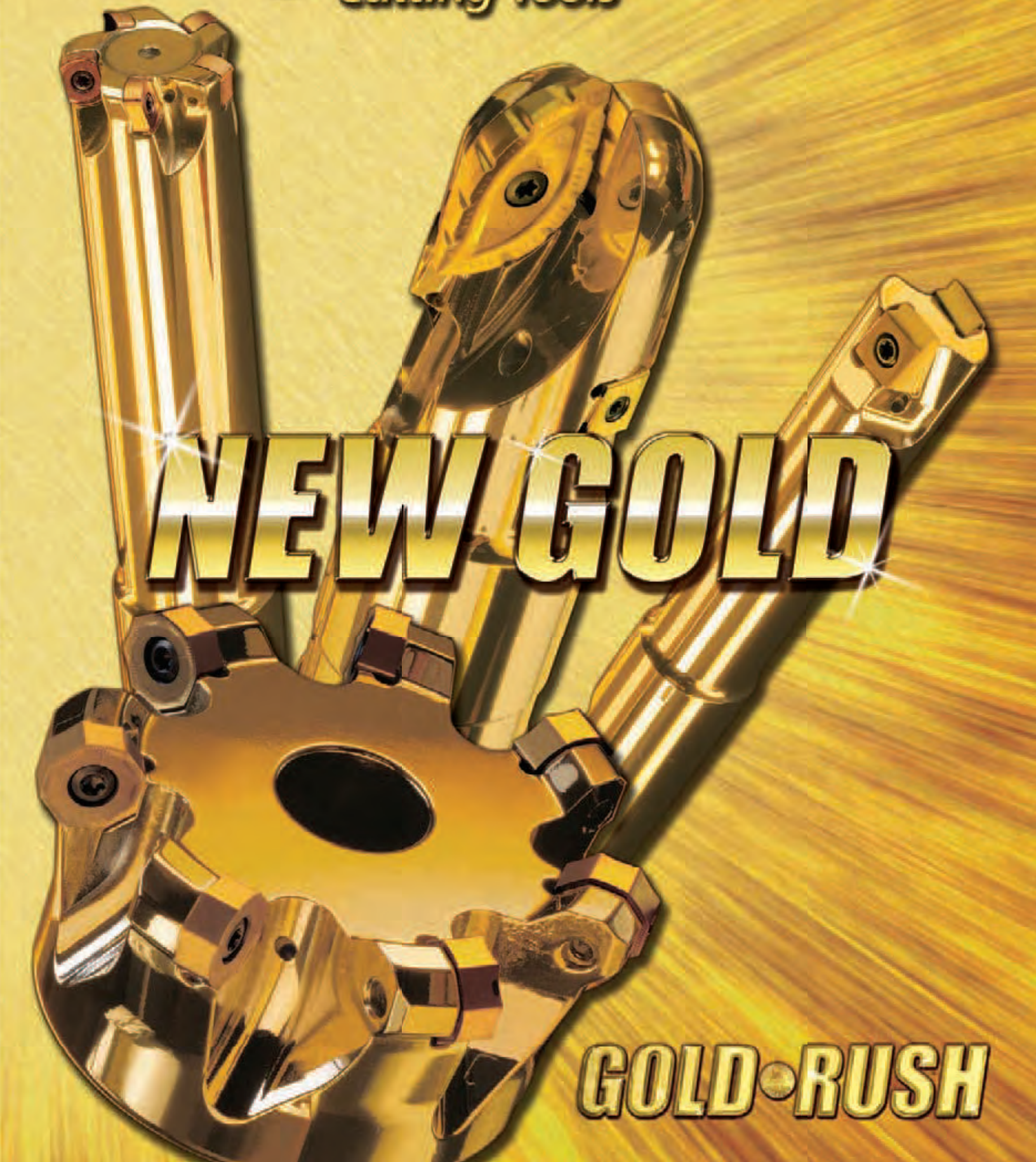
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# NEW GOLD

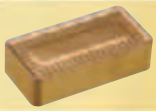
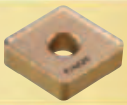
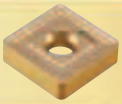
GOLD•RUSH


