26, E28 E54 F31,F32 F60~F62 |
| | CCGT 09T3005MF 09T301MF 09T302MF 09T304MF | 1 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 < 0.1 < 0.2 < 0.4 | 7 | | | ● | ● | ● | ● | | | E26~E28 E54 F60~F62 |
| Stainless steel/ Heat-resistant alloys Finishing - Medium | CCMT 09T304MQ 09T308MQ | 2 | 2 | 9.525 | 3.97 | 4.7 | 0.4 0.8 | 7 | ● | ● | ● | ● | ● | ● | ● | | F122 |
| Finishing Precision / Sharp edge | CCET 0301003R-FSF 0301003L-FSF 030101R-FSF 030101L-FSF 030102R-FSF 030102L-FSF 030104R-FSF 030104L-FSF | 3 | 2 | 3.5 | 1.4 | 1.9 | 0.03 0.03 0.1 0.1 0.2 0.2 0.4 0.4 | 7 | | | | | | | | | |
| | CCET 040101R-FSF 040101L-FSF 040102R-FSF 040102L-FSF 040104R-FSF 040104L-FSF | 4 | 2 | 4.3 | 1.8 | 2.3 | 0.1 0.1 0.2 0.2 0.4 0.4 | 7 | | | | | | | | | F31 F32 F60 F62 |
| Finishing Precision / Sharp edge | CCET 0301005ML-FSF 030101MR-FSF 030101ML-FSF 030102MR-FSF 030102ML-FSF 030104MR-FSF 030104ML-FSF | 3 | 2 | 3.5 | 1.4 | 1.9 | < 0.05 < 0.1 < 0.1 < 0.2 < 0.2 < 0.4 < 0.4 | 7 | | | ● | ● | ● | ● | | | F31 F32 F60 F62 |
| | CCET 0401005ML-FSF 040101MR-FSF 040101ML-FSF 040102MR-FSF 040102ML-FSF 040104MR-FSF 040104ML-FSF | 4 | 2 | 4.3 | 1.8 | 2.3 | < 0.05 < 0.1 < 0.1 < 0.2 < 0.2 < 0.4 < 0.4 | 7 | | | ● | ● | ● | ● | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

80° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Positive

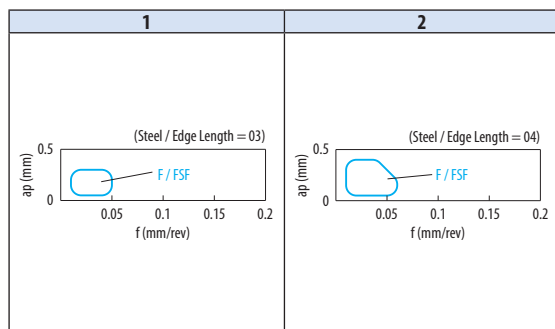


Ceramic

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Angle (°) | Carbide | | | | | | Cermet | | Applicable toolholder | | | | | | | |
|---------------|-------------|------------------------------|----------------|-----|-----|-----|-----------|---------|----|--------|--------|--------|--------|--------|--------|-----------------------|-----|---|-------|------|-------|-------|-------|
| | | | No. of edges | IC | S | D1 | | RE | AN | DLC | | PVD | | - | | | PVD | - | | | | | |
| | | | | | | | | | | PDL010 | PDL025 | PR1725 | PR1535 | PR1705 | PR1725 | | | | PR930 | KW10 | PV710 | PV720 | PV730 |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | CCET | 0301005MR-F | 1 | 2 | 3.5 | 1.4 | 1.9 | < 0.05 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| | 0301005ML-F | < 0.05 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 030101MR-F | < 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 030101ML-F | < 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 030102MR-F | < 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | 030102ML-F | < 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | 030104MR-F | < 0.4 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | 030104ML-F | < 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| | CCET | 040101MR-F | 2 | 2 | 4.3 | 1.8 | 2.3 | < 0.1 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| | 040101ML-F | < 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 040102MR-F | < 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 040102ML-F | < 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 040104MR-F | < 0.4 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 040104ML-F | < 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| Finishing | CCGT | 0301003L-F | 1 | 2 | 3.5 | 1.4 | 1.9 | 0.03 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| | 030101R-F | 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 030101L-F | 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 030102R-F | 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 030102L-F | 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 030104R-F | 0.4 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 030104L-F | 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | |
| | CCGT | 0401003L-F | 2 | 2 | 4.3 | 1.8 | 2.3 | 0.03 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| | 040101R-F | 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 040101L-F | 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 040102R-F | 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 040102L-F | 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | 040104R-F | 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| | 040104L-F | 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| CCGT | 0301005ML-F | 1 | 2 | 3.5 | 1.4 | 1.9 | < 0.05 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| 030101MR-F | < 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 030101ML-F | < 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 030102MR-F | < 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 030102ML-F | < 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 030104MR-F | < 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | |
| 030104ML-F | < 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | |
| CCGT | 0401005ML-F | 2 | 2 | 4.3 | 1.8 | 2.3 | < 0.05 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| 040101ML-F | < 0.1 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 040102MR-F | < 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 040102ML-F | < 0.2 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 040104MR-F | < 0.4 | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 040104ML-F | < 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

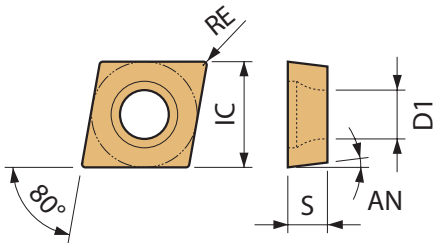
Applicable chipbreaker range


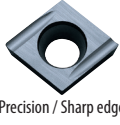



● : Standard item □ : Deleted from the next catalog

80° Rhombic

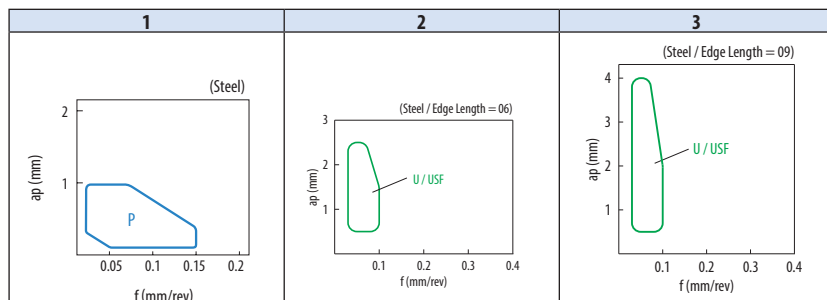
How to read pages of "Turning inserts" See page B15



| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Angle (°) | Carbide | | | | Cermet | | Applicable toolholder | | | | | |
|---|---|--|--|----|-------|-------|-----------|--|--|--------|--------|--------|-----|-----------------------|---|--------|--------|-----------------------------------|--|
| | | | No. of edges | IC | S | D1 | | AN | DLC | | PVD | | PVD | | - | | | | |
| | | | | | | | | | PDL010 | PDL025 | PR1225 | PR1535 | | | | PR1705 | PR1725 | PR930 | PV710 |
| Finishing  | CCET | 09T301MR-P 09T301ML-P 09T302MR-P 09T302ML-P 09T304MR-P 09T304ML-P | 1 | 2 | 9.525 | 3.97 | 4.4 | < 0.1 < 0.1 < 0.2 < 0.2 < 0.4 < 0.4 | 7 | | | ● | ● | | | | | E26~E28 E54 F60~F62 F122 | |
| | Low feed  | CCET | 0602003FR-USF 0602003FL-USF 060201FR-USF 060201FL-USF 060202FR-USF 060202FL-USF | 2 | 2 | 6.35 | 2.38 | 2.8 | 0.03 0.03 0.1 0.1 0.2 0.2 | 7 | | | ● | ● | | | | | E26 E28 E54 F31 F32 F60~F62 |
| | | CCET | 09T3003FR-USF 09T3003FL-USF 09T301FR-USF 09T301FL-USF 09T302FR-USF 09T302FL-USF | 3 | 2 | 9.525 | 3.97 | 4.4 | 0.03 0.03 0.1 0.1 0.2 0.2 | 7 | | | ● | ● | | | | | E26~E28 E54 F60~F62 F122 |
| | | CCET | 0602005MFR-USF 0602005MFL-USF 060201MFR-USF 060201MFL-USF 060202MFR-USF 060202MFL-USF | 2 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 < 0.05 < 0.1 < 0.1 < 0.2 < 0.2 | 7 | | | ● | ● | | | | | E26 E28 E54 F31 F32 F60~F62 |
| | | CCET | 09T3005MFR-USF 09T3005MFL-USF 09T301MFR-USF 09T301MFL-USF 09T302MFR-USF 09T302MFL-USF | 3 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 < 0.05 < 0.1 < 0.1 < 0.2 < 0.2 | 7 | | | ● | ● | | | | | E26~E28 E54 F60~F62 F122 |
| Low feed  | | CCET | 0602005MFR-U 0602005MFL-U 060201MFR-U 060201MFL-U 060202MFR-U 060202MFL-U | 2 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 < 0.05 < 0.1 < 0.1 < 0.2 < 0.2 | 7 | | | ● | ● | ● | ● | ● | ● | E26 E28 E54 F31 F32 F60~F62 |
| | CCET | 09T3005MFL-U 09T3005MFR-U 09T301MFL-U 09T301MFR-U 09T302MFL-U 09T302MFR-U 09T304MFL-U 09T304MFR-U | 3 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 < 0.05 < 0.1 < 0.1 < 0.2 < 0.2 < 0.4 < 0.4 | 7 | | | ● | ● | ● | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |

Applicable chipbreaker range

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).



● : Standard item

B



Turning indexable inserts

80° Rhombic

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

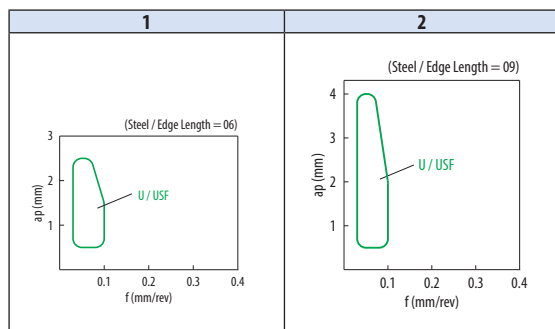
W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Material | | | | Applicable toolholder |
|-------------------|---|------------------------------|---------------------|----------------|------|-----|--------|-----------|----------|---------|------|--|-----------------------|
| | | No. of edges | No. of chipbreakers | IC | S | D1 | RE | | AN | Carbide | | Cermet | |
| | | | | | | | | PR1225 | | PR330 | KW10 | | |
| <p>Sharp edge</p> | CCGT 0602003FR-U 0602003FL-U 060201FR-U 060201FL-U 060202FR-U 060202FL-U | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.03 | 7 | ● | ● | ● | E26 E28 E54 F31 F32 F60~F62 | |
| | | | | | | | 0.03 | | ● | ● | ● | | |
| | | | | | | | 0.1 | | ● | ● | ● | | |
| | | | | | | | 0.1 | | ● | ● | ● | | |
| | | | | | | | 0.2 | | ● | ● | ● | | |
| | | | | | | | 0.2 | | ● | ● | ● | | |
| | CCGT 09T3003FR-U 09T3003FL-U 09T301FR-U 09T301FL-U 09T302FR-U 09T302FL-U | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.03 | 7 | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |
| | | | | | | | 0.03 | | ● | ● | ● | | |
| | | | | | | | 0.1 | | ● | ● | ● | | |
| | | | | | | | 0.1 | | ● | ● | ● | | |
| | | | | | | | 0.2 | | ● | ● | ● | | |
| | | | | | | | 0.2 | | ● | ● | ● | | |
| | CCGT 0602005MFR-U 0602005MFL-U 060201MFR-U 060201MFL-U 060202MFR-U 060202MFL-U 060204MFR-U 060204MFL-U | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 | 7 | ● | ● | ● | E26 E28 E54 F31 F32 F60~F62 | |
| | | | | | | | < 0.05 | | ● | ● | ● | | |
| | | | | | | | < 0.1 | | ● | ● | ● | | |
| | | | | | | | < 0.1 | | ● | ● | ● | | |
| | | | | | | | < 0.2 | | ● | ● | ● | | |
| | | | | | | | < 0.2 | | ● | ● | ● | | |
| | CCGT 09T3005MFR-U 09T3005MFL-U 09T301MFR-U 09T301MFL-U 09T302MFR-U 09T302MFL-U 09T304MFR-U 09T304MFL-U | 2 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | 7 | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |
| | | | | | | | < 0.05 | | ● | ● | ● | | |
| | | | | | | | < 0.1 | | ● | ● | ● | | |
| | | | | | | | < 0.1 | | ● | ● | ● | | |
| | | | | | | | < 0.2 | | ● | ● | ● | | |
| | | | | | | | < 0.2 | | ● | ● | ● | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

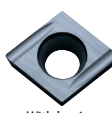
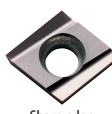
Applicable chipbreaker range



● : Standard item

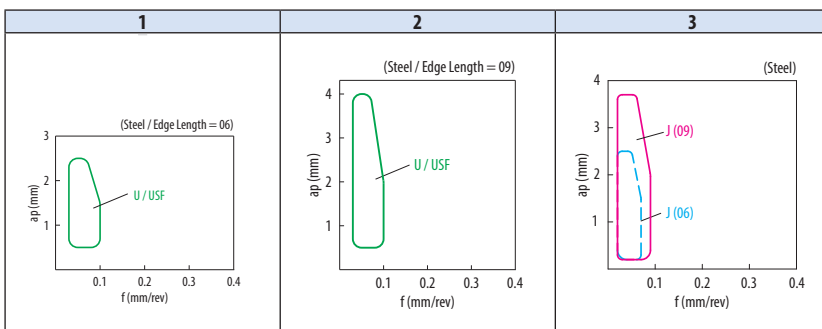
80° Rhombic

How to read pages of "Turning inserts" See page B15

| Insert | | Description | | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Material | | | | | | Applicable toolholder | | | | | | | | | | | |
|---|------|--------------|-------------|------------------------------|---|----------------|------|-----|--------|-----------|----------|---------|--------|--------|--------|-------|-----------------------|-------|-------|------|----------|---------|--------------|----|---|-----|-----|----------|
| | | | | | | IC | S | D1 | RE | | AN | Carbide | | | Cermet | | | | | | | | | | | | | |
| | | | | | | | | | | | | PR1225 | PR1535 | PR1725 | PR930 | PV710 | | PV720 | PV730 | Ti60 | Ti610 | Ti620 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | No. of edges | IC | S | D1 | RE | AN |
| Low feed  | CCGT | 060201ER-U | 060201EL-U | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.1 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E26 | | | | | | | |
| | | 060202ER-U | 060202EL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E28 | |
| | | 060204ER-U | 060204EL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E54 |
| | | 060202MEL-U | 060202MEL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F31 |
| | | 060204MEL-U | 060204MEL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F32 |
| | | 060204MEL-U | 060204MEL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F60~F62 |
| | CCGT | 09T301ER-U | 09T301EL-U | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.1 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E26~E28 | | | | | | |
| | | 09T302ER-U | 09T302EL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E54 | |
| | | 09T304ER-U | 09T304EL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F60~F62 |
| | | 09T302MEL-U | 09T302MEL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F122 |
| | | 09T304MEL-U | 09T304MEL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F122 |
| | | 09T304MEL-U | 09T304MEL-U | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F122 |
| Low feed  | CCET | 0602005MFR-J | 060201MFR-J | 3 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E26, E28 | | | | | | | |
| | | 060201MFL-J | 060202MFR-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E54 | | |
| | | 060202MFL-J | 060202MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F31, F32 |
| | | 060202MFL-J | 060202MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F60~F62 |
| | | 060202MFL-J | 060202MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F60~F62 |
| | | 060202MFL-J | 060202MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F60~F62 |
| | CCET | 09T301MFR-J | 09T301MFL-J | 3 | 2 | 9.525 | 3.97 | 4.4 | < 0.1 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E26~E28 | | | | | | |
| | | 09T302MFR-J | 09T302MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E54 | |
| | | 09T304MFR-J | 09T304MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F60~F62 |
| | | 09T302MFL-J | 09T302MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F122 |
| | | 09T304MFL-J | 09T304MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F122 |
| | | 09T304MFL-J | 09T304MFL-J | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | F122 |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

80° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Positive

C

D

R


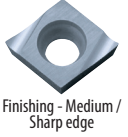


S

T

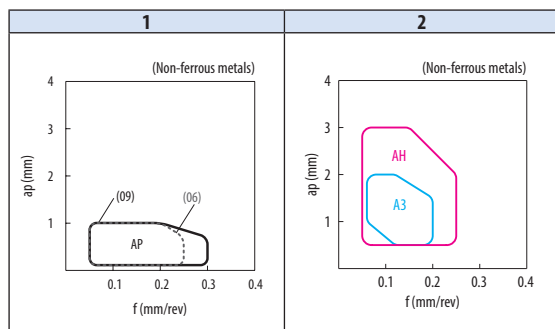
V

W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | | Angle (°) | Carbide | | | Applicable toolholder |
|--|---|------------------------------|--------------|----------------|------|-----|--|----|-----------|---------|------|--------------------------------------|-----------------------|
| | | No. of edges | No. of edges | IC | S | D1 | RE | AN | DLC | | | | |
| | | | | | | | | | PDL010 | PDL025 | KW10 | | |
|  Finishing / Sharp edge | CCGT 060202AP 060204AP | 1 | 2 | 6.35 | 2.38 | 3 | 0.2 0.4 | 7 | ● | ● | ● | E26, E28, E54 F31, F32 F60~F62 | |
| | CCGT 09T302AP 09T304AP 09T308AP | 1 | 2 | 9.525 | 3.97 | 4.7 | 0.2 0.4 0.8 | 7 | ● | ● | ● | E26~E28 E54 | |
|  Finishing - Medium / Sharp edge | CCGT 09T302R-A3 09T302L-A3 09T304R-A3 09T304L-A3 09T308R-A3 09T308L-A3 | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.2 0.2 0.4 0.4 0.8 0.8 | 7 | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |
| | CCGT 120402R-A3 120402L-A3 120404R-A3 120404L-A3 120408R-A3 120408L-A3 | 2 | 2 | 12.7 | 4.76 | 5.5 | 0.2 0.2 0.4 0.4 0.8 0.8 | 7 | ● | ● | ● | E28 | |
|  Finishing - Medium / Sharp edge | CCGT 09T304AH 09T308AH | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.4 0.8 | 7 | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |
|  Without Chipbreaker | CCGW 060201 060202 | - | 2 | 6.35 | 2.38 | 2.8 | 0.1 0.2 | 7 | ● | ● | ● | E26, E28, E54 F31, F32 F60~F62 | |
| | CCGW 09T300 09T301 09T302 09T304 | - | 2 | 9.525 | 3.97 | 4.4 | 0 0.1 0.2 0.4 | 7 | ● | ● | ● | E26~E28 E54 F60~F62 F122 | |

Applicable chipbreaker range



● : Standard item

55° Rhombic

How to read pages of "Turning inserts" See page B15

Turning indexable inserts

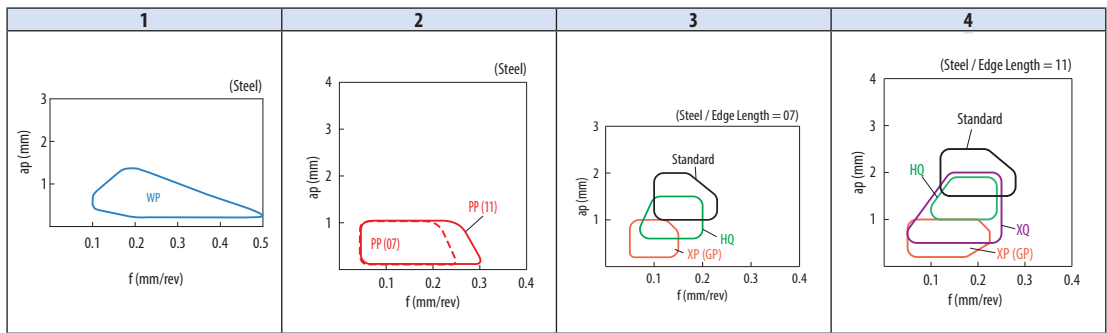


| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | | Angle (°) | Material | | | | | | | | | | Applicable toolholder | | | | | | |
|---|---|------------------------------|----------------|-------|------|-----|-------------------------|-----------|----------|---------|-------|-------|-------|-------|--------|--------|--------|--------|-----------------------|--------|--------|-------|-----|-------|-------|
| | | | No. of edges | IC | S | D1 | RE | | AN | Carbide | | | | | Cermet | | | | | | | | | | |
| | | | | | | | | | | CVD | | PVD | | | CVD | | PVD | | | - | | | | | |
| | | | | | | | | | | CA02SP | CA510 | CA515 | CA525 | CA530 | CA5515 | CA5525 | PR1725 | PR1535 | | PR1705 | PR1725 | PR830 | CCY | PV710 | PV720 |
| Finishing - Medium Polished / Sharp edge | DCGT 070201MFP-GQ 070202MFP-GQ 070204MFP-GQ | B68 1 | 2 | 6.35 | 2.38 | 3 | < 0.1 < 0.2 < 0.4 | 7 | | | | | | | | | | | | | | | | | *1 |
| | DCGT 11T301MFP-GQ 11T302MFP-GQ 11T304MFP-GQ | B68 1 | 2 | 9.525 | 3.97 | 4.7 | < 0.1 < 0.2 < 0.4 | 7 | | | | | | | | | | | | | | | | | *2 |
| Finishing With Wiper Edge | DCMX 070202WP 070204WP 070208WP | 1 | 2 | 6.35 | 2.38 | 3 | 0.2 0.4 0.8 | 7 | | | | | | | | | | | | | | | | | *1 |
| | DCMX 11T302WP 11T304WP 11T308WP | 1 | 2 | 9.525 | 3.97 | 4.7 | 0.2 0.4 0.8 | 7 | | | | | | | | | | | | | | | | | *2 |
| Finishing With Wiper Edge | DCMX 070204R-WP 070204L-WP | 1 | 2 | 6.35 | 2.38 | 3 | 0.4 | 7 | | | | | | | | | | | | | | | | | *1 |
| | DCMX 11T304R-WP 11T304L-WP | 1 | 2 | 9.525 | 3.97 | 4.7 | 0.4 | 7 | | | | | | | | | | | | | | | | | *2 |
| Finishing | DCMT 070202PP 070204PP | 2 | 2 | 6.35 | 2.38 | 3 | 0.2 0.4 | 7 | | | | | | | | | | | | | | | | | *1 |
| | DCMT 11T302PP 11T304PP 11T308PP | 2 | 2 | 9.525 | 3.97 | 4.7 | 0.2 0.4 0.8 | 7 | | | | | | | | | | | | | | | | | *2 |
| Finishing | DCMT 070202GP 070204GP | 3 | 2 | 6.35 | 2.38 | 2.8 | 0.2 0.4 | 7 | | | | | | | | | | | | | | | | | *1 |
| | DCMT 11T304GP 11T308GP | 4 | 2 | 9.525 | 3.97 | 4.4 | 0.4 0.8 | 7 | | | | | | | | | | | | | | | | | *2 |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).
See "Precautions when using Wiper inserts" in the R36 and R37 for WP chipbreaker.

- *1: DC...07type E29, E31, E34 E35, E55, E56, F66~F68, F70~F72, F74~F76
- *2: DC...11type E23, E29~E32, E34, E35, E55, E56 F66~F68, F70~F72, F74~F76, F123

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

55° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Positive

C

D

R

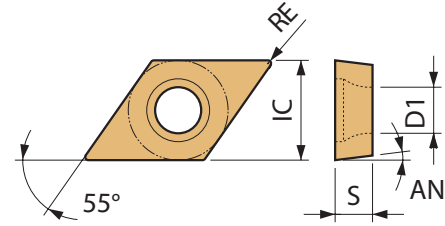
S

T

V

W

Ceramic

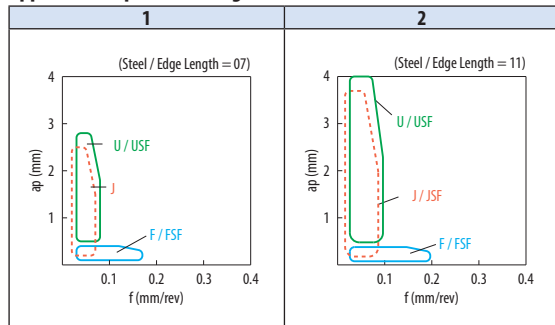
| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Angle (°) | Carbide | | Cermet | | Applicable toolholder | |
|--|--------------------|------------------------------|----------------|-------|------|--------|-----------|---------|------------------|----------------------------|----------------------------------|-----------------------|------------------------|
| | | | IC | S | D1 | RE | | AN | DLC | PVD | PVD | | - |
| | | | | | | | | | PDL010 PDL025 | PR1725 PR1535 PR1705 | PR930 PV710 PV720 PV730 | | TN60 TN610 TN620 |
|  Finishing Precision / Sharp edge | DCET 0702003R-FSF | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.03 | | | | | *1 | |
| | 0702003L-FSF | | | | | | 0.03 | | | | | | |
| | 070201R-FSF | | | | | | 0.1 | | | | | | |
| | 070201L-FSF | | | | | | 0.1 | | | | | | |
| | 070202R-FSF | | | | | | 0.2 | | | | | | |
| | 070202L-FSF | | | | | | 0.2 | | | | | | |
| | 070204R-FSF | | | | | | 0.4 | | | | | | |
| | 070204L-FSF | 0.4 | | | | | | | | | | | |
| | DCET 11T3003R-FSF | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.03 | | | | | *2 | |
| | 11T301R-FSF | | | | | | 0.1 | | | | | | |
| | 11T301L-FSF | | | | | | 0.1 | | | | | | |
| | 11T302R-FSF | | | | | | 0.2 | | | | | | |
| | 11T302L-FSF | | | | | | 0.2 | | | | | | |
| | 11T304R-FSF | | | | | | 0.4 | | | | | | |
| | 11T304L-FSF | 0.4 | | | | | | | | | | | |
| | DCET 0702005MR-FSF | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 | | | | | *1 | |
| | 0702005ML-FSF | | | | | | < 0.05 | | | | | | |
| | 070201MR-FSF | | | | | | < 0.1 | | | | | | |
| 070201ML-FSF | < 0.1 | | | | | | | | | | | | |
| 070202MR-FSF | < 0.2 | | | | | | | | | | | | |
| 070202ML-FSF | < 0.2 | | | | | | | | | | | | |
| 070204MR-FSF | < 0.4 | | | | | | | | | | | | |
| 070204ML-FSF | < 0.4 | | | | | | | | | | | | |
| DCET 11T3005MR-FSF | 2 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | | | | | *2 | | |
| 11T301MR-FSF | | | | | | < 0.1 | | | | | | | |
| 11T302MR-FSF | | | | | | < 0.2 | | | | | | | |
| 11T302ML-FSF | | | | | | < 0.2 | | | | | | | |
| 11T304MR-FSF | | | | | | < 0.4 | | | | | | | |
| 11T304ML-FSF | | | | | | < 0.4 | | | | | | | |
| DCET 0702005MR-F | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 | | | | | *1 | | |
| 0702005ML-F | | | | | | < 0.05 | | | | | | | |
| 070201MR-F | | | | | | < 0.1 | | | | | | | |
| 070201ML-F | | | | | | < 0.1 | | | | | | | |
| 070202MR-F | | | | | | < 0.2 | | | | | | | |
| 070202ML-F | | | | | | < 0.2 | | | | | | | |
| 070204MR-F | | | | | | < 0.4 | | | | | | | |
| 070204ML-F | < 0.4 | | | | | | | | | | | | |
| DCET 11T3005MR-F | 2 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | | | | | *2 | | |
| 11T301MR-F | | | | | | < 0.1 | | | | | | | |
| 11T301ML-F | | | | | | < 0.1 | | | | | | | |
| 11T302MR-F | | | | | | < 0.2 | | | | | | | |
| 11T302ML-F | | | | | | < 0.2 | | | | | | | |
| 11T304MR-F | | | | | | < 0.4 | | | | | | | |
| 11T304ML-F | < 0.4 | | | | | | | | | | | | |

Applicable chipbreaker range

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc) indicate models with minus tolerance on corner-R(RE).

*1: DC..07type E29, E31, E34 E35, E55, E56, F66~F68, F70~F72, F74~F76

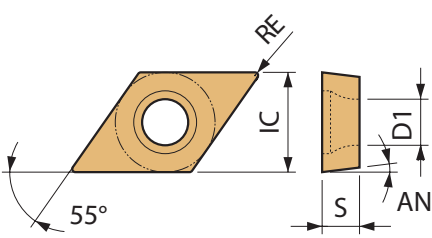
*2: DC..11type E23, E29~E32, E34, E35, E55, E56 F66~F68, F70~F72, F74~F76, F123

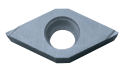


● : Standard item

55° Rhombic

How to read pages of "Turning inserts" See page B15



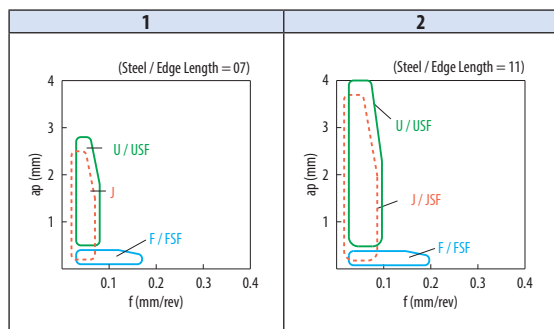
| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Applicable toolholder | | | |
|--|------------------|------------------------------|----------------|----------------|------|--------|--------|-----------|-----------------------|---------|--------|----|
| | | No. of edges | No. of inserts | IC | S | D1 | RE | | AN | Carbide | Cermet | |
| Finishing  | DCGT 0702003R-F | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.03 | 7 | ● | ● | ● | *1 |
| | DCGT 0702003L-F | | | | | | 0.03 | | ● | ● | | |
| | DCGT 070201R-F | | | | | | 0.1 | | ● | ● | | |
| | DCGT 070201L-F | | | | | | 0.1 | | ● | ● | | |
| | DCGT 070202R-F | | | | | | 0.2 | | ● | ● | | |
| | DCGT 070202L-F | | | | | | 0.2 | | ● | ● | | |
| | DCGT 070204R-F | | | | | | 0.4 | | ● | ● | | |
| | DCGT 070204L-F | 0.4 | ● | ● | | | | | | | | |
| | DCGT 11T3003R-F | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.03 | 7 | ● | ● | ● | *2 |
| | DCGT 11T3003L-F | | | | | | 0.03 | | ● | ● | | |
| | DCGT 11T301R-F | | | | | | 0.1 | | ● | ● | | |
| | DCGT 11T301L-F | | | | | | 0.1 | | ● | ● | | |
| | DCGT 11T302R-F | | | | | | 0.2 | | ● | ● | | |
| | DCGT 11T302L-F | | | | | | 0.2 | | ● | ● | | |
| | DCGT 11T304R-F | | | | | | 0.4 | | ● | ● | | |
| | DCGT 11T304L-F | 0.4 | ● | ● | | | | | | | | |
| | DCGT 0702005MR-F | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 | 7 | ● | ● | ● | *1 |
| | DCGT 0702005ML-F | | | | | | < 0.05 | | ● | ● | | |
| | DCGT 070201MR-F | | | | | | < 0.1 | | ● | ● | | |
| | DCGT 070201ML-F | | | | | | < 0.1 | | ● | ● | | |
| | DCGT 070202MR-F | | | | | | < 0.2 | | ● | ● | | |
| | DCGT 070202ML-F | | | | | | < 0.2 | | ● | ● | | |
| | DCGT 070204MR-F | | | | | | < 0.4 | | ● | ● | | |
| | DCGT 070204ML-F | < 0.4 | ● | ● | | | | | | | | |
| DCGT 11T3005MR-F | 2 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | 7 | ● | ● | ● | *2 | |
| DCGT 11T301MR-F | | | | | | < 0.1 | | ● | ● | | | |
| DCGT 11T301ML-F | | | | | | < 0.1 | | ● | ● | | | |
| DCGT 11T302MR-F | | | | | | < 0.2 | | ● | ● | | | |
| DCGT 11T302ML-F | | | | | | < 0.2 | | ● | ● | | | |
| DCGT 11T304MR-F | | | | | | < 0.4 | | ● | ● | | | |
| DCGT 11T304ML-F | | | | | | < 0.4 | | ● | ● | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

*1: DC..07type E29, E31, E34 E35, E55, E56, F66~F68, F70~F72, F74~F76

*2: DC..11type E23, E29~E32, E34, E35, E55, E56 F66~F68, F70~F72, F74~F76, F123

Applicable chipbreaker range



● : Standard item



55° Rhombic

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

W

Ceramic

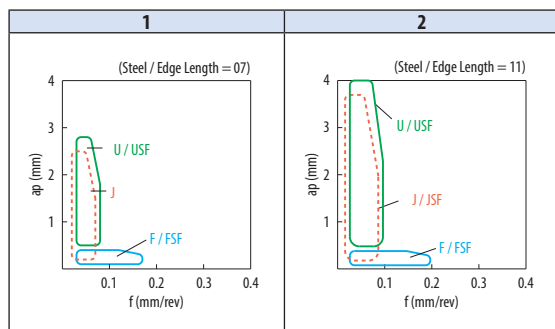
| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | | | Cermet | | Applicable toolholder | | | | | | | | | |
|---|--|------------------------------|-------|----------------|------|--------|--------|-----------|---------|----|--------|--------|--------|--------|--------|--------|-----------------------|---|-------|-------|-------|-------|------|-------|-------|--|
| | | | | No. of edges | IC | S | D1 | | RE | AN | DLC | | | PVD | | | | - | | | | | | | | |
| | | | | | | | | | | | PDL010 | PDL025 | PR1225 | PR1535 | PR1705 | PR1725 | | | PR930 | PV710 | PV720 | PV730 | TN60 | TN610 | TN620 | |
| Precision / Sharp edge | DCET 0702003FR-USF 0702003FL-USF 070201FR-USF 070201FL-USF 070202FR-USF 070202FL-USF | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.03 | 7 | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.03 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.1 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.1 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | |
| | DCET 11T3003FR-USF 11T3003FL-USF 11T301FR-USF 11T301FL-USF 11T302FR-USF 11T302FL-USF | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.03 | 7 | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.03 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.1 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.1 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | |
| DCET 0702005MFR-USF 070201MFR-USF 070202MFR-USF 070202MFL-USF | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 | 7 | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.1 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| DCET 11T3005MFR-USF 11T301MFR-USF 11T301MFL-USF 11T302MFR-USF 11T302MFL-USF | 2 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | 7 | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.1 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.1 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| DCET 0702003FR-U 0702005MFR-U 070201MFR-U 070201MFL-U 070202MFR-U 070202MFL-U | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.03 | 7 | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.05 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | < 0.1 | | | | | | | | | | | | | | | | | | | | |
| | DCET 11T3005MFR-U 11T301MFR-U 11T301MFL-U 11T302MFR-U 11T302MFL-U 11T304MFR-U | 2 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | 7 | | | | | | | | | | | | | | | | | | |
| | | | | | | | < 0.1 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | < 0.1 | | | | | | | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

*1: DC..07type E29, E31, E34 E35, E55, E56, F66~F68, F70~F72, F74~F76

*2: DC..11type E23, E29~E32, E34, E35, E55, E56 F66~F68, F70~F72, F74~F76, F123

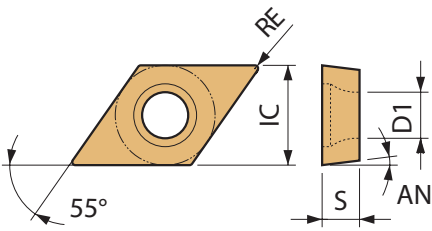
Applicable chipbreaker range

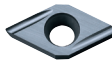


● : Standard item

55° Rhombic

How to read pages of "Turning inserts" See page B15



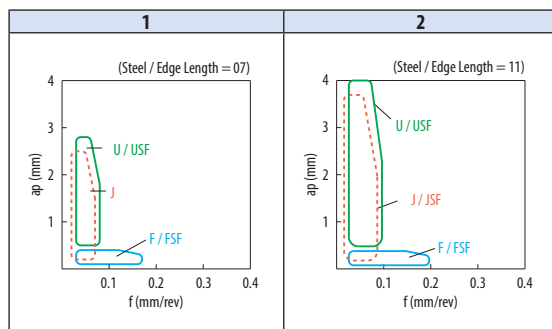
| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | Cermet | Applicable toolholder |
|---|-------------------|------------------------------|----------------|----------------|------|--------|--------|-----------|---------|-------|------|------|--------|-----------------------|
| | | No. of edges | No. of inserts | IC | S | D1 | RE | | AN | PVD | | | | |
| | | | | | | | | PR1225 | | PR830 | KM10 | PV90 | TN60 | |
| Low feed  | DCGT 0702003FR-U | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.03 | 7 | ● | ● | ● | ● | ● | ● |
| | 0702003FL-U | | | | | | 0.03 | | | | | | | |
| | 070201FR-U | | | | | | 0.1 | | | | | | | |
| | 070201FL-U | | | | | | 0.1 | | | | | | | |
| | 070202FR-U | | | | | | 0.2 | | | | | | | |
| | 070202FL-U | | | | | | 0.2 | | | | | | | |
| | DCGT 11T3003FR-U | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.03 | 7 | ● | ● | ● | ● | ● | ● |
| | 11T3003FL-U | | | | | | 0.03 | | | | | | | |
| | 11T301FR-U | | | | | | 0.1 | | | | | | | |
| | 11T301FL-U | | | | | | 0.1 | | | | | | | |
| | 11T302FR-U | | | | | | 0.2 | | | | | | | |
| | 11T302FL-U | 0.2 | | | | | | | | | | | | |
| | DCGT 0702005MFR-U | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 | 7 | ● | ● | ● | ● | ● | ● |
| | 0702005MFL-U | | | | | | < 0.05 | | | | | | | |
| | 070201MFR-U | | | | | | < 0.1 | | | | | | | |
| | 070201MFL-U | | | | | | < 0.1 | | | | | | | |
| | 070202MFR-U | | | | | | < 0.2 | | | | | | | |
| | 070202MFL-U | | | | | | < 0.2 | | | | | | | |
| | 070204MFR-U | | | | | | < 0.4 | | | | | | | |
| | 070204MFL-U | < 0.4 | | | | | | | | | | | | |
| DCGT 11T3005MFR-U | 3 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | 7 | ● | ● | ● | ● | ● | ● | |
| 11T301MFR-U | | | | | | < 0.1 | | | | | | | | |
| 11T301MFL-U | | | | | | < 0.1 | | | | | | | | |
| 11T302MFR-U | | | | | | < 0.2 | | | | | | | | |
| 11T302MFL-U | | | | | | < 0.2 | | | | | | | | |
| 11T304MFR-U | | | | | | < 0.4 | | | | | | | | |
| 11T304MFL-U | < 0.4 | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

*1: DC..07type E29, E31, E34 E35, E55, E56, F66~F68, F70~F72, F74~F76

*2: DC..11type E23, E29~E32, E34, E35, E55, E56 F66~F68, F70~F72, F74~F76, F123

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

B
Turning indexable inserts

55° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

W

Ceramic

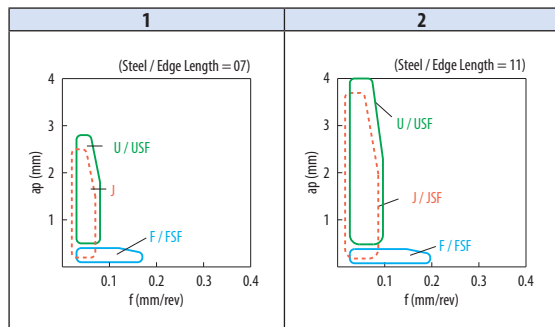
| Insert | | Description | Applicable chipbreaker range | Dimension (mm) | | | | Angle (°) | Carbide | | | Cermet | | | Applicable toolholder | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | No. of edges | | IC | S | | D1 | RE | AN | PVD | PVD | - | | PVD | PVD | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <table border="1"> <tr> <td>Free-cutting steel</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>P</td> </tr> <tr> <td>Carbon steel / Alloy steel</td> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>P</td> </tr> <tr> <td>Stainless steel</td> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>M</td> </tr> <tr> <td>Gray cast iron</td> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>K</td> </tr> <tr> <td>Nodular cast iron</td> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>K</td> </tr> <tr> <td>Non-ferrous metals</td> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>N</td> </tr> <tr> <td>Heat-resistant alloy</td> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>S</td> </tr> <tr> <td>Titanium alloy</td> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>S</td> </tr> <tr> <td>Hard materials</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td> </tr> </table> | | | | | | | | | | | | | | | | Free-cutting steel | | | | | | | | | | | | | | | | P | Carbon steel / Alloy steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | P | Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | M | Gray cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | K | Nodular cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | K | Non-ferrous metals | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | N | Heat-resistant alloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | S | Titanium alloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | S | Hard materials | | | | | | | | | | | | | | | | H |
| Free-cutting steel | | | | | | | | | | | | | | | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carbon steel / Alloy steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gray cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nodular cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-ferrous metals | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat-resistant alloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Titanium alloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hard materials | | | | | | | | | | | | | | | | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low feed With honing | DCGT | 070201ER-U | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.1 | 7 | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 070201EL-U | | | | | | 0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 070202ER-U | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 070202EL-U | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 070204ER-U | | | | | | 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 070204EL-U | | | | | | 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DCGT | 11T301ER-U | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.1 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T301EL-U | | | | | | 0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T302ER-U | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T302EL-U | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T304ER-U | | | | | | 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T304EL-U | | | | | | 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DCGT | 070201MER-U | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.1 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 070202MER-U | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 070202MEL-U | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 070204MER-U | | | | | | < 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 070204MEL-U | | < 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DCGT | | 11T301MER-U | | | | | | 2 | | | | | | | | | | 2 | 9.525 | 3.97 | 4.4 | < 0.1 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11T301MEL-U | < 0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11T302MER-U | < 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11T302MEL-U | < 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11T304MER-U | < 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11T304MEL-U | < 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low feed Precision / Sharp edge | DCET | 11T3003FR-JSF | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.03 | 7 | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T3003FL-JSF | | | | | | 0.03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T301FR-JSF | | | | | | 0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T301FL-JSF | | | | | | 0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T302FR-JSF | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T302FL-JSF | | | | | | 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DCET | 11T3005MFR-JSF | 2 | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T301MFR-JSF | | | | | | < 0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T302MFR-JSF | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11T302MFL-JSF | | | | | | < 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