GOLD


GOLD RUSH
CR SERIES
GOLD RUSH

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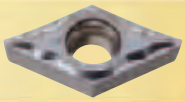
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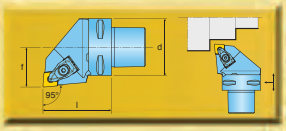
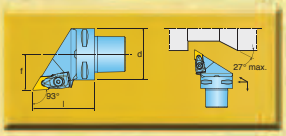
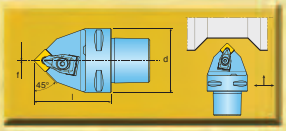
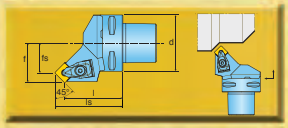
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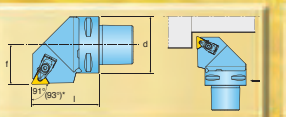
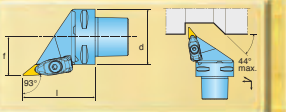
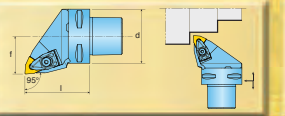
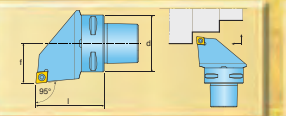
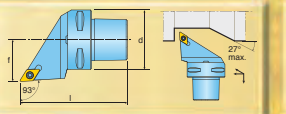
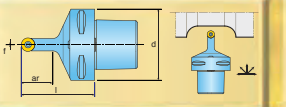
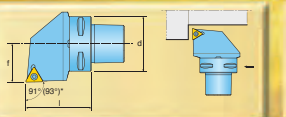
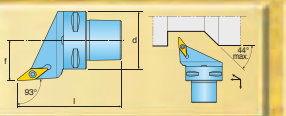
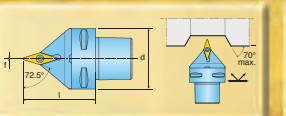
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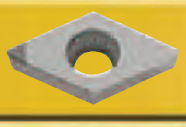
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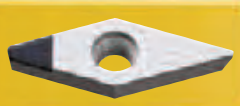
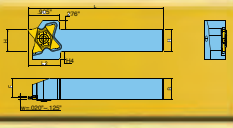
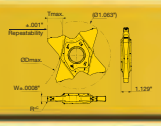
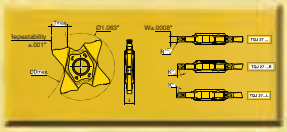
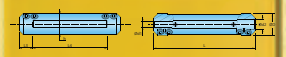
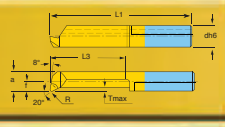
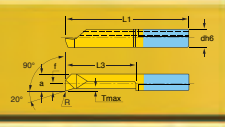
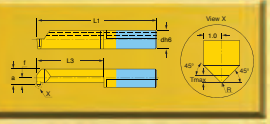
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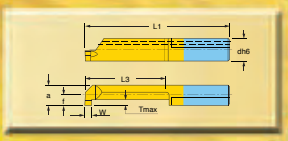
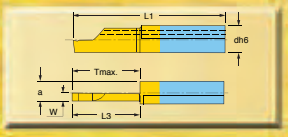
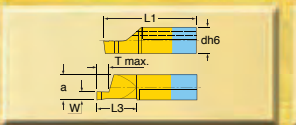
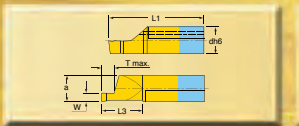
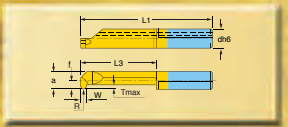
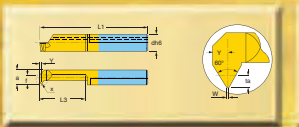
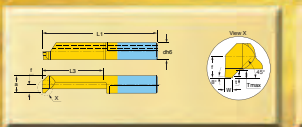
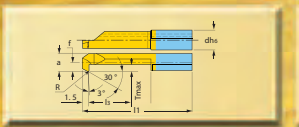
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|  | TOMICRO™ SLEEVES | | 143 |
|  | TOMICRO™ MINT | Mini carbide bars for internal turning and chamfering | 144 |
|  | TOMICRO™ MINP | Mini carbide bars for internal turning and chamfering | 146 |
|  | TOMICRO™ MINC | Mini carbide bars for internal turning and 45° chamfering | 146 |