*1: DC.07type E29, E31, E34 E35, E55, E56, F66~F68, F70~F72, F74~F76

*2: DC.11type E23, E29~E32, E34, E35, E55, E56 F66~F68, F70~F72, F74~F76, F123

Applicable chipbreaker range



● : Standard item

55° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

W

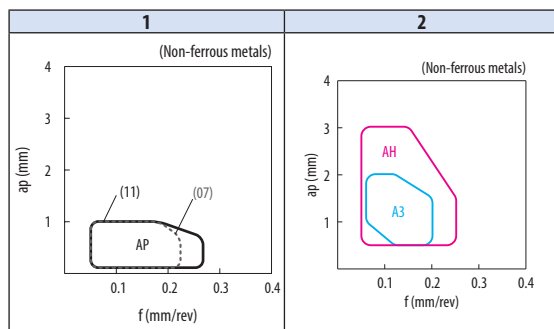
Ceramic

| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | | Angle (°) | Carbide | | | Applicable toolholder | |
|---|---------------------------------------|------------------------------|----------------|-------|------|------|-------------------|------------|---------|--------|--------|-----------------------|------|
| | | | No. of edges | IC | S | D1 | RE | | AN | DLC | | | |
| | | | | | | | | | | PDL010 | PDL025 | | KW10 |
| Non-Ferrous Metals Finishing / Sharp edge | DCGT 070202AP 070204AP | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.2 0.4 | 7 | ● | ● | ● | *1 | |
| | DCGT 11T302AP 11T304AP 11T308AP | 1 | 2 | 9.525 | 3.97 | 4.4 | 0.2 0.4 0.8 | 7 | ● | ● | ● | | |
| Non-Ferrous Metals Finishing - Medium / Sharp edge | DCGT 11T302R-A3 | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.2 | 7 | ● | ● | ● | *2 | |
| | 11T302L-A3 | | | | | | 0.2 | | ● | ● | ● | | |
| | 11T304R-A3 | | | | | | 0.4 | | ● | ● | ● | | |
| | 11T304L-A3 | | | | | | 0.4 | | ● | ● | ● | | |
| | 11T308R-A3 11T308L-A3 | | | | | | 0.8 0.8 | | ● | ● | ● | | |
| Non-Ferrous Metals Finishing - Medium / Sharp edge | DCGT 11T304AH 11T308AH | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.4 0.8 | 7 | ● | ● | ● | | |
| | Cast iron Without Chipbreaker | DCGW 070201 070202 | - | 2 | 6.35 | 2.38 | 2.8 | 0.1 0.2 | 7 | ● | ● | ● | *1 |
| DCGW 11T301 11T302 11T304 | | - | 2 | 9.525 | 3.97 | 4.4 | 0.1 0.2 0.4 | 7 | ● | ● | ● | *2 | |

*1: DC..07type E29, E31, E34 E35, E55, E56, F66~F68, F70~F72, F74~F76

*2: DC..11type E23, E29~E32, E34, E35, E55, E56 F66~F68, F70~F72, F74~F76, F123

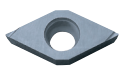
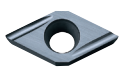
Applicable chipbreaker range



● : Standard item

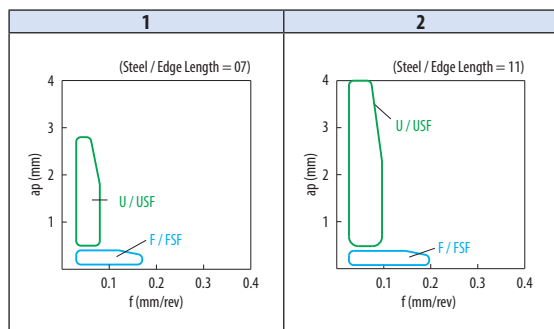
55° Rhombic

How to read pages of "Turning inserts" See page B15

| | | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | Cermet | Applicable toolholder | | | | | | | |
|---|----------------|------------------------------|----|----------------|-------|------|----------------|-------------------------|---------|--------|-----------------------|--------------------|------|-----|--------|----|---|-----|
| Insert | Description | No. of edges | IC | S | D1 | RE | AN | PRI725 PR930 TK60 | - | | | | | | | | | |
| | | | | | | | | | | | | Free-cutting steel | | | | | | |
| | | Carbon steel / Alloy steel | | | | | | | | M | | | | | | | | |
| | | Stainless steel | | | | | | | | K | | | | | | | | |
| | | Gray cast iron | | | | | | | | N | | | | | | | | |
| | | Nodular cast iron | | | | | | | | S | | | | | | | | |
| | | Non-ferrous metals | | | | | | | | H | | | | | | | | |
| | | Heat-resistant alloy | | | | | | | | | | | | | | | | |
| | | Titanium alloy | | | | | | | | | | | | | | | | |
| | | Hard materials | | | | | | | | | | | | | | | | |
| Finishing  Precision / Sharp edge | DPET | 0702003R-FSF | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.03 | 11 | ● | E37 | | | | | | | |
| | | 070201R-FSF | | | | | | 0.1 | | ● | | | | | | | | |
| | | 070202R-FSF | | | | | | 0.2 | | ● | | | | | | | | |
| | | 070202L-FSF | | | | | | 0.2 | | ● | | | | | | | | |
| | DPET | 11T3003R-FSF | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.03 | 11 | ● | E37 | | | | | | | |
| | | 11T301R-FSF | | | | | | 0.1 | | ● | | | | | | | | |
| | | 11T302R-FSF | | | | | | 0.2 | | ● | | | | | | | | |
| | | 11T302L-FSF | | | | | | 0.2 | | ● | | | | | | | | |
| DPET | 070202MR-FSF | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.2 | 11 | ● | E37 | | | | | | | | |
| | 070202ML-FSF | | | | | | | | ● | | | | | | | | | |
| | DPET | | | | | | 11T3005MR-FSF | | 2 | | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | 11 | ● | E37 |
| | | | | | | | 11T301MR-FSF | | | | | | | | < 0.1 | | ● | |
| 11T302MR-FSF | | < 0.2 | ● | | | | | | | | | | | | | | | |
| Low feed  Precision / Sharp edge | DPET | 0702003FR-USF | 1 | 2 | 6.35 | 2.38 | 2.8 | 0.03 | 11 | ● | E37 | | | | | | | |
| | | 070201FR-USF | | | | | | 0.1 | | ● | | | | | | | | |
| | | 070201FL-USF | | | | | | 0.1 | | ● | | | | | | | | |
| | | 070202FR-USF | | | | | | 0.2 | | ● | | | | | | | | |
| | DPET | 11T3003FR-USF | 2 | 2 | 9.525 | 3.97 | 4.4 | 0.03 | 11 | ● | E37 | | | | | | | |
| | | 11T301FR-USF | | | | | | 0.1 | | ● | | | | | | | | |
| | | 11T301FL-USF | | | | | | 0.1 | | ● | | | | | | | | |
| | | 11T302FR-USF | | | | | | 0.2 | | ● | | | | | | | | |
| DPET | 0702005MFR-USF | 1 | 2 | 6.35 | 2.38 | 2.8 | < 0.05 | 11 | ● | E37 | | | | | | | | |
| | 070201MFR-USF | | | | | | < 0.1 | | ● | | | | | | | | | |
| | 070202MFR-USF | | | | | | < 0.2 | | ● | | | | | | | | | |
| | DPET | | | | | | 11T3005MFR-USF | | 2 | | 2 | 9.525 | 3.97 | 4.4 | < 0.05 | 11 | ● | E37 |
| 11T301MFR-USF | | < 0.1 | ● | | | | | | | | | | | | | | | |
| 11T302MFR-USF | | < 0.2 | ● | | | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

70° Rhombic

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

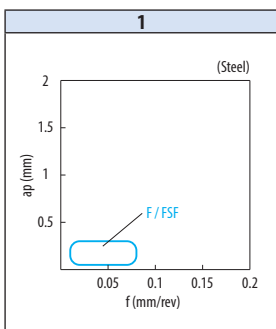
W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | | Angle (°) | Carbide | | | | Cermet | Applicable toolholder |
|----------------------------|-------------------|------------------------------|----|----------------|-----|-----|------|--------|-----------|---------|------|------|--|--------|-----------------------|
| | | No. of edges | IC | S | D1 | RE | AN | PVD | | | | | | | |
| | | | | | | | | PR1535 | PR1725 | PR930 | KW10 | TN60 | | | |
| Precision / Sharp edge | JCET 030102R-FSF | 1 | 2 | 3.5 | 1.4 | 1.9 | 0.2 | 7 | | | | | | | |
| | JCET 030102L-FSF | | | | | | 0.2 | | | | | | | | |
| | JCET 030104L-FSF | | | | | | 0.4 | | | | | | | | |
| Sharp edge | JCET 030101MR-FSF | 1 | 2 | 3.5 | 1.4 | 1.9 | <0.1 | 7 | | | | | | | |
| | JCET 030101ML-FSF | | | | | | <0.1 | | | | | | | | |
| | JCET 030102MR-F | | | | | | <0.2 | | | | | | | | |
| Sharp edge | JCET 030102ML-F | 1 | 2 | 3.5 | 1.4 | 1.9 | <0.2 | 7 | | | | | | | |
| | JCET 030104MR-F | | | | | | <0.2 | | | | | | | | |
| | JCET 030104ML-F | | | | | | <0.4 | | | | | | | | |
| | JCGT 030101R-F | | | | | | <0.4 | | | | | | | | |
| | JCGT 030101L-F | | | | | | <0.4 | | | | | | | | |
| JCGT 030102R-F | 0.1 | | | | | | | | | | | | | | |
| JCGT 030102L-F | 0.1 | | | | | | | | | | | | | | |
| JCGT 030104R-F | 0.2 | | | | | | | | | | | | | | |
| JCGT 030104L-F | 0.2 | | | | | | | | | | | | | | |
| JCGT 030104R-F | 0.4 | | | | | | | | | | | | | | |
| JCGT 030104L-F | 0.4 | | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).



Applicable chipbreaker range



● : Standard item

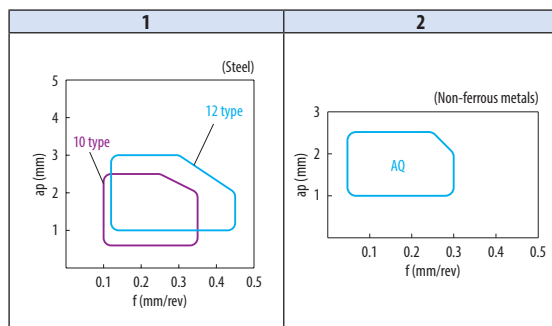
Round

How to read pages of "Turning inserts" See page B15

| Insert | | Description | Applicable chipbreaker range | Dimension (mm) | | | | Angle (°) | Material | | | | | | | | | | Applicable toolholder | | | | | | | |
|--------------------|---|----------------|------------------------------|----------------|------|-----|----|-----------|----------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-----------------------|--------|-------|-------|------|-------|---|-----|
| | | | | IC | S | D1 | AN | | Carbide | | | | | | | | | | | Cermet | | | | | | |
| | | | | | | | | | CVD | | | | | | | | | | | - | PVD | - | | | | |
| | | | | | | | | CA02SP | CA310 | CA315 | CA320 | CA4515 | CA510 | CA515 | CA525 | CA530 | CA5515 | CA5525 | CA6525 | KW10 | PV720 | PV730 | TN60 | TN620 | | |
| Medium |  | RCMX 1003M0 | 1 | 10 | 3.18 | 3.6 | 7 | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | D40 |
| | | RCMX 1204M0 | 1 | 12 | 4.76 | 4.2 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Non-Ferrous Metals |  Finishing - Medium | RCGX 1003M0-AQ | 2 | 10 | 3.18 | 3.6 | 7 | | | | | | | | | | | | | ● | | | | | | |

Chipbreaker shape of RCMX... varies by grade (cermet / PVD coated cermet / CVD coated carbide)

Applicable chipbreaker range



● : Standard item


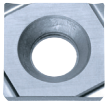
90° Square

How to read pages of "Turning inserts" See page B15

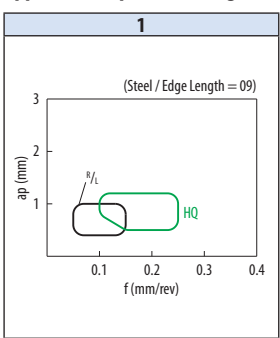
B

Turning indexable inserts

- Chip breakers
- Positive
- C
- D
- R
- S
- T
- V
- W
- Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | | | Cermet | | Applicable toolholder | | | |
|--|------------------------------|------------------------------|---|----------------|---|----|----|-----------|---------|--------|--------|---------|-------|--------|--------|---|-----------------------|--------|--------|-------|
| | | No. of edges | 1 | IC | S | D1 | RE | | CVD | | | | | | PVD | - | | | | |
| | | | | | | | | | CA02SP | CA510 | CA515 | CA525 | CA530 | CA5515 | | | | CA5525 | CA5535 | PV710 |
| | | | | | | | | | TiN60 | TiN610 | TiN620 | Cermets | | | | | | | | |
|  SCMT 09T304HQ 09T308HQ | 1 4 9.525 3.97 4.4 0.4 0.8 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | - | | |
| | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | - | |
|  SPGH 090304L | 1 4 9.525 3.18 4.6 0.4 11 | | | | | | | | | | | | | | | | | F111 | | |

Applicable chipbreaker range



● : Standard item

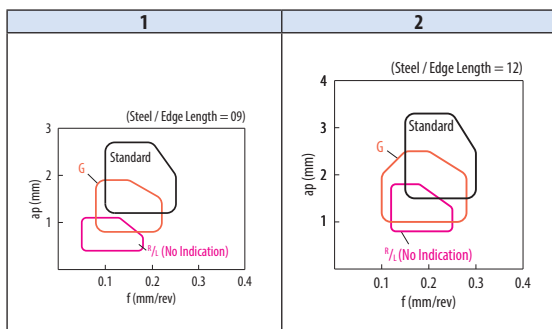
90° Square

How to read pages of "Turning inserts" ➡ See page B15

B
Turning indexable inserts

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | Angle (°) | Material | | | | | | | | | | | | Applicable toolholder | | | | | | | | | | | | | |
|-----------|-------------|------------------------------|----|----------------|-------|------|-----------|----------|-------|-------|-------|--------|--------|-------|-------|--------|--------|--------|--------|-----------------------|-----|--------|-------|-------|-------|------|------|-------|-------|--|--|--|--|
| | | No. of edges | IC | S | RE | AN | | Material | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Carbide | | | | | | Cermet | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | CVD | | | | PVD | | CVD | | PVD | | | | | | | | | | | | | | | | | |
| | | | | | | | | CA025P | CA310 | CA315 | CA370 | CA4515 | CA515 | CA530 | CA595 | CA595L | CA595S | CA6525 | PR1535 | KW10 | CCY | PV7005 | PV710 | PV720 | PV730 | PI90 | Ti60 | Ti610 | Ti620 | | | | |
| Medium | | SPMR 090304G | 1 | 4 | 9.525 | 3.18 | 0.4 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SPMR 120304G | 2 | 4 | 12.7 | 3.18 | 0.4 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium | | SPMR 090304 | 1 | 4 | 9.525 | 3.18 | 0.4 | 11 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | |
| | | SPMR 120304 | 2 | 4 | 12.7 | 3.18 | 0.4 | 11 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | |
| Finishing | | SPGR 090304R | 1 | 4 | 9.525 | 3.18 | 0.4 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SPGR 120304R | | | | | 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cast iron | | SPGN 090304 | - | 4 | 9.525 | 3.18 | 0.4 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SPGN 120304 | | | | | 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SPMN 120308 | - | 4 | 12.7 | 3.18 | 0.8 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SPMN 120412 | | | | | 0.8 | | | | | | | | | | | | | | | | | | | | | | | | | | |

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

60° Triangle

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

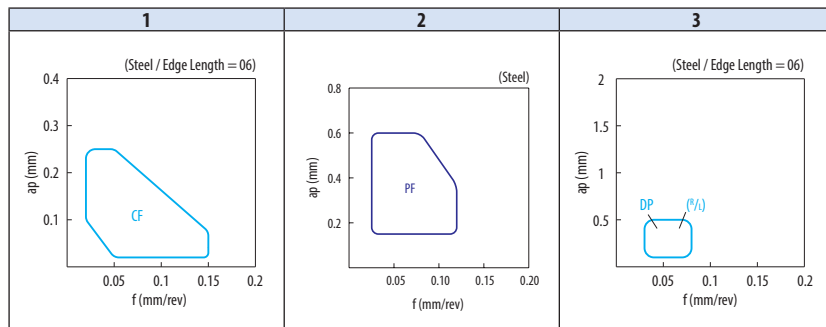
W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | | | | Cermet | | | Applicable toolholder | | | | | | | | |
|------------------------------------|---|------------------------------|----|----------------|------|-----|--|-----------|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|---------------------------------|-------|------|-----|-------|-------|-------|-------|-------|
| | | No. of edges | IC | S | D1 | RE | AN | | CVD | | | PVD | | - | | CVD | | | | | | | | | | | |
| | | | | | | | | CA02P | CA510 | CA515 | CA525 | CA530 | CA5515 | CA5525 | PR1725 | PR1535 | PR1705 | PR1725 | | PR930 | KW10 | CCX | PV710 | PV720 | PV730 | TN610 | TN620 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minute ap Sharp edge | TBGT 060102CF | 1 | 3 | 3.97 | 1.59 | 2.3 | 0.2 | 5 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minute ap Polished / Sharp edge | TBGT 060101MP-CF 060102MP-CF | 1 | 3 | 3.97 | 1.59 | 2.3 | < 0.1 < 0.2 | 5 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing Polished / Sharp edge | TBGT 060101MFP-PF 060102MFP-PF 060104MFP-PF | 2 | 3 | 3.97 | 1.59 | 2.3 | < 0.1 < 0.2 < 0.4 | 5 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | TBMT 060102DP 060104DP | 3 | 3 | 3.97 | 1.59 | 2.3 | 0.2 0.4 | 5 | | | | | | | | | | | F33, F34 F80~F82 F86, F87 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | TBET 0601005MR 0601005ML 060101MR 060101ML 060102MR 060102ML 060104MR 060104ML | 3 | 3 | 3.97 | 1.59 | 2.4 | < 0.05 < 0.05 < 0.1 < 0.1 < 0.2 < 0.2 < 0.4 < 0.4 | 5 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | TBGT 0601003L 060101R 060101L 060102R 060102L 060104R 060104L | 3 | 3 | 3.97 | 1.59 | 2.4 | 0.03 0.1 0.1 0.2 0.2 0.4 0.4 | 5 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cast iron Without Chipbreaker | TBGW 060102 060104 | - | 3 | 3.97 | 1.59 | 2.4 | 0.2 0.4 | 5 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item




60° Triangle

How to read pages of "Turning inserts" ➔ See page B15

B

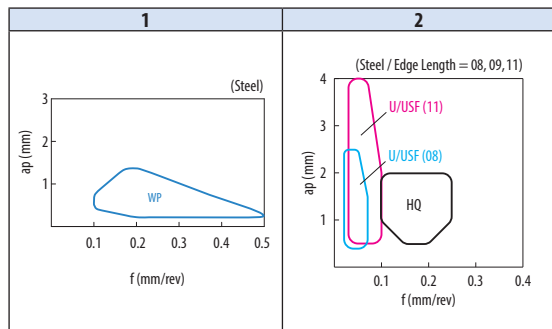


Turning indexable inserts

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | | | Cermets | | | | Applicable toolholder | | | | | | | | | | | | |
|--|---|------------------------------|---|----------------|------|-----|--|-----------|---------|-------|-------|-------|--------|-------|---------|-------|-------|--------|-----------------------|--------|--------|--------|--------|-------|-----|-------|-------|-------|------|-------|-------|
| | | No. of edges | | IC | S | D1 | RE | | CVD | | | | | | PVD | | - | | | | | | | | | | | | | | |
| | | | | | | | | | CA02SP | CA310 | CA315 | CA320 | CA4515 | CA510 | CA515 | CA525 | CA530 | CA5515 | | CA5525 | CA5535 | PR1225 | PR1725 | PR850 | CCX | PV710 | PV720 | PV730 | TN60 | TN610 | TN620 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing  | TCMX 090204WP | 1 | 3 | 5.56 | 2.38 | 2.5 | 0.4 | 7 | ● | | | | | | | | | ● | ● | | | | | | | | | | | | |
| | TCMX 110204WP | 1 | 3 | 6.35 | 2.38 | 2.8 | 0.4 | 7 | ● | | | | | | | | | ● | ● | | | | | | | | | | | | |
| Finishing - Medium  | TCMT 090202HQ 090204HQ | 2 | 3 | 5.56 | 2.38 | 2.5 | 0.2 0.4 | 7 | | | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | |
| | TCMT 110202HQ 110204HQ 110208HQ | 2 | 3 | 6.35 | 2.38 | 2.8 | 0.2 0.4 0.8 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | |
| | TCMT 16T304HQ 16T308HQ 16T312HQ | 2 | 3 | 9.525 | 3.97 | 4.4 | 0.4 0.8 1.2 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | |
| Low feed  | TCET 0802003FR-USF 0802003FL-USF 080201FR-USF 080202FR-USF | 2 | 3 | 4.76 | 2.38 | 2.5 | 0.03 0.03 0.1 0.2 | 7 | | | | | | | | | | ● | ● | | | | | | | | | | | | |
| | TCET 1103003FR-USF 1103003FL-USF 110301FR-USF 110301FL-USF 110302FR-USF 110302FL-USF | 2 | 3 | 6.35 | 3.18 | 2.8 | 0.03 0.03 0.1 0.1 0.2 0.2 | 7 | | | | | | | | | | ● | ● | | | | | | | | | | | | |
| | TCET 1103005MFR-USF 110301MFR-USF 110302MFR-USF | 2 | 3 | 6.35 | 3.18 | 2.8 | < 0.05 < 0.1 < 0.2 | 7 | | | | | | | | | | ● | ● | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).
See "Precautions when using Wiper inserts" in the R36 and R37 for WP chipbreaker.