| T-Clamp | Description | Series | Page |
|---|---|---|---|
|  | T-MICRO™ MING | Mini carbide bars for grooving and turning | 147 |
|  | T-MICRO™ MINF | Mini carbide bars for deep face grooving | 148 |
|  | T-MICRO™ MINF | Mini carbide bars for face grooving | 148 |
|  | T-MICRO™ MINA | Mini carbide bars for shaft grooving | 149 |
|  | T-MICRO™ MINR | Mini carbide bars, full radius for internal boring and profiling | 149 |
|  | T-MICRO™ MINN | Mini carbide bars for ISO Full Profile Internal Thread Turning | 150 |
|  | T-MICRO™ MINU | Mini carbide bars for undercutting and chamfering | 150 |
|  | T-MICRO™ MINB | Mini carbide bars for Internal Back Turning | 151 |
|  | T-CLAMP TTSIR/L | Internal Grooving and Turning on Small diameters | 152 |
|  | T-CLAMP TDIM | Pressed inserts for internal turning and grooving | 153 |
|  | T-CLAMP TDIP | Precision inserts for internal turning and grooving | 153 |



NEW GOLD GOLD-RUSH

| Holemaking | Description | Series | Page |
|---|---|---|---|
|  | GOLD TWIST™ TPA | Replaceable drill tips | 157 |
|  | GOLD TWIST™ GR SERIES | Replaceable tip drill shanks | 158 |
|  | QUAD TWIST™ DRILL QR SERIES | Indexable drill shank | 164 |
|  | QUAD TWIST™ DRILL SOMT SK | Inserts for indexable drill | 166 |
|  | QUAD TWIST™ DRILL SOMT DP | Inserts for indexable drill | 166 |
|  | QUAD DRILL+™ QA SERIES | 2XD adjustable cartridge drill | 169 |
|  | QUAD DRILL+™ QA SERIES | 3XD adjustable cartridge drill | 169 |
|  | QWIK GUN™ GR SERIES | Replaceable Point Gundrills | 172 |
| | DEEP TWIST™ DEEP DRILL HF SERIES INSERTS | Inserts for HF Series Drils | 173 |
|  | DEEP TWIST™ DEEP DRILL HF SERIES | HF Series Drill | 174 |
| | | | |