Applicable chipbreaker range



● : Standard item

60° Triangle

How to read pages of "Turning inserts" See page B15

B





Turning indexable inserts

Chip breakers

Positive

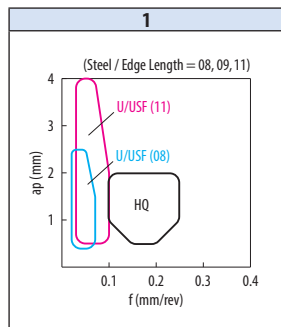


Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | Cermet | Applicable toolholder |
|--|-------------------|------------------------------|---------------------|----------------|------|------|-------|-----------|---------|--------|-------|------|--------|-----------------------|
| | | No. of edges | No. of chipbreakers | IC | S | D1 | RE | | AN | PVD | | | | |
| | | | | | | | | PR1225 | | PR1725 | PR930 | KW10 | TN60 | |
|  <p>Sharp edge</p> | TCGT 080201FR-U | 1 | 3 | 4.76 | 2.38 | 2.5 | 0.1 | 7 | | | | | | E38 |
| | 080202FR-U | | | | | | 0.2 | | | | | | | |
| | 080202FL-U | | | | | | 0.2 | | | | | | | |
| | TCGT 1103003FR-U | 1 | 3 | 6.35 | 3.18 | 2.8 | 0.03 | 7 | | | | | | |
| | 110301FR-U | | | | | | 0.1 | | | | | | | |
| | 110301FL-U | | | | | | 0.1 | | | | | | | |
| | 110302FR-U | | | | | | 0.2 | | | | | | | |
| | 110302FL-U | | | | | | 0.2 | | | | | | | |
| | TCGT 080201MFR-U | 1 | 3 | 4.76 | 2.38 | 2.5 | <0.1 | 7 | | | | | | |
| | 080202MFR-U | | | | | | <0.2 | | | | | | | |
| | 080202MFL-U | | | | | | <0.2 | | | | | | | |
| | TCGT 1103005MFR-U | 1 | 3 | 6.35 | 3.18 | 2.8 | <0.05 | 7 | | | | | | |
| | 1103005MFL-U | | | | | | <0.05 | | | | | | | |
| | 110301MFR-U | | | | | | <0.1 | | | | | | | |
| | 110301MFL-U | | | | | | <0.1 | | | | | | | |
| 110302MFR-U | <0.2 | | | | | | | | | | | | | |
| 110302MFL-U | <0.2 | | | | | | | | | | | | | |
| 110304MFR-U | <0.4 | | | | | | | | | | | | | |
| 110304MFL-U | <0.4 | | | | | | | | | | | | | |
|  <p>With honing</p> | TCGT 080202ER-U | 1 | 3 | 4.76 | 2.38 | 2.5 | 0.2 | 7 | | | | | E38 | |
| | 080202EL-U | | | | | | 0.2 | | | | | | | |
| | TCGT 110301ER-U | 1 | 3 | 6.35 | 3.18 | 2.8 | 0.1 | 7 | | | | | | |
| | 110302ER-U | | | | | | 0.2 | | | | | | | |
| | 110302EL-U | | | | | | 0.2 | | | | | | | |
| | 110304ER-U | | | | | | 0.4 | | | | | | | |
| | 110304EL-U | 0.4 | | | | | | | | | | | | |
| | TCGT 080202MER-U | 1 | 3 | 4.76 | 2.38 | 2.5 | <0.2 | 7 | | | | | | |
| TCGT 110302MER-U | 1 | 3 | 6.35 | 3.18 | 2.8 | <0.2 | 7 | | | | | | | |
| 110302MEL-U | | | | | | <0.2 | | | | | | | | |
| 110304MER-U | | | | | | <0.4 | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

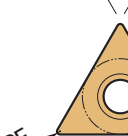

Applicable chipbreaker range



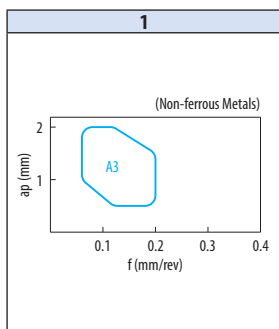
● : Standard item

60° Triangle

How to read pages of "Turning inserts" See page B15

| | | Free-cutting steel | | Carbon steel / Alloy steel | | Stainless steel | | Gray cast iron | | Nodular cast iron | | Non-ferrous metals | | Heat-resistant alloy | | Titanium alloy | | Hard materials | | | |
|--|---------------------------------|------------------------------|----|----------------------------|------|-----------------|-------------------|----------------|-----------|-------------------|---|--------------------|-----------------------|----------------------|---|----------------|---|----------------|---|---|-----|
| | | | | | | | | | | | | | | | | | | | | | |
| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | | Angle (°) | Carbide | | | Applicable toolholder | | | | | | | | |
| | | No. of edges | IC | S | D1 | RE | AN | DLC | | | | | | | | | | | | | |
| | | | | | | | | PDL010 | PDL025 | KW10 | | | | | | | | | | | |
| Non-Ferrous Metals  Finishing - Medium / Sharp edge | TCGT 110302R-A3 | 1 | 3 | 6.35 | 3.18 | 2.8 | 0.2 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 110302L-A3 | | | | | | | | | | | | | | | | | | | | |
| | 110304R-A3 | | | | | | | | | | | | | | | | | | | | |
| | 110304L-A3 | | | | | | | | | | | | | | | | | | | | |
| | 110308R-A3 110308L-A3 | | | | | | | | | | | | | | | | | | | | |
| Cast iron  Without Chipbreaker | TCGW 080201 080202 | - | 3 | 4.76 | 2.38 | 2.5 | 0.1 0.2 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | E38 |
| | TCGW 110301 110302 110304 | - | 3 | 6.35 | 3.18 | 2.8 | 0.1 0.2 0.4 | 7 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |

Applicable chipbreaker range



● : Standard item

60° Triangle

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

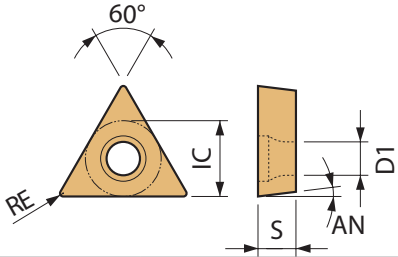
S

T

V

W

Ceramic

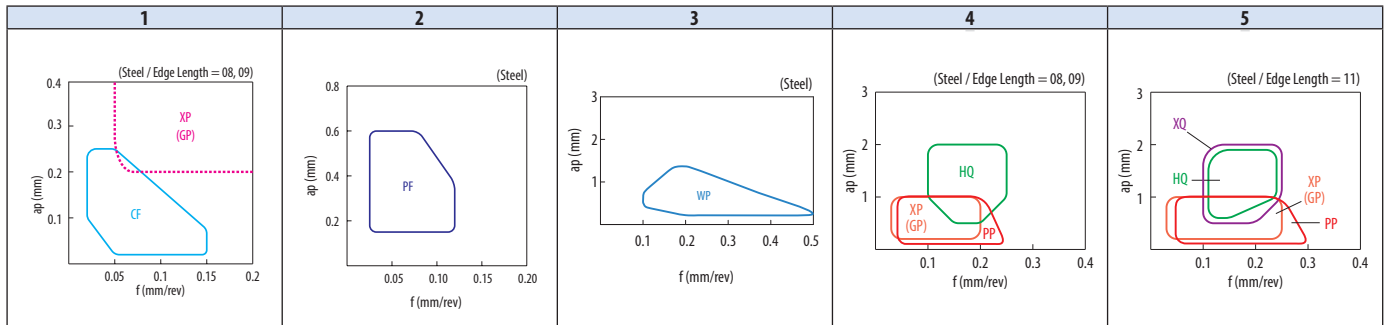


| Insert | Description | Applicable chipbreaker range | Dimension (mm) | | | | Angle (°) | Carbide | | | | | Cermet | | | | Applicable toolholder | | | |
|------------------------------------|---|---------------------------------------|----------------|------|------|------|----------------------|-------------------|----|--------|-------|-------|--------|-------|-----|--------|-----------------------|---|--------|----------------------------|
| | | | No. of edges | IC | S | D1 | | RE | AN | CVD | | PVD | | | CVD | PVD | | - | | |
| | | | | | | | | | | CA02SP | CA510 | CA515 | CA525 | CA530 | | PR1225 | | | PR1535 | PR1705 |
| Minute ap Sharp edge | TPGT 080202CF | 1 | 3 | 4.76 | 2.38 | 2.3 | 0.2 | 11 | | | | | | | | | | | | E39 F80~F82 F86 |
| | TPGT 090202CF | 1 | 3 | 5.56 | 2.38 | 2.8 | 0.2 | 11 | | | | | | | | | | | | F33, F34 F80~F82 F86 |
| Minute ap Polished / Sharp edge | TPGT 080201MP-CF 080202MP-CF | 1 | 3 | 4.76 | 2.38 | 2.3 | <0.1 <0.2 | 11 | | | | | | | | | | | | E39 F80~F82 F86 |
| | TPGT 090201MP-CF 090202MP-CF | 1 | 3 | 5.56 | 2.38 | 2.8 | <0.1 <0.2 | 11 | | | | | | | | | | | | |
| Finishing Polished / Sharp edge | TPGT 090201MFP-PF 090202MFP-PF 090204MFP-PF | 2 | 3 | 5.56 | 2.38 | 2.8 | <0.1 <0.2 <0.4 | 11 | | | | | | | | | | | | F33, F34 F80~F82 F86 |
| | TPMX 090202WP 090204WP 090208WP | 3 | 3 | 5.56 | 2.38 | 2.8 | 0.2 0.4 0.8 | 11 | | | | | | | | | | | | |
| | | TPMX 110302WP 110304WP 110308WP | 3 | 3 | 6.35 | 3.18 | 3.3 | 0.2 0.4 0.8 | 11 | | | | | | | | | | | E39 F80~F82 F84, F85 |
| Finishing With Wiper Edge | TPMX 110304R-WP 110304L-WP | 3 | 3 | 6.35 | 3.18 | 3.3 | 0.4 | 11 | | | | | | | | | | | | |
| Finishing | TPMT 090202PP 090204PP | 4 | 3 | 5.56 | 2.38 | 2.8 | 0.2 0.4 | 11 | | | | | | | | | | | | F33, F34 F80~F82 F86 |
| | TPMT 110302PP 110304PP 110308PP | 5 | 3 | 6.35 | 3.18 | 3.3 | 0.2 0.4 0.8 | 11 | | | | | | | | | | | | E39 F80~F82 F84, F85 |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

See "Precautions when using Wiper inserts" in the R36 and R37 for WP chipbreaker.

Applicable chipbreaker range



● : Standard item

60° Triangle

How to read pages of "Turning inserts" ➔ See page B15

B



Turning indexable inserts

Chip breakers

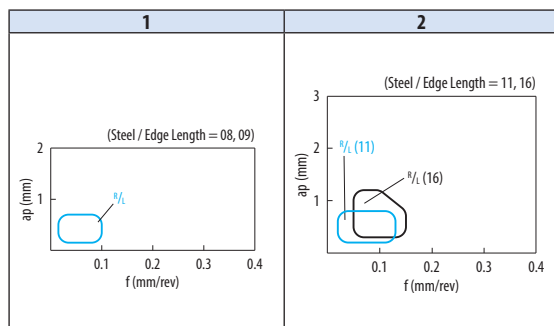
Positive



Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | Cermet | | Applicable toolholder | | | | | | | | | | | | | | |
|--------------|--------------|------------------------------|-------|----------------|------|-----|-----|-----------|---------|--------|--------|-------|-----------------------|--------|--------|-------|-------|-------|------|-------|-----------------------|----------------------------|--|--|--|--|--|
| | | No. of edges | IC | S | D1 | RE | AN | | PVD | | PVD | | | | | | | | | | | | | | | | |
| | | | | | | | | PR1535 | PR1705 | PR1725 | PR830 | KW10 | | PV7005 | PV710 | PV720 | PV730 | PV90 | TN60 | TN610 | TN620 | | | | | | |
| | | | | IC | S | D1 | RE | AN | PR1535 | PR1705 | PR1725 | PR830 | | KW10 | PV7005 | PV710 | PV720 | PV730 | PV90 | TN60 | TN610 | TN620 | | | | | |
| Finishing | TPGH 080201R | 1 | 3 | 4.76 | 2.38 | 2.3 | 0.1 | 11 | ● | ● | | | | | | | | | | | E39 F80~F82 F86 | | | | | | |
| | TPGH 080201L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 080202R | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 080202L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 080204R | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 080204L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 090201R | 1 | 3 | 5.56 | 2.38 | 3.2 | 0.1 | 11 | ● | ● | | | | | | | | | | | | F33, F34 F80~F82 F86 | | | | | |
| | TPGH 090201L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 090202R | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 090202L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 090204R | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 090204L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 110202R | 2 | 3 | 6.35 | 2.38 | 3.7 | 0.2 | 11 | ● | ● | | | | | | | | | | | | F84 F85 | | | | | |
| | TPGH 110202L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 110204R | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 110204L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| | TPGH 110302R | 2 | 3 | 6.35 | 3.18 | 3.3 | 0.2 | 11 | ● | ● | | | | | | | | | | | | E39 F80~F82 F84, F85 | | | | | |
| | TPGH 110302L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| TPGH 110304R | ● | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| TPGH 110304L | ● | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| TPGH 110308R | ● | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| TPGH 110308L | ● | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| TPGH 160302R | 2 | 3 | 9.525 | 3.18 | 4.7 | 0.2 | 11 | ● | ● | | | | | | | | | | | | F80~F82 F84 | | | | | | |
| TPGH 160302L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | |
| TPGH 160304R | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | |
| TPGH 160304L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | |
| TPGH 160308R | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | |
| TPGH 160308L | | | | | | ● | | ● | | | | | | | | | | | | | | | | | | | |

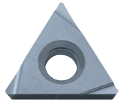
Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

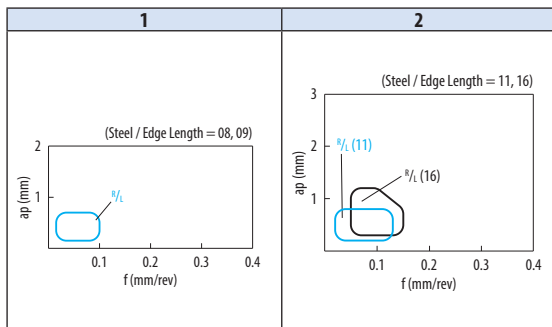
60° Triangle

How to read pages of "Turning inserts" See page B15

| | | Applicable chipbreaker range | | Dimension (mm) | | | | | Angle (°) | Carbide | Applicable toolholder |
|---------------|-------------|------------------------------|-------|----------------|-----|-------|----|------------------|----------------------------|--|-----------------------|
| Insert | Description | No. of edges | IC | S | D1 | RE | AN | PRI705 PRI725 | PVD | | |
| | | | | | | | | | | Finishing  | TPGH 080201ML |
| 080202MR | < 0.2 | ●● | | | | | | | | | |
| 080202ML | < 0.2 | ●● | | | | | | | | | |
| 080204MR | < 0.4 | ●● | | | | | | | | | |
| 080204ML | < 0.4 | ●● | | | | | | | | | |
| TPGH 090201ML | 1 | 3 | 5.56 | 2.38 | 3.2 | < 0.1 | 11 | ● | F33, F34 F80~F82 F86 | | |
| 090202MR | | | | | | < 0.2 | | ●● | | | |
| 090202ML | | | | | | < 0.2 | | ●● | | | |
| 090204MR | | | | | | < 0.4 | | ●● | | | |
| 090204ML | | | | | | < 0.4 | | ●● | | | |
| TPGH 110202ML | 2 | 3 | 6.35 | 2.38 | 3.7 | < 0.2 | 11 | ● | F84 F85 | | |
| 110204ML | | | | | | < 0.4 | | ● | | | |
| TPGH 110302MR | 2 | 3 | 6.35 | 3.18 | 3.3 | < 0.2 | 11 | ●● | E39 F80~F82 F84, F85 | | |
| 110302ML | | | | | | < 0.2 | | ●● | | | |
| 110304MR | | | | | | < 0.4 | | ●● | | | |
| 110304ML | | | | | | < 0.4 | | ●● | | | |
| 110308ML | | | | | | < 0.8 | | ●● | | | |
| TPGH 160302ML | 4 | 3 | 9.525 | 3.18 | 4.7 | < 0.2 | 11 | ● | F80~F82 F84 | | |
| 160304MR | | | | | | < 0.4 | | ●● | | | |
| 160304ML | | | | | | < 0.4 | | ●● | | | |
| 160308ML | | | | | | < 0.8 | | ●● | | | |
| | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

60° Triangle

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

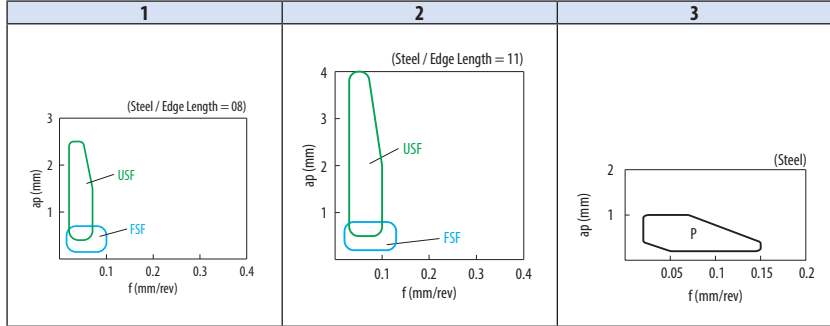
W

Ceramic

| | | Material | | | | | | | | | | | |
|---------------|---|---|----|----------------|------|------|--|--|---------------------------------|----------------------------|--------|----------------------------|----------------------------|
| | | Free-cutting steel | | | | | | | | | P | | |
| | | Carbon steel / Alloy steel | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| | | Stainless steel | ● | ● | ● | ● | ● | ● | ● | ● | M | | |
| | | Gray cast iron | | | | | | | | | K | | |
| | | Nodular cast iron | | | | | | | | | | | |
| | | Non-ferrous metals | | | | | | | | | N | | |
| | | Heat-resistant alloy | ● | ● | ● | ● | ● | ● | ● | ● | S | | |
| | | Titanium alloy | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| | | Hard materials | | | | | | | | | H | | |
| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Material | | | Applicable toolholder | |
| | | No. of edges | IC | S | D1 | RE | AN | | Carbide | | Cermet | | |
| | | | | | | | | PVD | - | | | | |
| Finishing | TPET 0802003L-FSF 080201R-FSF 080201L-FSF 080202R-FSF 080202L-FSF | 1 | 3 | 4.76 | 2.38 | 2.3 | 0.03 0.1 0.1 0.2 0.2 | 11 | ● ● ● ● ● | | | E39 F80~F82 F86 | |
| | TPET 1103003R-FSF 1103003L-FSF 1103005L-FSF 110301R-FSF 110301L-FSF 110302R-FSF 110302L-FSF | 2 | 3 | 6.35 | 3.18 | 3.3 | 0.03 0.03 0.05 0.1 0.1 0.2 0.2 | 11 | ● ● ● ● ● ● ● | | | E39 F80~F82 F84, F85 | |
| | TPET 080202ML-FSF | 1 | 3 | 4.76 | 2.38 | 2.3 | <0.2 | 11 | ● | | | E39 F80~F82, F86 | |
| | TPET 1103005ML-FSF 110301MR-FSF 110301ML-FSF 110302MR-FSF 110302ML-FSF | 2 | 3 | 6.35 | 3.18 | 3.3 | <0.05 <0.1 <0.1 <0.2 <0.2 | 11 | ● ● ● ● ● | | | E39 F80~F82 F84, F85 | |
| | Finishing | TPEH 080201MR-P 080201ML-P 080202MR-P 080202ML-P 080204MR-P 080204ML-P | 3 | 3 | 4.76 | 2.38 | 2.3 | <0.1 <0.1 <0.2 <0.2 <0.4 <0.4 | 11 | ● ● ● ● ● ● | | | E39 F80~F82 F86 |
| | | TPEH 090201MR-P 090201ML-P 090202MR-P 090202ML-P 090204MR-P 090204ML-P | 3 | 3 | 5.56 | 2.38 | 3.2 | <0.1 <0.1 <0.2 <0.2 <0.4 <0.4 | 11 | ● ● ● ● ● ● | | | F33, F34 F80~F82 F86 |
| | | TPEH 110301MR-P 110301ML-P 110302MR-P 110302ML-P 110304MR-P 110304ML-P | 3 | 3 | 6.35 | 3.18 | 3.3 | <0.1 <0.1 <0.2 <0.2 <0.4 <0.4 | 11 | ● ● ● ● ● ● | | | E39 F80~F82 F84, F85 |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

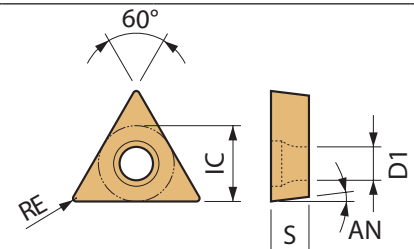
Applicable chipbreaker range



● : Standard item

60° Triangle

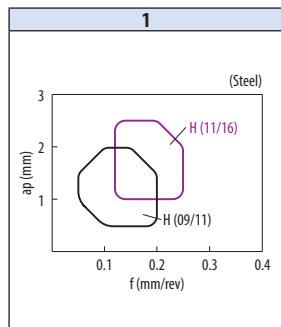
How to read pages of "Turning inserts" See page B15



| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Material | | | | | | Applicable toolholder | | | |
|--------|---|------------------------------|---------------------|----------------|------|-----|--|-----------|----------|--------|-------|--------|-------|-------|-----------------------|-------|----------------------------|----------------------------|
| | | No. of edges | No. of chipbreakers | IC | S | D1 | RE | | Carbide | | | Cermet | | | | | | |
| | | | | | | | | | PR1535 | PR1725 | PR930 | KW10 | PV710 | PV720 | | PV730 | Ti60 | Ti610 |
| Medium | TPGH 090201L-H 090202L-H 090204L-H | 1 | 3 | 5.56 | 2.38 | 3.2 | 0.1 0.2 0.4 | 11 | ● | ● | ● | ● | ● | ● | ● | ● | ● | F33, F34 F80~F82 F86 |
| | TPGH 110302R-H 110302L-H 110304R-H 110304L-H 110308R-H 110308L-H | 1 | 3 | 6.35 | 3.18 | 3.3 | 0.2 0.2 0.4 0.4 0.8 0.8 | 11 | ● | ● | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F84, F85 |
| | TPGH 160304R-H 160304L-H 160308R-H 160308L-H | 1 | 3 | 9.525 | 3.18 | 4.7 | 0.4 0.4 0.8 0.8 | 11 | ● | ● | ● | ● | ● | ● | ● | ● | F80~F82 F84 | |
| | TPGT 160402L-H 160404L-H 160408L-H | 1 | 3 | 9.525 | 4.76 | 4.5 | 0.2 0.4 0.8 | 11 | ● | ● | ● | ● | ● | ● | ● | ● | - | |
| | TPGH 110302ML-H 110304ML-H | 1 | 3 | 6.35 | 3.18 | 3.3 | <0.2 <0.4 | 11 | ● | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F84, F85 | |
| | TPGH 160304ML-H | 1 | 3 | 9.525 | 3.18 | 4.7 | <0.4 | 11 | ● | ● | ● | ● | ● | ● | ● | ● | F80~F82 F84 | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

60° Triangle

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

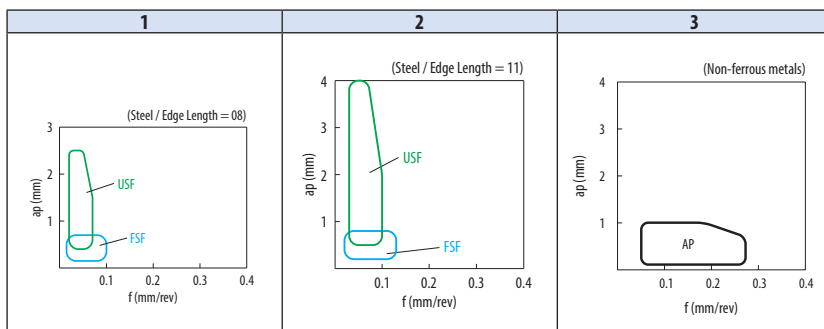
W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Material | | | | | | Applicable toolholder | |
|--|---|------------------------------|----|----------------|------|-----|----------------------------------|-----------|----------|-----|---|--------|---|---|-----------------------|----------------------------|
| | | No. of edges | IC | S | D1 | RE | AN | | Carbide | | | Cermet | | | | |
| | | | | | | | | | DLC | PVD | - | PVD | - | - | | |
| <p>Precision / Sharp edge</p> | TPET 080201FL-USF 080202FR-USF 080202FL-USF | 1 | 3 | 4.76 | 2.38 | 2.3 | 0.1 0.2 0.2 | 11 | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F86 |
| | TPET 110301FR-USF 110301FL-USF 110302FR-USF 110302FL-USF | 2 | 3 | 6.35 | 3.18 | 3.3 | 0.1 0.1 0.2 0.2 | 11 | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F84, F85 |
| | TPET 080202MFR-USF 080202MFL-USF | 1 | 3 | 4.76 | 2.38 | 2.3 | <0.2 | 11 | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F86 |
| | TPET 110301MFL-USF 110302MFR-USF 110302MFL-USF | 2 | 3 | 6.35 | 3.18 | 3.3 | <0.1 <0.2 <0.2 | 11 | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F84, F85 |
| <p>Non-Ferrous Metals Finishing / Sharp edge</p> | TPGT 090202AP 090204AP 090208AP | 3 | 3 | 5.56 | 2.38 | 2.8 | 0.2 0.4 0.8 | 11 | ● | ● | ● | ● | ● | ● | ● | F33, F34 F80~F82 F86 |
| | TPGT 110302AP 110304AP 110308AP | 3 | 3 | 6.35 | 3.18 | 3.3 | 0.2 0.4 0.8 | 11 | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F84, F85 |
| <p>Cast Iron Without Chipbreaker</p> | TPGB 080202 080204 080208 | - | 3 | 4.76 | 2.38 | 2.3 | 0.2 0.4 0.8 | 11 | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F86 |
| | TPGB 090202 090204 | - | 3 | 5.56 | 2.38 | 3.2 | 0.2 0.4 | 11 | ● | ● | ● | ● | ● | ● | ● | F33, F34 F80~F82 F86 |
| | TPGB 1102005 110201 110202 110204 | - | 3 | 6.35 | 2.38 | 3.7 | 0.05 0.1 0.2 0.4 | 11 | ● | ● | ● | ● | ● | ● | ● | F84 F85 |
| | TPGB 1103005 110301 110302 110304 110308 | - | 3 | 6.35 | 3.18 | 3.3 | 0.05 0.1 0.2 0.4 0.8 | 11 | ● | ● | ● | ● | ● | ● | ● | E39 F80~F82 F84, F85 |
| | TPGB 160304 160308 | - | 3 | 9.525 | 3.18 | 4.7 | 0.4 0.8 | 11 | ● | ● | ● | ● | ● | ● | ● | F80~F82 F84 |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

60° Triangle

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

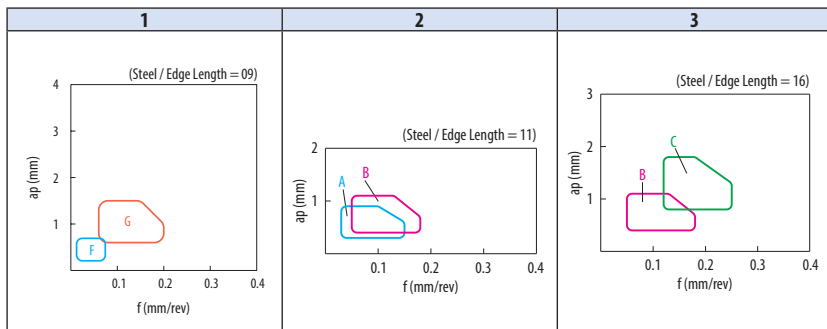
W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | | | Cermet | | | | Applicable toolholder | | | | | | |
|--------------------|---|------------------------------|------|-------------------|------|--|-------|-----------|---|------------|--------|--------|------|--------------------------|--------|--------------------|--|-------------------|-----------------------|------|-------|--------------------------|----|--|--|
| | | No. of edges | IC | S | RE | AN | CVD | | | | | | PVD | | | | | | | | | | | | |
| | | | | | | | CA310 | CA315 | CA320 | CA4505 | CA4515 | CA5505 | KW10 | PV7005 | PV710 | PV720 | PV730 | PV90 | | TN60 | TN610 | TN620 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | TPGR 090202L-F 090204R-F 090204L-F Sharp edge | 1 | 3 | 5.56 | 2.38 | 0.2 0.4 0.4 | 11 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | Finishing | TPGR 110302R-A 110302L-A 110304R-A 110304L-A | 2 | 3 | 6.35 | 3.18 | 0.2 0.4 0.4 | 11 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | Finishing - Medium | TPGR 110304R-B 110304L-B 110308R-B 110308L-B | 2 | 3 | 6.35 | 3.18 | 0.4 0.4 0.8 0.8 | 11 | | |
| Finishing - Medium | TPGR 160302R-B 160302L-B 160304R-B 160304L-B 160308R-B 160308L-B | 3 | 3 | 9.525 | 3.18 | 0.2 0.2 0.4 0.4 0.8 0.8 | 11 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | Medium | TPGR 160304R-C 160304L-C 160308R-C 160308L-C | 3 | 3 | 9.525 | 3.18 | 0.4 0.4 0.8 0.8 | 11 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | Cast iron | TPGN 090202 090204 TPGN 110302 110304 110308 TPGN 160304 160308 TPMN 110304 110308 TPMN 160304 160308 160312 Without Chipbreaker | - | 3 | 5.56 | 2.38 | 0.2 0.4 0.4 | 11 | | |
| - | 3 | 6.35 | 3.18 | 0.2 0.4 0.8 | 11 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | - | 3 | 9.525 | 3.18 | 0.4 0.8 | 11 | | | | | | | | | | | | | | |
| - | 3 | 6.35 | 3.18 | 0.4 0.8 | 11 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | - | 3 | 9.525 | 3.18 | | | 0.4 0.8 1.2 | 11 | | | | | | |

F113

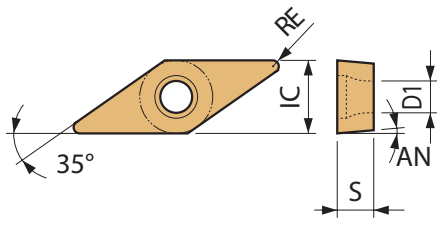
Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

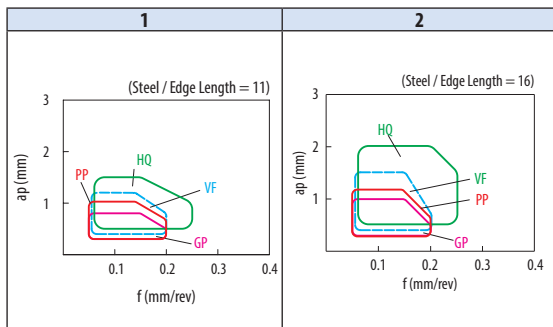
35° Rhombic

How to read pages of "Turning inserts" See page B15



| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | | | | | | | Cermet | | | | Applicable toolholder | | | | | | | | | | | | |
|--------------------|---|------------------------------|--------------|----------------|------|-----|--------------------------|-----------|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-----------------------|--------|--------|---------------------------------------|-----|--------|-------|-------|-------|------|------|-------|-------|
| | | No. of edges | No. of edges | IC | S | D1 | RE | | AN | CVD | | | | | PVD | | | CVD | | PVD | | - | | | | | | | | | | | | | |
| | | | | | | | | | | CA02P | CA510 | CA515 | CA525 | CA530 | CA5505 | CA5515 | CA5525 | CA5535 | CA6515 | CA6525 | PR1225 | | | PR1535 | PR1725 | PR8930 | CCX | PV7005 | PV710 | PV720 | PV730 | PV90 | TN60 | TN610 | TN620 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | VBMT 110302PP 110304PP 110308PP | 1 | 2 | 6.35 | 3.18 | 2.8 | 0.2 0.4 0.8 | 5 | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | E40~E43 E58 F90, F91 F94~F99 | | | | | | | | | |
| | VBMT 160404PP 160408PP 160412PP | 2 | 2 | 9.525 | 4.76 | 4.4 | 0.4 0.8 1.2 | 5 | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | E41~E43 F90, F91 F94~F99 | | | | | | | | | |
| Finishing | VBMT 110304GP | 1 | 2 | 6.35 | 3.18 | 2.8 | 0.4 | 5 | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | E40~E43 E58 F90, F91 F94~F99 | | | | | | | | | |
| | VBMT 160404GP 160408GP | 2 | 2 | 9.525 | 4.76 | 4.4 | 0.4 0.8 | 5 | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | E41~E43 F90, F91 F94~F99 | | | | | | | | | |
| Finishing | VBMT 110302VF 110304VF 110308VF | 1 | 2 | 6.35 | 3.18 | 2.8 | 0.2 0.4 0.8 | 5 | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | E40~E43 E58 F90, F91 F94~F99 | | | | | | | | | |
| | VBMT 160402VF 160404VF 160408VF 160412VF | 2 | 2 | 9.525 | 4.76 | 4.4 | 0.2 0.4 0.8 1.2 | 5 | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | E41~E43 F90, F91 F94~F99 | | | | | | | | | |
| Finishing - Medium | VBMT 110304HQ 110308HQ | 1 | 2 | 6.35 | 3.18 | 2.8 | 0.4 0.8 | 5 | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | E40~E43 E58 F90, F91 F94~F99 | | | | | | | | | |
| | VBMT 160404HQ 160408HQ 160412HQ | 2 | 2 | 9.525 | 4.76 | 4.4 | 0.4 0.8 1.2 | 5 | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | E41~E43 F90, F91 F94~F99 | | | | | | | | | |

Applicable chipbreaker range



● : Standard item □ : Deleted from the next catalog

B



Turning indexable inserts

35° Rhombic

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

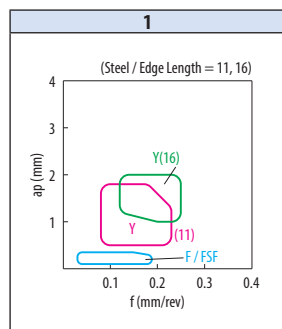


Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | Cermet | | | | Applicable toolholder | | | | |
|-------------------------------|--------------------|------------------------------|---|----------------|------|------|--------|-----------|---------|--------|--------|-------|--------|-------|-------|-------|-----------------------|------|-------|-------|--|
| | | No. of edges | | IC | S | D1 | RE | | PVD | | - | | PVD | | - | | | | | | |
| | | | | | | | | PR1225 | PR1535 | PR1705 | PR1725 | PR830 | KW10 | PV710 | PV720 | PV730 | | TN60 | TN610 | TN620 | |
| <p>Precision / Sharp edge</p> | VBET 1103003R-FSF | 1 | 2 | 6.35 | 3.18 | 2.8 | 0.03 | 5 | | | | | | | | | | | | | |
| | 1103003L-FSF | | | | | | 0.03 | | | | | | | | | | | | | | |
| | 110301R-FSF | | | | | | 0.1 | | | | | | | | | | | | | | |
| | 110301L-FSF | | | | | | 0.1 | | | | | | | | | | | | | | |
| | 110302R-FSF | | | | | | 0.2 | | | | | | | | | | | | | | |
| | 110302L-FSF | 0.2 | | | | | | | | | | | | | | | | | | | |
| | VBET 1103005MR-FSF | 1 | 2 | 6.35 | 3.18 | 2.8 | < 0.05 | 5 | | | | | | | | | | | | | |
| | 1103005ML-FSF | | | | | | < 0.05 | | | | | | | | | | | | | | |
| | 110301MR-FSF | | | | | | < 0.1 | | | | | | | | | | | | | | |
| | 110301ML-FSF | | | | | | < 0.1 | | | | | | | | | | | | | | |
| 110302MR-FSF | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| 110302ML-FSF | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| <p>Sharp edge</p> | VBET 1103005MR-F | 1 | 2 | 6.35 | 3.18 | 2.8 | < 0.05 | 5 | | | | | | | | | | | | | |
| | 1103005ML-F | | | | | | < 0.05 | | | | | | | | | | | | | | |
| | 110301MR-F | | | | | | < 0.1 | | | | | | | | | | | | | | |
| | 110301ML-F | | | | | | < 0.1 | | | | | | | | | | | | | | |
| | 110302MR-F | | | | | | < 0.2 | | | | | | | | | | | | | | |
| | 110302ML-F | < 0.2 | | | | | | | | | | | | | | | | | | | |
| | <p>Sharp edge</p> | VBGT 1103003R-F | 1 | 2 | 6.35 | 3.18 | 2.8 | 0.03 | 5 | | | | | | | | | | | | |
| | | 1103003L-F | | | | | | 0.03 | | | | | | | | | | | | | |
| | | 110301R-F | | | | | | 0.1 | | | | | | | | | | | | | |
| | | 110301L-F | | | | | | 0.1 | | | | | | | | | | | | | |
| 110302R-F | | 0.2 | | | | | | | | | | | | | | | | | | | |
| 110302L-F | | 0.2 | | | | | | | | | | | | | | | | | | | |
| VBGT 1103005MR-F | | 1 | 2 | 6.35 | 3.18 | 2.8 | < 0.05 | 5 | | | | | | | | | | | | | |
| 1103005ML-F | | | | | | | < 0.05 | | | | | | | | | | | | | | |
| 110301MR-F | | | | | | | < 0.1 | | | | | | | | | | | | | | |
| 110301ML-F | | | | | | | < 0.1 | | | | | | | | | | | | | | |
| 110302MR-F | < 0.2 | | | | | | | | | | | | | | | | | | | | |
| 110302ML-F | < 0.2 | | | | | | | | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

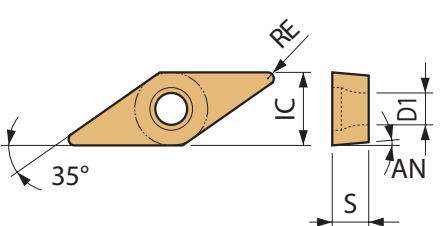
Applicable chipbreaker range


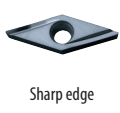
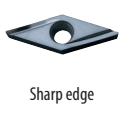
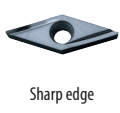


● : Standard item

35° Rhombic

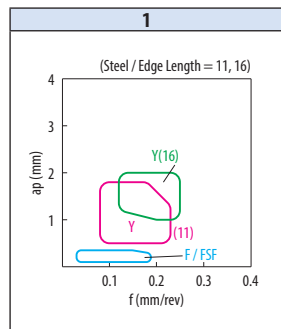
How to read pages of "Turning inserts" See page B15



| Insert | | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | Cermet | | | | Applicable toolholder | | | |
|--------------------|---|------------------|------------------------------|----------------|----------------|-------|-----|--------|-----------|---------|--------|--------|--------|--------|------|-------|-------|--------------------------------|---------------------------------------|--------------------------------|-------|
| | | | No. of edges | No. of inserts | IC | S | D1 | RE | | PVD | | - | | PVD | | - | | | | | |
| | | | | | | | | | | PR1225 | PR1535 | PR1705 | PR1725 | PR830 | KW10 | PV710 | PV720 | | PV730 | TN60 | TN610 |
| Finishing - Medium |  | VBET 1103005MR-Y | 1 | 2 | 6.35 | 3.18 | 2.8 | < 0.05 | 5 | ● | ● | | | | | | | | E40~E43 E58 F90, F91 F94~F99 | | |
| | | 1103005ML-Y | | | | | | < 0.05 | | ● | ● | | | | | | | | | | |
| | | 110301MR-Y | | | | | | < 0.1 | | ● | ● | | | | | | | | | | |
| | | 110301ML-Y | | | | | | < 0.1 | | ● | ● | | | | | | | | | | |
| | | 110302MR-Y | | | | | | < 0.2 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | |
| | | 110302ML-Y | | | | | | < 0.2 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | |
| | | 110304MR-Y | | | | | | < 0.4 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | |
| 110304ML-Y | | | | | | < 0.4 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | |
| Finishing - Medium |  | VBGT 1103003R-Y | 1 | 2 | 6.35 | 3.18 | 2.8 | 0.03 | 5 | | ● | ● | | | | | | | E40~E43 E58 F90, F91 F94~F99 | | |
| | | 1103003L-Y | | | | | | | | ● | ● | | | | | | | | | | |
| | | 110301R-Y | | | | | | | | | ● | ● | ● | ● | ● | | | | | | |
| | | 110301L-Y | | | | | | | | | | ● | ● | ● | ● | | | | | | |
| | | 110302R-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110302L-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110304R-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110304L-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110308R-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110308L-Y | | | | ● | ● | ● | ● | ● | | | | | | | | | | | |
| | | VBGT 160402R-Y | 1 | 2 | 9.525 | 4.76 | 4.4 | 0.2 | 5 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | E41~E43 F90, F91 F94~F99 | |
| | | 160402L-Y | | | | | | | | ● | ● | ● | ● | ● | ● | | | | | | |
| | | 160404R-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 160404L-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 160408R-Y | | | | | | | | | | ● | ● | ● | ● | ● | ● | | | | |
| 160408L-Y | | | | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | |
| Finishing - Medium |  | VBGT 1103005MR-Y | 1 | 2 | 6.35 | 3.18 | 2.8 | < 0.05 | 5 | ● | ● | | | | | | | | E40~E43 E58 F90, F91 F94~F99 | | |
| | | 1103005ML-Y | | | | | | | | ● | ● | | | | | | | | | | |
| | | 110301MR-Y | | | | | | | | | ● | ● | | | | | | | | | |
| | | 110301ML-Y | | | | | | | | | | ● | ● | | | | | | | | |
| | | 110302MR-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110302ML-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110304MR-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110304ML-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 110308MR-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| 110308ML-Y | | | | ● | ● | ● | ● | ● | | | | | | | | | | | | | |
| Finishing - Medium |  | VBGT 160402MR-Y | 1 | 2 | 9.525 | 4.76 | 4.4 | < 0.2 | 5 | ● | ● | | | | | | | E41~E43 F90, F91 F94~F99 | | | |
| | | 160402ML-Y | | | | | | | | ● | ● | | | | | | | | | | |
| | | 160404MR-Y | | | | | | | | | | ● | ● | | | | | | | | |
| | | 160404ML-Y | | | | | | | | | | ● | ● | | | | | | | | |
| | | 160408MR-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |
| | | 160408ML-Y | | | | | | | | | | ● | ● | ● | ● | ● | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range

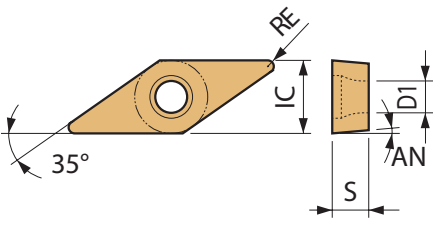


● : Standard item



35° Rhombic

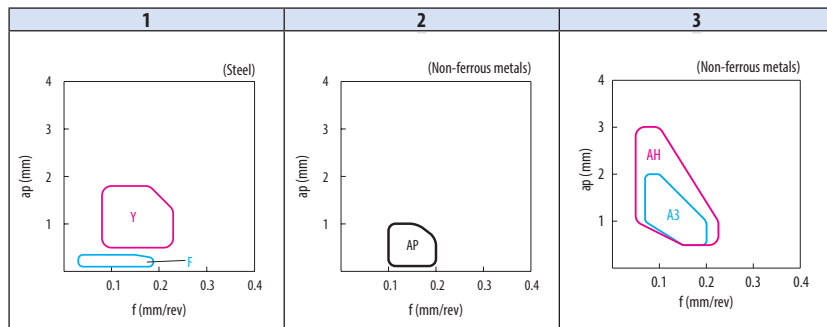
How to read pages of "Turning inserts" See page B15



| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | | Angle (°) | Carbide | | | Applicable toolholder | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|--|------------------------------|----|----------------|------|-----|--|--------|-----------|---------|------|--|-----------------------|--|--------------------|------------|--|---|---|------|------|-----|--|---|--|--|--|--|--|--------------------|---------------------------------|------------------|---|---|-------|------|-----|------------|---|--|--|--|--|--------------------|---------------------------------|--|---|---|-------|------|-----|------------|---|--|--|--|--|--|
| | | No. of edges | IC | S | D1 | RE | AN | DLC | PVD | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | PDL010 | PR1535 | PR1725 | KW10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | VCET 110301MR-F 110301ML-F 110302MR-F 110302ML-F 110304MR-F 110304ML-F | 1 | 2 | 6.35 | 3.18 | 2.8 | < 0.1 < 0.1 < 0.2 < 0.2 < 0.4 < 0.4 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | Finishing - Medium | Sharp edge | VCET 1103005MR-Y 1103005ML-Y 110301MR-Y 110301ML-Y 110302MR-Y 110302ML-Y 110304MR-Y 110304ML-Y | 1 | 2 | 6.35 | 3.18 | 2.8 | < 0.05 < 0.05 < 0.1 < 0.1 < 0.2 < 0.2 < 0.4 < 0.4 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Non-Ferrous Metals | Finishing / Sharp edge | VCGT 160404AP | 2 | 2 | 9.525 | 4.76 | 4.4 | 0.4 0.4 | 7 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Non-Ferrous Metals | Finishing - Medium / Sharp edge | VCGT 160404R-A3 160404L-A3 160408R-A3 160408L-A3 | 3 | 2 | 9.525 | 4.76 | 4.4 | 0.8 0.8 | 7 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Non-Ferrous Metals | Finishing - Medium / Sharp edge | VCGT 160404AH | 3 | 2 | 9.525 | 4.76 | 4.4 | 0.4 | 7 | | | | | | | | | | | | | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

B



Turning indexable inserts

35° Rhombic

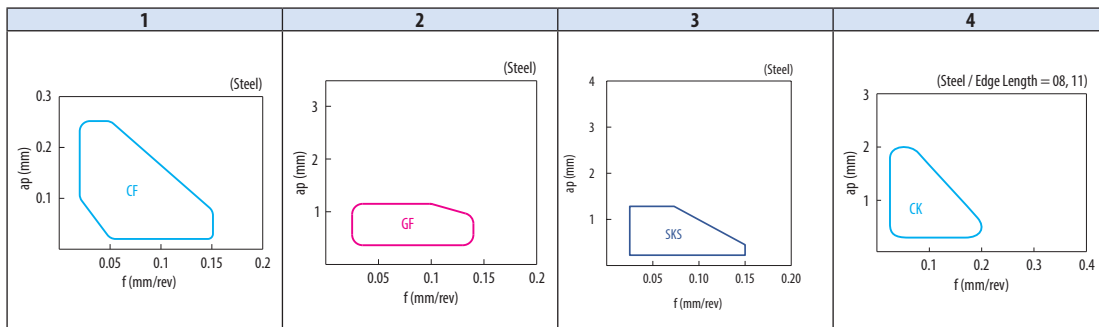
How to read pages of "Turning inserts" See page B15

- B**
- Turning indexable inserts
- Chip breakers
- Positive
- C
- D
- R
- S
- T
- V
- W
- Ceramic

| Free-cutting steel | | | | | | | | | | | | | | P | | |
|------------------------------------|--|------------------------------|--------------|----------------|------|-----|-------------------------|----|-----------|---------|--------|--------|--------|--------|--------------------------|----------------------|
| Carbon steel / Alloy steel | | | | | | | | | | | | | | M | | |
| Stainless steel | | | | | | | | | | | | | | K | | |
| Gray cast iron | | | | | | | | | | | | | | N | | |
| Nodular cast iron | | | | | | | | | | | | | | S | | |
| Non-ferrous metals | | | | | | | | | | | | | | H | | |
| Heat-resistant alloy | | | | | | | | | | | | | | | | |
| Titanium alloy | | | | | | | | | | | | | | | | |
| Hard materials | | | | | | | | | | | | | | | | |
| Insert | Description | Applicable chipbreaker range | No. of edges | Dimension (mm) | | | | | Angle (°) | Carbide | | | | | Applicable toolholder | |
| | | | | IC | S | D1 | RE | AN | | DLC | | PVD | | | | |
| | | | | | | | | | PDL010 | PDL025 | PR1725 | PR1535 | PR1705 | PR1725 | | PR930 |
| Minute ap Sharp edge | VPGT 110302CF | 1 | 2 | 6.35 | 3.18 | 2.8 | 0.2 | 11 | | | | | | | | |
| | VPGT 110301MP-CF 110302MP-CF | 1 | 2 | 6.35 | 3.18 | 2.8 | < 0.1 < 0.2 | 11 | ● | ● | ● | ● | ● | ● | ● | E24 E47~E49 |
| Finishing Polished / Sharp edge | VPGT 110301MFP-GF 110302MFP-GF | 2 | 2 | 6.35 | 3.18 | 3 | < 0.1 < 0.2 | 11 | | | ● | ● | ● | ● | ● | E24 E47~E49 |
| | VPGT 110301MFP-SKS 110302MFP-SKS 110304MFP-SKS | 3 | 2 | 6.35 | 3.18 | 3 | < 0.1 < 0.2 < 0.4 | | | | ● | ● | ● | ● | ● | E24 E47~E49 |
| Finishing | VPGT 080201CK 080202CK | 4 | 2 | 4.76 | 2.38 | 2.3 | 0.1 0.2 | 11 | | | | | | | ● E48, E49 ● F90, F91 | |
| | VPGT 110301CK 110302CK | 4 | 2 | 6.35 | 3.18 | 2.8 | 0.1 0.2 | 11 | | | | | | | ● E24 ● E47~E49 | |
| Finishing Polished / Sharp edge | VPGT 080201MP-CK 080202MP-CK | 4 | 2 | 4.76 | 2.38 | 2.3 | < 0.1 < 0.2 | 11 | ● | ● | ● | ● | ● | ● | ● | E48, E49 F90, F91 |
| | VPGT 110301MP-CK 110302MP-CK | 4 | 2 | 6.35 | 3.18 | 2.8 | < 0.1 < 0.2 | 11 | ● | ● | ● | ● | ● | ● | ● | E24 E47~E49 |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

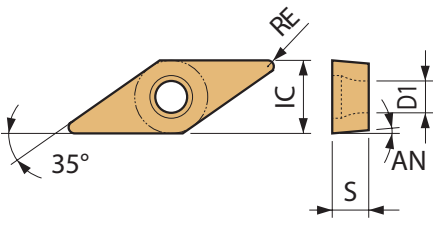
Applicable chipbreaker range

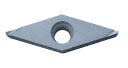
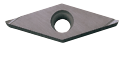


● : Standard item

35° Rhombic

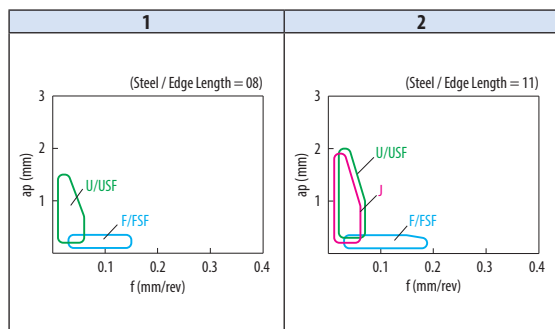
How to read pages of "Turning inserts" See page B15



| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Material | | | | Applicable toolholder | |
|--|--|--|----------------|----------------|------|------|---------------------------------------|-------------------------------|----------|---|--------|---|-----------------------|----------------------|
| | | No. of edges | No. of inserts | IC | S | D1 | RE | | Carbide | | Cermet | | | |
| | | | | | | | | | PVD | - | | | | |
| Finishing  Precision / Sharp edge | VPET 080201R-FSF 080201L-FSF 080202R-FSF 080202L-FSF | 1 | 2 | 4.76 | 2.38 | 2.3 | 0.1 0.1 0.2 0.2 | 11 | ● | ● | ● | ● | E48, E49 F90, F91 | |
| | VPET 1103003R-FSF 110301R-FSF 110301L-FSF 110302R-FSF 110302L-FSF | 2 | 2 | 6.35 | 3.18 | 2.8 | 0.03 0.1 0.1 0.2 0.2 | 11 | ● | ● | ● | ● | E24 E47~E49 | |
| | VPET 080201MR-FSF 080201ML-FSF 080202MR-FSF 080202ML-FSF | 1 | 2 | 4.76 | 2.38 | 2.3 | <0.1 <0.1 <0.2 <0.2 | 11 | ● | ● | ● | ● | E48, E49 F90, F91 | |
| | VPET 1103005MR-FSF 110301MR-FSF 110301ML-FSF 110302MR-FSF 110302ML-FSF | 2 | 2 | 6.35 | 3.18 | 2.8 | <0.05 <0.1 <0.1 <0.2 <0.2 | 11 | ● | ● | ● | ● | E24 E47~E49 | |
| | Finishing  Sharp edge | VPET 080201MR-F 080201ML-F 080202MR-F 080202ML-F | 1 | 2 | 4.76 | 2.38 | 2.3 | <0.1 <0.1 <0.2 <0.2 | 11 | ● | ● | ● | ● | E48, E49 F90, F91 |
| | | VPET 1103005MR-F 110301MR-F 110302MR-F 110302ML-F | 2 | 2 | 6.35 | 3.18 | 2.8 | <0.05 <0.1 <0.2 <0.2 | 11 | ● | ● | ● | ● | E24 E47~E49 |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

35° Rhombic

How to read pages of "Turning inserts" See page B15

B

Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

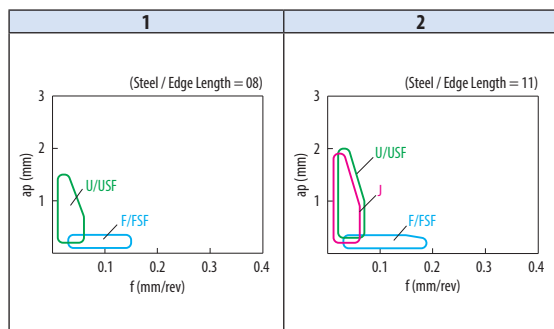
W

Ceramic

| | | Free-cutting steel | | | | | | | | | | P | | |
|------------------------------------|---|------------------------------|----|----------------|------|-----|--|-----------|---------|--------|--------|-------|--------|-----------------------|
| | | Carbon steel / Alloy steel | | | | | | | | | | M | | |
| | | Stainless steel | | | | | | | | | | K | | |
| | | Gray cast iron | | | | | | | | | | N | | |
| | | Nodular cast iron | | | | | | | | | | S | | |
| | | Non-ferrous metals | | | | | | | | | | H | | |
| | | Heat-resistant alloy | | | | | | | | | | | | |
| | | Titanium alloy | | | | | | | | | | | | |
| | | Hard materials | | | | | | | | | | | | |
| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | Angle (°) | Carbide | | | | Cermet | Applicable toolholder |
| | | No. of edges | IC | S | D1 | RE | AN | | PVD | | | | | |
| | | | | | | | | | PR1225 | PR1535 | PR1725 | PR930 | | |
| Low feed Precision / Sharp edge | VPET 080201FR-USF 080201FL-USF 080202FR-USF 080202FL-USF | 1 | 2 | 4.76 | 2.38 | 2.3 | 0.1 0.1 0.2 0.2 | 11 | | | | | | E48, E49 F90, F91 |
| | VPET 1103003FR-USF 1103003FL-USF 110301FR-USF 110301FL-USF 110302FR-USF 110302FL-USF | 2 | 2 | 6.35 | 3.18 | 2.8 | 0.03 0.03 0.1 0.1 0.2 0.2 | 11 | | | | | | E24 E47~E49 |
| | VPET 080201MFR-USF 080202MFR-USF 080202MFL-USF | 1 | 2 | 4.76 | 2.38 | 2.3 | <0.1 <0.2 <0.2 | 11 | | | | | | E48, E49 F90, F91 |
| | VPET 1103005MFR-USF 110301MFR-USF 110301MFL-USF 110302MFR-USF | 2 | 2 | 6.35 | 3.18 | 2.8 | <0.05 <0.1 <0.1 <0.2 | 11 | | | | | | E24 E47~E49 |
| Low feed Sharp edge | VPET 080201MFR-U 080201MFL-U 080202MFR-U 080202MFL-U | 1 | 2 | 4.76 | 2.38 | 2.3 | <0.1 <0.1 <0.2 <0.2 | 11 | | | | | | E48, E49 F90, F91 |
| | VPET 1103005MFR-U 1103005MFL-U 110301MFR-U 110301MFL-U 110302MFR-U 110302MFL-U | 2 | 2 | 6.35 | 3.18 | 2.8 | <0.05 <0.05 <0.1 <0.1 <0.2 <0.2 | 11 | | | | | | E24 E47~E49 |
| Low feed Sharp edge | VPET 1103005MFR-J 110301MFR-J 110301MFL-J 110302MFR-J 110302MFL-J | 2 | 2 | 6.35 | 3.18 | 2.8 | <0.05 <0.1 <0.1 <0.2 <0.2 | 11 | | | | | | E24 E47~E49 |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

80° Trigon

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

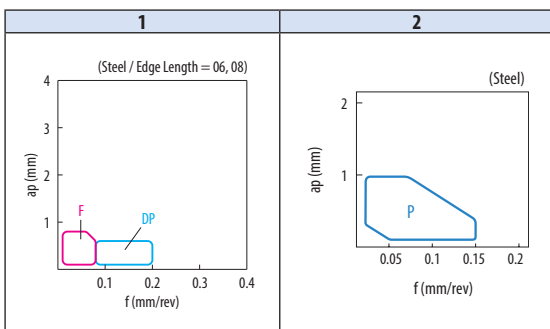
W

Ceramic

| Insert | Description | Applicable chipbreaker range | | Dimension (mm) | | | | | Angle (°) | Carbide | | | | Cermet | Applicable toolholder |
|--------------------------------------|--------------------------|------------------------------|----|----------------|------|-----|------------|--------|-----------|---------|------|------|--|-------------------|-----------------------|
| | | No. of edges | IC | S | D1 | RE | AN | PVD | | | | | | | |
| | | | | | | | | PR1535 | PR1725 | PR930 | KW10 | TN60 | | | |
| Finishing Sharp edge | WBG T 0601003L-F | 1 | 3 | 3.97 | 1.59 | 2.3 | 0.03 | 5 | | | | | | F136 F100~F102 | |
| | 060101R-F | | | | | | | | | | | | | | |
| | 060101L-F | | | | | | | | | | | | | | |
| | 060102R-F | | | | | | | | | | | | | | |
| | 060102L-F | | | | | | | | | | | | | | |
| | 060104R-F | | | | | | | | | | | | | | |
| | 060104L-F | | | | | | | | | | | | | | |
| | WBG T 080201L-F | 1 | 3 | 4.76 | 2.38 | 2.3 | 0.1 | | | | | | | | |
| | 080202R-F | | | | | | | | | | | | | | |
| | 080202L-F | | | | | | | | | | | | | | |
| 080204R-F | | | | | | | | | | | | | | | |
| 080204L-F | | | | | | | | | | | | | | | |
| Finishing Sharp edge | WBE T 080201MR-P | 2 | 3 | 4.76 | 2.38 | 2.3 | < 0.1 | 5 | | | | | | | |
| | 080201ML-P | | | | | | | | | | | | | | |
| | 080202MR-P | | | | | | | | | | | | | | |
| | 080202ML-P | | | | | | | | | | | | | | |
| | 080204MR-P | | | | | | | | | | | | | | |
| | 080204ML-P | | | | | | | | | | | | | | |
| Cast iron Without Chipbreaker | WBG W 060102L | - | 3 | 3.97 | 1.59 | 2.3 | 0.2 | 5 | | | | | | | |
| | WBG W 080202L 080204L | - | 3 | 4.76 | 2.38 | 2.3 | 0.2 0.4 | 5 | | | | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

Applicable chipbreaker range



● : Standard item

B106

25° Rhombic

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive

C

D

R

S

T

V

W

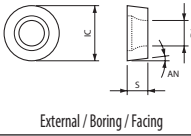
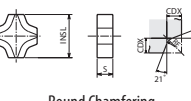
Ceramic

| Insert | | Description | No. of edges | Dimension (mm) | | | | | Angle (°) | Carbide | Applicable toolholder |
|-----------|--|---------------------------------------|--------------|----------------|------|-----|-------------------|----|-----------|-----------------------|-----------------------|
| | | | | IC | S | D1 | RE | AN | | | |
| | | | | | | | | | | | |
| | | ZBMT 13T304R-GF-15D | | | | | | | | | |
| Finishing | | ZBMT 13T302GF 13T304GF 13T308GF | 2 | 6.35 | 3.97 | 3.7 | 0.2 0.4 0.8 | 5 | ● ● ● ● ● | E52, E53 F106~F110 | |
| Finishing | | ZBMT 13T304R-GF-15D | 2 | 6.35 | 3.97 | 3.7 | 0.4 | 5 | ● ● | | |

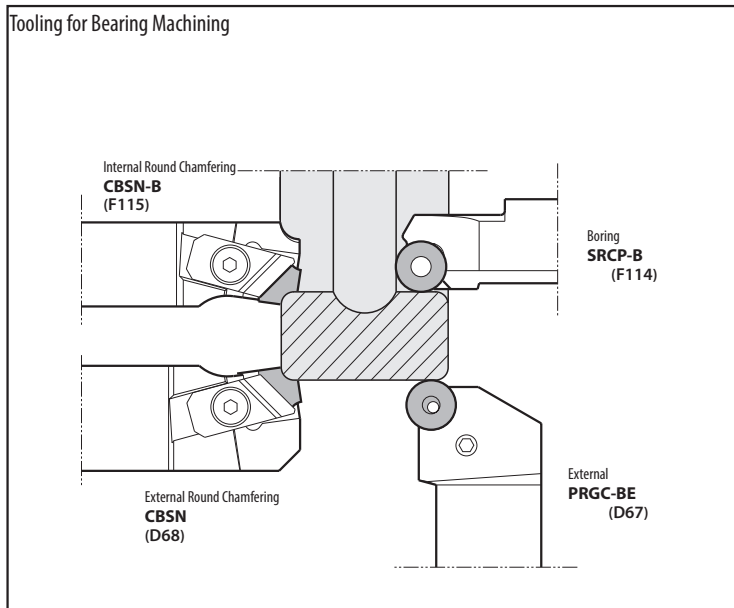
● : Standard item

Round / SNMF Type

How to read pages of "Turning inserts" See page B15

| Insert | | Description | | Dimension (mm) | | | | | | | Angle (°) | Cermet | Applicable toolholder |
|---|--|--|--|----------------------------|-------------------------------|------|----|------|-----|-------------------------------|-----------|-----------------------|-----------------------|
| | | | | No. of edges | CDX | INSL | IC | S | D1 | RE | AN | | |
| | | | | | | | | | | | | TI90 | |
| | | | | Free-cutting steel | | | | | | | | P | |
| | | | | Carbon steel / Alloy steel | | | | | | | | | |
| | | | | Stainless steel | | | | | | | | M | |
| | | | | Gray cast iron | | | | | | | | | K |
| | | | | Nodular cast iron | | | | | | | | | |
| | | | | Non-ferrous metals | | | | | | | | N | |
| | | | | Heat-resistant alloy | | | | | | | | | S |
| | | | | Titanium alloy | | | | | | | | | |
| | | | | Hard materials | | | | | | | | | H |
|  <p>External / Boring / Facing</p> | | RCMT 1204M0-BB RCMT 1606M0-BB RPMT 1203M0-BB RPMT 1604M0-BB | | - | - | - | 12 | 4.76 | 4.2 | - | 7 | ● | D67 |
| | | | | - | - | - | 16 | 6.35 | 5.5 | - | 7 | ● | |
|  <p>Round Chamfering</p> | | SNMF 120406-21 SNMF 120410-21 SNMF 120416-21 SNMF 120421-21 SNMF 120426-21 | | 8 | 1.5 3 3.1 3.2 3.3 | 12.7 | - | 4.76 | - | 0.6 1 1.6 2.1 2.6 | - | ● ● ● ● ● | D68 F115 |

Tooling for Bearing Machining



● : Standard item

TKFB

How to read pages of "Turning inserts" See page B15

B

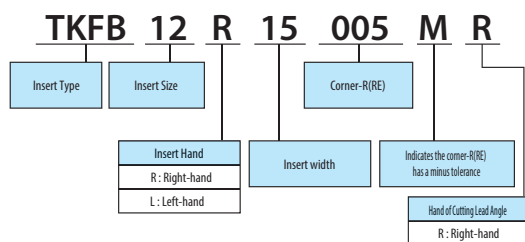
Turning indexable inserts

- Chip breakers
- Positive
- C
- D
- R
- S
- T
- V
- W
- Ceramic

| Insert | | Description | No. of edges | Dimension (mm) | | | | | | | Angle (°) | | Carbide | | | | Applicable toolholder |
|--------|-------------------|-------------|--------------|----------------|-----|--------|--------------|------|-----|----|-----------|-----|---------|------------|--------|------|-----------------------|
| | | | | CW | CDX | S | D1 | RE | W1 | a | θ | PVD | - | | | | |
| | | | | | | | | | | | | | PR1225 | PR1535 | PR1725 | KW10 | |
| | TKFB 12R15005M | 2 | 1.5 | 2.6 | | < 0.05 | 3 | 0.25 | - | ● | ● | ● | ● | E15 E16 | | | |
| | 12R28005M | 2 | 2.8 | 4.6 | 8.7 | 5.2 | < 0.05 | 3 | 0.3 | ● | ● | ● | ● | | | | |
| | 12R28010M | 2 | 2.8 | 4.6 | | | < 0.1 | 3 | 0.3 | ● | ● | ● | ● | | | | |
| | TKFB 16R38005M | 2 | 3.8 | 6.3 | 9.5 | 5.2 | < 0.05 | 4 | 0.3 | - | ● | ● | ● | | | | |
| | 16R38010M | 2 | 3.8 | 6.3 | | | < 0.1 | 4 | 0.3 | - | ● | ● | ● | | | | |
| | TKFB 12L28005MR | 2 | 2.8 | 4.6 | 8.7 | 5.2 | < 0.05 | 3 | 0.3 | - | ● | ● | ● | | | | |
| | 12L28010MR | 2 | 2.8 | 4.6 | | | < 0.1 | 3 | 0.3 | - | ● | ● | ● | | | | |
| | TKFB 16L38005MR | 2 | 3.8 | 6.3 | 9.5 | 5.2 | < 0.05 | 4 | 0.3 | - | ● | ● | ● | | | | |
| | 16L38010MR | 2 | 3.8 | 6.3 | | | < 0.1 | 4 | 0.3 | - | ● | ● | ● | | | | |
| | TKFB 12R28005P-GQ | 2 | 2.8 | 4.6 | 8.7 | 5.2 | 0.05 0.15 | 3 | 1.5 | 74 | ● | ● | ● | | | | |
| | 12R28015P-GQ | 2 | 2.8 | 4.6 | | | 0.15 | 3 | 1.5 | 74 | ● | ● | ● | | | | |
| | TKFB 16R38005P-GQ | 2 | 3.8 | 6.3 | 9.5 | 5.2 | 0.05 0.15 | 4 | 1.8 | 72 | ● | ● | ● | | | | |
| | 16R38015P-GQ | 2 | 3.8 | 6.3 | | | 0.15 | 4 | 1.8 | 72 | ● | ● | ● | | | | |
| | TKFB 12R28005-GQ | 2 | 2.8 | 4.6 | 8.7 | 5.2 | 0.05 0.15 | 3 | 1.5 | 74 | ● | ● | ● | | | | |
| | 12R28015-GQ | 2 | 2.8 | 4.6 | | | 0.15 | 3 | 1.5 | 74 | ● | ● | ● | | | | |
| | TKFB 16R38005-GQ | 2 | 3.8 | 6.3 | 9.5 | 5.2 | 0.05 0.15 | 4 | 1.8 | 72 | ● | ● | ● | | | | |
| | 16R38015-GQ | 2 | 3.8 | 6.3 | | | 0.15 | 4 | 1.8 | 72 | ● | ● | ● | | | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

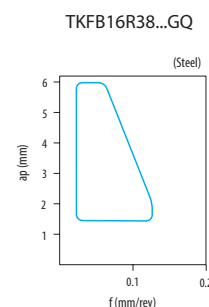
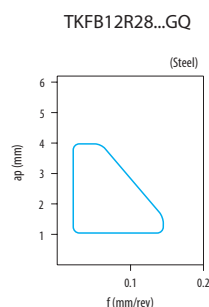
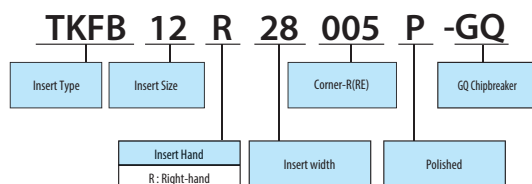
Inserts Identification System (Ref. to Tables 1 and 2)



| Small machining | General purpose | Large machining |
|-------------------|-------------------|-------------------|
| <p>TKFB12R15.</p> | <p>TKFB12R28.</p> | <p>TKFB16R38.</p> |

| Table 1 | | Table 2 | |
|------------|------------|------------|------------|
| Toolholder | Right-hand | Toolholder | Left-hand |
| Insert | Right-hand | Insert | Left-hand |
| Lead angle | Right-hand | Lead angle | Right-hand |
| | | | |

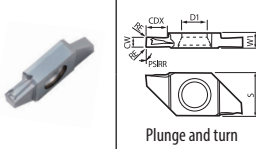
Applicable Chipbreaker Range



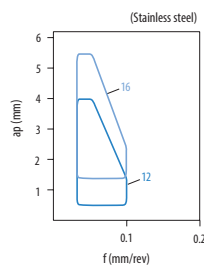
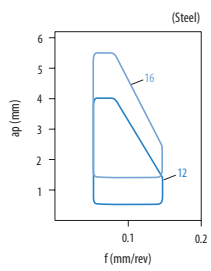
● : Standard item

TKF-GTP

How to read pages of "Turning inserts" See page B15

| Insert | | Description | | Dimension (mm) | | | | | | | Angle (°) | Carbide | Applicable toolholder | | |
|---|--|----------------|--|----------------|----|-----|-----|-----|------|----|----------------------------|---------|-----------------------|-------|-----|
| | | | | No. of edges | CW | CDX | S | D1 | RE | W1 | | | | PSIRR | |
| | | | | | | | | | | | | | | | PVD |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | Free-cutting steel | | P | | |
| | | | | | | | | | | | Carbon steel / Alloy steel | | P | | |
| | | | | | | | | | | | Stainless steel | | M | | |
| | | | | | | | | | | | Gray cast iron | | K | | |
| | | | | | | | | | | | Nodular cast iron | | K | | |
| | | | | | | | | | | | Non-ferrous metals | | N | | |
| | | | | | | | | | | | Heat-resistant alloy | | S | | |
| | | | | | | | | | | | Titanium alloy | | S | | |
| | | | | | | | | | | | Hard materials | | H | | |
|  | | TKF 12R200-GTP | | 2 | 2 | 4.3 | 8.7 | 5.2 | 0.08 | 3 | 0 | ● ● | E15 E16 | | |
| | | TKF 16R300-GTP | | 2 | 3 | 5.8 | 9.5 | 5.2 | 0.08 | 4 | 0 | ● ● | | | |

Applicable Chipbreaker Range



● : Standard item

ABS / ABW

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Negative

C

D

R

S

T

V

W

Ceramic

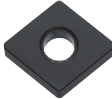

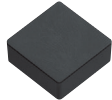

| Insert | | Description | No. of edges | Dimension (mm) | Carbide | | | | | Cermet | Applicable toolholder | |
|--------|--|--------------|--------------|------------------|---------|--------|--------|--------|---|--------|-----------------------|---|
| | | | | | RE | PVD | | | - | | | - |
| | | | | | | PR1725 | PR1705 | PR1725 | | | | |
| | | ABS 15R4005M | 2 | < 0.05 < 0.15 | ● | ● | ● | | | | E20 | |
| | | 15R4015M | | | ● | ● | ● | | | | | |
| | | ABS 15R4005 | 2 | 0.05 0.15 | | | | | ● | ● | E21 | |
| | | 15R4015 | | | | | | | ● | ● | | |
| | | ABW 15R4005M | 2 | < 0.05 < 0.15 | ● | ● | ● | | | | E21 | |
| | | 15R4015M | | | ● | ● | ● | | | | | |
| | | ABW 15R4005 | 2 | 0.05 0.15 | | | | | ● | ● | E22 | |
| | | 15R4015 | | | | | | | ● | ● | | |
| | | ABW 23R5005M | 2 | < 0.05 < 0.15 | ● | ● | ● | | | | E22 | |
| | | 23R5015M | | | ● | ● | ● | | | | | |
| | | ABW 23R5005 | 2 | 0.05 0.15 | | | | | ● | ● | E22 | |
| | | 23R5015 | | | | | | | ● | ● | | |

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. <0.05, <0.1, <0.2 etc.) indicate models with minus tolerance on corner-R(RE).

● : Standard item

80° Rhombic

How to read pages of "Turning inserts" See page B15

| Cutting edge preparation | | | Material compatibility | | | | | | | | | | | Applicable toolholder | | | | |
|---|---------------|--|-----------------------------|--------------------------------|--------------------------------|-----------------------------------|----------------------|--------------------------|--------|------|---------|-----|------|-----------------------|--------|--------|------|--------------------------------|
| Symbol | Specification | Example | Gray cast iron (with scale) | Gray cast iron (without scale) | Nodular cast iron (with scale) | Nodular cast iron (without scale) | Heat-resistant alloy | Hard materials | CVD | PVD | Ceramic | | | | | | | |
| | | | Edge preparation type | No. of edges | IC | S | D1 | RE | CS7050 | Ag6N | PT600M | Ag5 | KA30 | KS6015 | KS6040 | KS6050 | KT66 | |
| | | | Dimension (mm) | | | | | Ceramic | | | | | | | | | | |
|   | CNGA | 120412S01025 | S01025 | 4 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | ● | | | | | D8~D10 F116 F125 F126 |
| | CNGA | 120404S01525 120408S01525 120412S01525 | S01525 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | | | | | | | |
| | CNGA | 120404S02025 120408S02025 120412S02025 | S02025 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | | | | | | | |
| | CNGA | 120404T02025 120408T02025 120412T02025 | T02025 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ○ | |
| | CNGA | 120404S03030 120408S03030 120412S03030 | S03030 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● | ● | ● | | | | | | | |
| | CNMA | 120408S01525 | S01525 | 4 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | | | | | | | |
| | CNMA | 120408S03030 120412S03030 | S03030 | 4 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ● | | | | | | | | | |
|   | CNGN | 120408T01020 | T01020 | 4 | 12.7 | 4.76 | - | 0.8 | | | | | | ● | | | D49 | |
| | CNGN | 120412S01025 | S01025 | 4 | 12.7 | 4.76 | - | 1.2 | | | | ● | | | | | | |
| | CNGN | 120408T02025 120412T02025 120416T02025 | T02025 | 4 | 12.7 | 4.76 | - | 0.8 1.2 1.6 | ● | ● | | ● | ● | | ● | | | |
| | CNGN | 120708S01525 120712S01525 | S01525 | 4 | 12.7 | 7.94 | - | 0.8 1.2 | ● | ● | | | | | | | | |
| | CNGN | 120704T02025 120708T02025 120712T02025 120716T02025 | T02025 | 4 | 12.7 | 7.94 | - | 0.4 0.8 1.2 1.6 | | | ● | ● | ● | ● | | | | |
| | CNGN | 160708T02025 160712T02025 160716T02025 | T02025 | 4 | 15.875 | 7.94 | - | 0.8 1.2 1.6 | | | ● | ● | ● | | | | | |
| | CNMN | 120708T02025 | T02025 | 4 | 12.7 | 7.94 | - | 0.8 | | | ● | | | | | | | |

● : Standard item ○ : Check availability

B
Turning indexable inserts

55° Rhombic

How to read pages of "Turning inserts" See page B15

B

Cutting edge preparation

| Symbol | Specification | Example | |
|--------|-----------------------|---------|------------------------------------|
| S | Chamfered and R-honed | S01525 | 0.15mm × 25° chamfered and R-honed |
| T | Chamfered | T02025 | 0.20mm × 25° chamfered |

| | | | | |
|-----------------------------------|---|---|---|---|
| Gray cast iron (with scale) | | | | |
| Gray cast iron (without scale) | | | ☺ | ☺ |
| Nodular cast iron (with scale) | | | | |
| Nodular cast iron (without scale) | | | | |
| Heat-resistant alloy | | | | S |
| Hard materials | ○ | ● | | H |



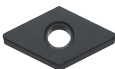
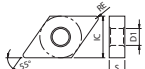
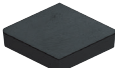

Turning indexable inserts

Chip breakers

Negative



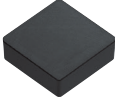
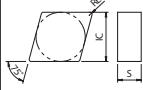
Ceramic

| Insert | Description | Edge preparation type | No. of edges | Dimension (mm) | | | | Ceramic | | | Applicable toolholder |
|---|---|-----------------------|--------------|----------------|------|------|--------------------------|------------------|--------|-----|------------------------------------|
| | | | | IC | S | D1 | RE | PVD | | | |
| | | | | | | | | Ag6N | PT600M | Ag5 | |
|   | DNGA 150404S01525 150408S01525 | S01525 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● ● | | | D13~D17 F118, F130 F132~F134 |
| | DNGA 150404S02025 150408S02025 | S02025 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 | ● ● | | | |
| | DNGA 150404T02025 150408T02025 150412T02025 | T02025 | 4 | 12.7 | 4.76 | 5.16 | 0.4 0.8 1.2 | ● ● ● | | | |
| | DNGA 150408S03030 | S03030 | 4 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | |
| | DNGA 150604T02025 150608T02025 150612T02025 | T02025 | 4 | 12.7 | 6.35 | 5.16 | 0.4 0.8 1.2 | ● ● ● | | | |
|   | DNGN 150704S01525 150708S01525 150712S01525 | S01525 | 4 | 12.7 | 7.94 | - | 0.4 0.8 1.2 | ● ● ● | | | D50 |
| | DNGN 150708S02025 | S02025 | 4 | 12.7 | 7.94 | - | 0.8 | ● | | | |
| | DNGN 150704T02025 150708T02025 150712T02025 150716T02025 | T02025 | 4 | 12.7 | 7.94 | - | 0.4 0.8 1.2 1.6 | ● ● ● ● | | | |

● : Standard item

75° Rhombic

How to read pages of "Turning inserts" See page B15

| Cutting edge preparation | | | | | | | | | | | | |
|---|--|-----------------------|------------------------------------|----------------|-------------------------------|-----------------------|--------------|-----|--------------------------|---|---|--|
| Symbol | Specification | Example | | | | | | | | | | |
| S | Chamfered and R-honed | S01525 | 0.15mm × 25° chamfered and R-honed | | | | | | | | K | |
| T | Chamfered | T02025 | 0.20mm × 25° chamfered | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | S | | |
| | | | | | | | | | | H | | |
| Insert | Description | Edge preparation type | No. of edges | Dimension (mm) | | | Cera- mic | | Applicable toolholder | | | |
| | | | | IC | S | RE | A66N | A65 | | | | |
|   | ENGN 130708S01525 ENGN 130704T02025 130708T02025 130712T02025 130716T02025 130720T02025 | S01525 | 4 | 12.7 | 7.94 | 0.8 | ● | - | D51 F145 | | | |
| | T02025 | 4 | 12.7 | 7.94 | 0.4 0.8 1.2 1.6 2 | ● ● ● ● ● | - | | | | | |

● : Standard item

Round

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Negative






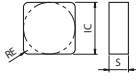
Ceramic

| Cutting edge preparation | | | | Material compatibility | | | | | | | | | | Applicable toolholder | | |
|--------------------------|-----------------------|-----------------------|------------------------------------|-----------------------------|--------------------------------|--------------------------------|-----------------------------------|----------------------|----------------|---------|-----------------------|--------|--|-----------------------|---|------------|
| Symbol | Specification | Example | | Gray cast iron (with scale) | Gray cast iron (without scale) | Nodular cast iron (with scale) | Nodular cast iron (without scale) | Heat-resistant alloy | Hard materials | Ceramic | | | | | | |
| E | R-honed | E005 | R0.05mm honed | | ☺ | ☺ | | | ☹ | ☹ | | | | | | K |
| K | Double chamfered | K15015 | 1.5mm × 15° chamfered | | | | | | | | | | | | | |
| S | Chamfered and R-honed | S01525 | 0.15mm × 25° chamfered and R-honed | | | | | | | | | | | | | |
| T | Chamfered | T02025 | 0.20mm × 25° chamfered | | | | | | | | | | | | | |
| | | | | ○ | ● | | | | | | | | | | H | |
| Insert | Description | Edge preparation type | Dimension (mm) | | Ceramic | | | | | | Applicable toolholder | | | | | |
| | | | IC | S | PVD | | - | | | | | | | | | |
| | | | | | Ag6N | PT600M | Ag5 | KS6015 | KS6030 | KS6040 | | KS6050 | | | | |
| | RNGN 090300T01020 | T01020 | 9.525 | 3.18 | | | | | | | | | | | | D61 |
| | RNGN 090400S01525 | S01525 | 9.525 | 4.76 | ● | | | | | | | | | | | |
| | RNGN 090400S02025 | S02025 | 9.525 | 4.76 | | ● | | | | | | | | | | |
| | RNGN 090400T02025 | T02025 | 9.525 | 4.76 | | ● | ● | | | | | | | | | |
| | RNGN 120400E003 | E003 | 12.7 | 4.76 | | | | | | | | | | | | D58 D61 |
| | RNGN 120400T01020 | T01020 | 12.7 | 4.76 | | | | | | | | | | | | |
| | RNGN 120400S01525 | S01525 | 12.7 | 4.76 | ● | | | | | | | | | | | |
| | RNGN 120400S02025 | S02025 | 12.7 | 4.76 | | ● | | | | | | | | | | |
| | RNGN 120400T02025 | T02025 | 12.7 | 4.76 | | ● | ● | ● | | | | | | | | |
| | RNGN 120700E003 | E003 | 12.7 | 7.94 | | | | | | | | | | | | |
| | RNGN 120700E005 | E005 | 12.7 | 7.94 | | | | | | | | | | | | |
| | RNGN 120700T01020 | T01020 | 12.7 | 7.94 | | | | | | | | | | | | |
| | RNGN 120700K15015 | K15015 | 12.7 | 7.94 | | ● | | | | | | | | | | |
| | RNGN 120700S01525 | S01525 | 12.7 | 7.94 | ● | | | | | | | | | | | |
| | RNGN 120700S02025 | S02025 | 12.7 | 7.94 | | ● | | | | | | | | | | |
| | RNGN 120700T02025 | T02025 | 12.7 | 7.94 | | ● | ● | ● | | | | | | | | |
| | RNGN 150700S01525 | S01525 | 15.875 | 7.94 | ● | | | | | | | | | | | D58 |
| | RNGN 150700S02025 | S02025 | 15.875 | 7.94 | | ● | | | | | | | | | | |
| | RNGN 150700T02025 | T02025 | 15.875 | 7.94 | | | ● | | | | | | | | | |
| | RNGN 190700E003 | E003 | 19.05 | 7.94 | | | | | | | | | | | | |
| RNGN 190700T01020 | T01020 | 19.05 | 7.94 | | | | | | | | | | | | | |

● : Standard item

90° Square

How to read pages of "Turning inserts" See page B15

| Cutting edge preparation | | | Material compatibility | | | | | | | | | | Applicable toolholder | | | | | |
|---|---|---|-----------------------------|--------------------------------|--------------------------------|-----------------------------------|-------------------------------|----------------|---------|------|--------|-----|-----------------------|--------|-----------------------|--------|--------|-----------------------|
| Symbol | Specification | Example | Gray cast iron (with scale) | Gray cast iron (without scale) | Nodular cast iron (with scale) | Nodular cast iron (without scale) | Heat-resistant alloy | Hard materials | Ceramic | | | | | | Applicable toolholder | | | |
| | | | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | CVD | PVD | | | | | | | | |
| | | | ● | ☺ | ☺ | ☺ | ☺ | ☺ | CS7050 | A66N | PT600M | A65 | KA30 | KS6015 | | KS6040 | KS6050 | KT66 |
| Symbol | Specification | Example | | | | | | | | | | | | | | | | |
| S | Chamfered and R-honed | S01525 0.15mm × 25° chamfered and R-honed | | | | | | | | | | | K | | | | | |
| T | Chamfered | T02025 0.20mm × 25° chamfered | | | | | | | | | | | S | | | | | |
| | | | | | | | | | | | | | H | | | | | |
| Insert | Description | Edge preparation type | No. of edges | Dimension (mm) | | | | Ceramic | | | | | | | | | | Applicable toolholder |
| | | | | IC | S | D1 | RE | CVD | PVD | | | | | | | | | |
|   | SNGA 120408S01525 120412S01525 | S01525 | 8 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ● | ● | | | | | | | | | D19~D21 F136 |
| | SNGA 120408S02025 120412S02025 | S02025 | 8 | 12.7 | 4.76 | 5.16 | 0.8 1.2 | ● | ● | | | | | | | | | |
| | SNGA 120408T02025 120412T02025 120416T02025 | T02025 | 8 | 12.7 | 4.76 | 5.16 | 0.8 1.2 1.6 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | SNMA 120408S03030 | S03030 | 8 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | | | | | | | | |
|   | SNGN 120408T00520 | T00520 | 8 | 12.7 | 4.76 | - | 0.8 | | ● | | | | | | | | | D52~D54 D63 D64 |
| | SNGN 120412T01020 | T01020 | 8 | 12.7 | 4.76 | - | 1.2 | | | | | | | ● | | | | |
| | SNGN 120408S01025 120412S01025 120416S01025 120420S01025 | S01025 | 8 | 12.7 | 4.76 | - | 0.8 1.2 1.6 2 | | | ● | ● | ● | ● | ● | ● | ● | ● | |
| | SNGN 120408S01525 120412S01525 120416S01525 | S01525 | 8 | 12.7 | 4.76 | - | 0.8 1.2 1.6 | ● | ● | ● | | | | | | | | |
| | SNGN 120408S02025 120412S02025 120416S02025 | S02025 | 8 | 12.7 | 4.76 | - | 0.8 1.2 1.6 | | ● | ● | ● | | | | | | | |
| | SNGN 120404T02025 120408T02025 120412T02025 120416T02025 120420T02025 | T02025 | 8 | 12.7 | 4.76 | - | 0.4 0.8 1.2 1.6 2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ | |
| | SNGN 120416S03030 | S03030 | 8 | 12.7 | 4.76 | - | 1.6 | ● | | | | | | | | | | |
| | SNGN 120704S01525 120708S01525 120712S01525 120716S01525 120720S01525 | S01525 | 8 | 12.7 | 7.94 | - | 0.4 0.8 1.2 1.6 2 | ● | ● | ● | ● | | | | | | | |
| | SNGN 120708S02025 120712S02025 120716S02025 120720S02025 | S02025 | 8 | 12.7 | 7.94 | - | 0.8 1.2 1.6 2 | | ● | ● | ● | | | | | | | |
| | SNGN 120704T02025 120708T02025 120712T02025 120716T02025 120720T02025 | T02025 | 8 | 12.7 | 7.94 | - | 0.4 0.8 1.2 1.6 2 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | SNMN 120716T02025 | T02025 | 8 | 12.7 | 7.94 | - | 1.6 | | | ● | | | | | | | | |
| | SNGN 150712T02025 150716T02025 | T02025 | 8 | 15.875 | 7.94 | - | 1.2 1.6 | | | ● | ● | | | | | | | |

● : Standard item ○ : Check availability

B



Turning indexable inserts

60° Triangle

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Negative



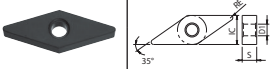
Ceramic

| Cutting edge preparation | | | Material compatibility | | | | | | | | | | | | K |
|--------------------------|---|---|--------------------------------|----------------|------|------|-------------------|---------|-----------------------------------|------|--------|--------|------|-----------------------|---|
| Symbol | Specification | Example | Material compatibility | | | | | | | | | | | | |
| S | Chamfered and R-honed | S01525 0.15mm × 25° chamfered and R-honed | Material compatibility | | | | | | | | | | | | |
| T | Chamfered | T02025 0.20mm × 25° chamfered | Material compatibility | | | | | | | | | | | | |
| | | | Gray cast iron (with scale) | | | | | | Gray cast iron (without scale) | | | | | | S |
| | | | Nodular cast iron (with scale) | | | | | | Nodular cast iron (without scale) | | | | | | |
| | | | Heat-resistant alloy | | | | | | | | | | | | H |
| | | | Hard materials | | | | | | | | | | | | |
| Insert | Description | Edge preparation type | No. of edges | Dimension (mm) | | | | Ceramic | | | | | | Applicable toolholder | |
| | | | | IC | S | D1 | RE | PVD | | - | | | | | |
| | | | | | | | | AG6N | AG5 | KA30 | KS6015 | KS6050 | KT66 | | |
| | | | | | | | | PT600M | | | | | | | |
| | TNGA 160408T00520 | T00520 | 6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | D22~D25 D27 D28 F120 F137 F138 |
| | TNGA 160404S01525 160408S01525 160412S01525 | S01525 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 | ● | | | | | | | |
| | TNGA 160404S02025 160408S02025 160412S02025 | S02025 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 | ● | ● | | | | | | |
| | TNGA 160404T02025 160408T02025 160412T02025 | T02025 | 6 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 | ● | ● | ● | ● | ● | ○ | ○ | |
| | TNGA 160408S03030 | S03030 | 6 | 9.525 | 4.76 | 3.81 | 0.8 | ● | | | | | | | |
| | TNGN 110304T00520 110308T00520 110312T00520 | T00520 | 6 | 6.35 | 3.18 | - | 0.4 0.8 1.2 | ● | ● | ● | | | | | D66 F146 |
| | TNGN 160404T00520 160408T00520 160412T00520 | T00520 | 6 | 9.525 | 4.76 | - | 0.4 0.8 1.2 | ● | ● | | | | | | D56 |
| | TNGN 160404S01025 160408S01025 160412S01025 | S01025 | 6 | 9.525 | 4.76 | - | 0.4 0.8 1.2 | | ● | ● | | | | | |
| | TNGN 160404S01525 160408S01525 160412S01525 | S01525 | 6 | 9.525 | 4.76 | - | 0.4 0.8 1.2 | ● | ● | | | | | | |
| | TNGN 160404S02025 160408S02025 160412S02025 | S02025 | 6 | 9.525 | 4.76 | - | 0.4 0.8 1.2 | ● | ● | | | | | | |
| | TNGN 160404T02025 160408T02025 160412T02025 | T02025 | 6 | 9.525 | 4.76 | - | 0.4 0.8 1.2 | ● | ● | ● | ● | | | | |
| | TNGN 160704T02025 160708T02025 160712T02025 | T02025 | 6 | 9.525 | 7.94 | - | 0.4 0.8 1.2 | ● | ● | | | | | | |

● : Standard item ○ : Check availability

35° Rhombic

How to read pages of "Turning inserts" See page B15

| Cutting edge preparation | | | | Gray cast iron (with scale) | | | | Gray cast iron (without scale) | | | | Nodular cast iron (with scale) | | | | Nodular cast iron (without scale) | | | | Heat-resistant alloy | | | | Hard materials | | | |
|---|---|-----------------------|------------------------------------|-----------------------------|------|------|-------------------|--------------------------------|-------------|-------------|--|--------------------------------|--|--|--|-----------------------------------|--|--|--|----------------------|--|--|--|----------------|--|--|--|
| Symbol | Specification | Example | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | Chamfered and R-honed | S01525 | 0.15mm × 25° chamfered and R-honed | | | | | | | | | | | | | | | | | | | | | | | | |
| T | Chamfered | T02025 | 0.20mm × 25° chamfered | | | | | | | | | | | | | | | | | | | | | | | | |
| Insert | Description | Edge preparation type | No. of edges | Dimension (mm) | | | | Ceramic | | | | Applicable toolholder | | | | | | | | | | | | | | | |
| | | | | IC | S | D1 | RE | PVD | | - | | | | | | | | | | | | | | | | | |
| | | | | | | | | Ag6N PT600M | Ag6 KT66 | | | | | | | | | | | | | | | | | | |
|  | VNGA 160404S01525 160408S01525 | S01525 | 4 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | ● ● | | | | D30~D39 | | | | | | | | | | | | | | | |
| | VNGA 160404S02025 160408S02025 | S02025 | 4 | 9.525 | 4.76 | 3.81 | 0.4 0.8 | ● ● | | | | | | | | | | | | | | | | | | | |
| | VNGA 160404T02025 160408T02025 160412T02025 | T02025 | 4 | 9.525 | 4.76 | 3.81 | 0.4 0.8 1.2 | ● ● ● | ● ● ○ | ○ ○ ○ | | | | | | | | | | | | | | | | | |
| | VNMA 160408S01525 | S01525 | 4 | 9.525 | 4.76 | 3.81 | 0.8 | ● | | | | | | | | | | | | | | | | | | | |

● : Standard item ○ : Check availability

Round

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive



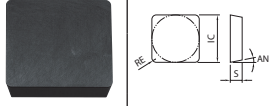
Ceramic

| Cutting edge preparation | | | | Gray cast iron (with scale) | | | K |
|--------------------------|-------------------|-----------------------|------------------------|-----------------------------------|-----------|---------|-----------------------|
| Symbol | Specification | Example | | Gray cast iron (without scale) | | | |
| E | R-honed | E003 | R0.03mm honed | Nodular cast iron (with scale) | | | |
| T | Chamfered | T01020 | 0.10mm x 20° chamfered | Nodular cast iron (without scale) | | | |
| | | | | Heat-resistant alloy | | | S |
| | | | | Hard materials | | | H |
| Insert | Description | Edge preparation type | Dimension (mm) | | Angle (°) | Ceramic | Applicable toolholder |
| | | | IC | S | AN | | |
| | RPGN 090300E003 | E003 | 9.525 | 3.18 | 11 | ● | - |
| | RPGN 090300T01020 | T01020 | 9.525 | 3.18 | 11 | ● | |
| | RPGN 120400E003 | E003 | 12.7 | 4.76 | 11 | ● | |
| | RPGN 120400T01020 | T01020 | 12.7 | 4.76 | 11 | ● | |

● : Standard item

Square

How to read pages of "Turning inserts" See page B15

| Cutting edge preparation | | | Gray cast iron (with scale) | | Gray cast iron (without scale) | | Nodular cast iron (with scale) | | Nodular cast iron (without scale) | | Heat-resistant alloy | | Hard materials | |
|---|-----------------------|---|-----------------------------|------|--------------------------------|------------|--------------------------------|--------|-----------------------------------|----|----------------------|------|----------------|--|
| Symbol | Specification | Example | | | | | | | | | | | | |
| S | Chamfered and R-honed | S00820 0.08mm × 20° chamfered and R-honed | | | | | | | | | | | | |
| T | Chamfered | T00820 0.08mm × 20° chamfered | | | | | | | | | | | | |
|  | | | SPGN 090308S00820 | | S00820 | 4 | 9.525 | 3.18 | 0.8 | 11 | ● | F112 | | |
| | | | SPGN 090308T00820 | | T00820 | 4 | 9.525 | 3.18 | 0.8 | 11 | ● | | | |
| SPGN 120308S00820 | | S00820 | 4 | 12.7 | 3.18 | 0.8 | 11 | ● | | | | | | |
| SPGN 120308T00820 120312T00820 | | T00820 | 4 | 12.7 | 3.18 | 0.8 1.2 | 11 | ● ● | | | | | | |



Turning indexable inserts

● : Standard item

Triangle

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Positive




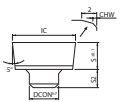

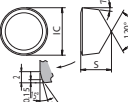
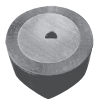
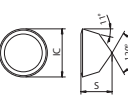
Ceramic

| Cutting edge preparation | | | Gray cast iron (with scale) | | Gray cast iron (without scale) | | Nodular cast iron (with scale) | | Nodular cast iron (without scale) | | Heat-resistant alloy | | Hard materials | |
|--------------------------|---|---|-----------------------------|----------------|--------------------------------|-------------------|--------------------------------|---------|-----------------------------------|---|-----------------------|--|----------------|--|
| Symbol | Specification | Example | | | | | | | | | | | | |
| S | Chamfered and R-honed | S00820 0.08mm × 20° chamfered and R-honed | | | | | | | | | | | K | |
| T | Chamfered | T00820 0.08mm × 20° chamfered | | | | | | | | | | | S | |
| | | | | | | | | | | | | | H | |
| Insert | Description | Edge preparation type | No. of edges | Dimension (mm) | | | Angle (°) | Ceramic | | | Applicable toolholder | | | |
| | | | | IC | S | RE | | AN | PVD | - | | | | |
| | TBGN 060104S00820 060108S00820 | S00820 | 3 | 3.97 | 1.59 | 0.4 0.8 | 5 | ● | ● | - | - | | | |
| | TPGN 090204T00820 090208T00820 | T00820 | 3 | 5.56 | 2.38 | 0.4 0.8 | 11 | ● | ● | - | - | | | |
| | TPGN 110304S00820 110308S00820 | S00820 | 3 | 6.35 | 3.18 | 0.4 0.8 | 11 | ● | ● | - | - | | | |
| | TPGN 110304T00820 110308T00820 | T00820 | 3 | 6.35 | 3.18 | 0.4 0.8 | 11 | ● | ● | ● | F113 | | | |
| | TPGN 160304S00820 160308S00820 160312S00820 | S00820 | 3 | 9.525 | 3.18 | 0.4 0.8 1.2 | 11 | ● | ● | ● | - | | | |
| | TPGN 160304T00820 160308T00820 | T00820 | 3 | 9.525 | 3.18 | 0.4 0.8 | 11 | ● | ● | ● | - | | | |

● : Standard item

Inserts for high hardened roll

How to read pages of "Turning inserts" See page B15

| Cutting edge preparation | | | | Material | | | | | | | | | | Applicable toolholder |
|---|---|-----------------------|------------------------------------|-----------------------------|---|------|-----|---------|--------------------------------|---|--|-----------------------|---|-----------------------|
| Symbol | Specification | Example | | Gray cast iron (with scale) | | | | | Gray cast iron (without scale) | | | | | K |
| E | R-honed | E005 | R0.05mm honed | | | | | | | | | | | |
| K | Double chamfered | K20003 | 2.0mm × 3° chamfered | | | | | | | | | | | |
| P | Double chamfered and R-honed | P20015 | 2.0mm × 15° chamfered and R-honed | | | | | | | | | | | |
| S | Chamfered and R-honed | S01020 | 0.10mm × 20° chamfered and R-honed | | | | | | | | | | | S |
| T | Chamfered | T01020 | 0.10mm × 20° chamfered | | | | | | | | | | | H |
| Insert | Description | Edge preparation type | Dimension (mm) | | | | | Ceramic | | | | Applicable toolholder | | |
| | | | IC | DCON | S | S2 | CHW | PVD | | | | | | |
|  |  | RBG 16K20003 | K20003 | 16 | 8 | 8 | 5 | 0.2 | ● | | | | - | |
|  |  | RCGX 060600E005 | E005 | 6.35 | - | 6.35 | - | - | ● | | | | - | |
| | | RCGX 060600T01020 | T01020 | 6.35 | - | 6.35 | - | - | ● | ● | | | | |
| | | RCGX 090700T01020 | T01020 | 9.525 | - | 8 | - | - | ● | ● | | | | |
| | | RCGX 090700P20015 | P20015 | 9.525 | - | 8 | - | - | ● | ○ | | | | |
| | | RCGX 120700E003 | E003 | 12.7 | - | 8 | - | - | ● | | | | | |
| | | RCGX 120700T01020 | T01020 | 12.7 | - | 8 | - | - | ● | | | | | |
| | | RCGX 120700P20015 | P20015 | 12.7 | - | 8 | - | - | ● | | | | | |
|  |  | RPGX 060600E003 | E003 | 6.35 | - | 6.35 | - | - | ● | | | | - | |
| | | RPGX 060600T01020 | T01020 | 6.35 | - | 6.35 | - | - | ● | | | | | |
| | | RPGX 090700E003 | E003 | 9.525 | - | 8 | - | - | ● | | | | | |
| | | RPGX 090700T01020 | T01020 | 9.525 | - | 8 | - | - | ● | | | | | |
| | | RPGX 120700E003 | E003 | 12.7 | - | 8 | - | - | ● | | | | | |

● : Standard item ○ : Check availability

Grooving inserts

How to read pages of "Turning inserts" See page B15

B



Turning indexable inserts

Chip breakers

Grooving

C

D

R

S

T

V

W

Ceramic

| Cutting edge preparation | | | Material compatibility | | | | | | | | | | Applicable toolholder | | | | | | |
|--------------------------|-----------------------|---|-----------------------------------|----------------|-----|-----|------|----------------|---------|---------|--------|-----|-----------------------|--|--|---|--|---|--|
| Symbol | Specification | Example | Material compatibility | | | | | | | | | | Applicable toolholder | | | | | | |
| S | Chamfered and R-honed | S01020 0.10mm × 20° chamfered and R-honed | Gray cast iron (with scale) | | | | | | | | | | | | | K | | | |
| T | Chamfered | T01020 0.10mm × 20° chamfered | Gray cast iron (without scale) | | | | | | | | | | | | | | | S | |
| | | | Nodular cast iron (with scale) | | | | | | | | | | | | | | | | |
| | | | Nodular cast iron (without scale) | | | | | | | | | | | | | | | | |
| | | | Heat-resistant alloy | | | | | | | | | | | | | | | | |
| | | | Hard materials | | | | | | | | | | | | | | | | |
| Insert | Description | Edge preparation type | No. of edges | Dimension (mm) | | | | Tolerance (mm) | | Ceramic | | | Applicable toolholder | | | | | | |
| | | | | CW | S | RE | INSL | CW min. | CW max. | PVD | | | | | | | | | |
| | | | | | | | | | | A66N | PT600M | A65 | | | | | | | |
| | GH 4020-05 | S01020 T01020 | 2 | 4 | 7.5 | 0.5 | 20 | -0.05 | +0.05 | ● | ● | ● | G62 G63 G93 | | | | | | |
| | GH 5020-05 | S01020 T01020 | 2 | 5 | 7.5 | 0.5 | 20 | -0.05 | +0.05 | ● | ● | ● | | | | | | | |
| | GH 6020-05 | T01020 | 2 | 6 | 7.5 | 0.5 | 20 | -0.05 | +0.05 | | | ● | | | | | | | |
| | GH 7020-05 | T01020 | 2 | 7 | 7.5 | 0.5 | 20 | -0.05 | +0.05 | | | ● | | | | | | | |

● : Standard item