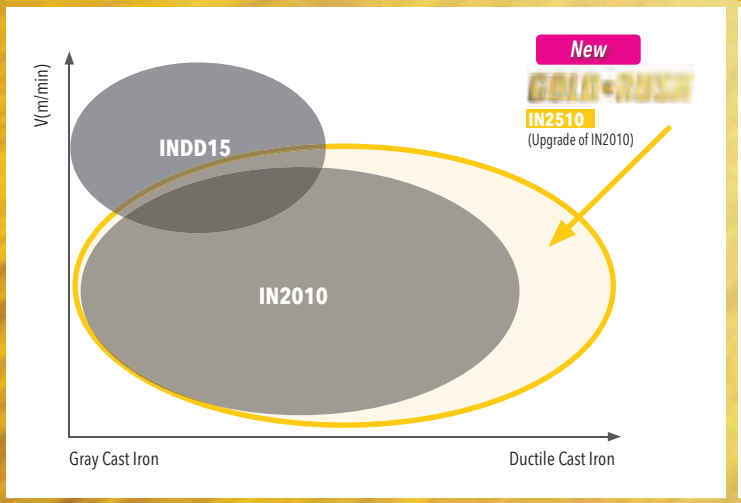



# GOLD·RUSH Grades

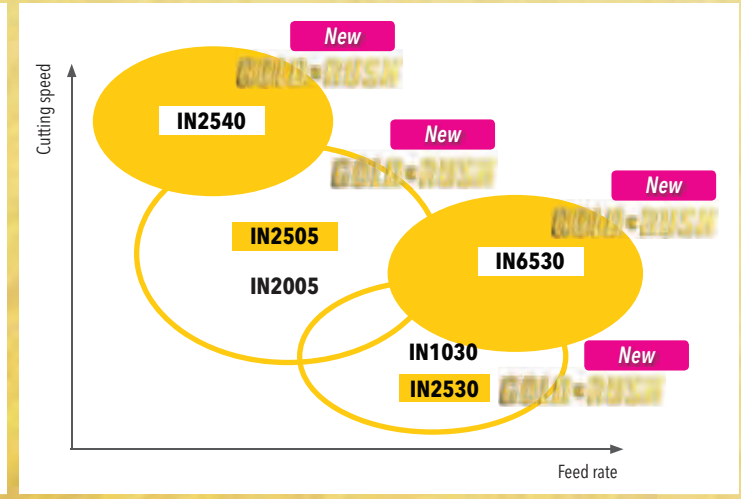
## The ingenious solution that takes cutting tool materials to another level

- Stable and extended tool life in continuous and interrupted cutting operations
- Reduced cutting friction and minimized built-up edge on exotic materials
- High surface finish on the workpiece
- Improved adhesion and insert chipping resistance

**CAST IRON**



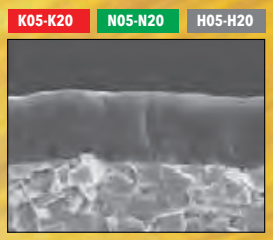

**STEEL**



# Gold Rush Grades for Milling Applications

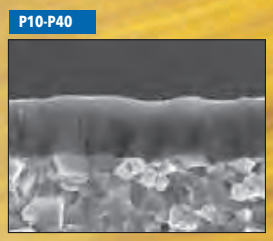
## IN2510 (PVD)

- Grade with high wear resistance for general cast iron machining (Gray and Ductile cast iron milling)
- Extended tool life for medium and low speed machining
- Dedicated substrate for cast iron plus PVD coated grade with surface treatment after coating




## IN2540 (PVD)

- Excellent for alloy steels, mold steels and normal steels
- Has high wear, thermal crack resistance and high mechanical shock resistance
- Recommended for dry milling
- For medium to rough machining in Die & Mold application
- New yellow colored PVD coated grade with surface treatment after coating



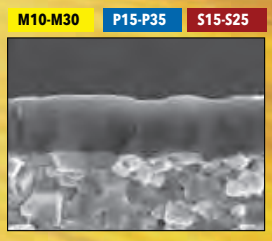

## IN6530 (CVD)

- Grade for roughing of steels, alloy and stainless steels
- Excellent toughness with optimum wear resistance
- CVD coated grade with surface treatment after coating



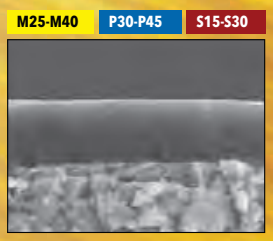

## IN2505 (PVD)

- Excellent for low carbon, low alloy steels, alloy steels, mold steels and stainless steels
- Has high wear resistance and optimum toughness
- For medium to finish machining in Mold & Die
- Sub-micron substrate
- New yellow colored PVD coated grade with surface treatment after coating




## IN2530 (PVD)

- Will replace IN2030
- Grade for steel and stainless steel applications
- Good for medium to low speed application
- PVD coated grade with surface treatment after coating



HIPOS·TRIO™ 3H 90

## MILLING SOLUTIONS RAISED TO A TRIPLE GOLD PERFORMANCE STANDARD

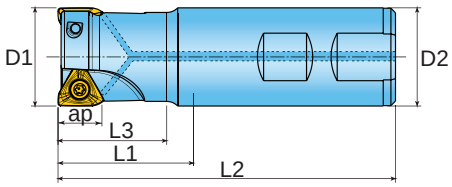
- Diameter Range From .625" to 6.00"
- Hi Positive Design with 3 Cutting Edges for Performance and Economy
- Ramping Capability for Cutting Versatility
- Three Insert Sizes for Complete Diameter Coverage
- Full Range of Insert Radii with Ingersoll Premium Grades

## HIPOS·TRIO™ SERIES 1KJ1

### 0 DEGREE LEAD ENDMILL






| Cutter Number | D1 Effective Diameter | Number of Inserts | L1 Extension Length | L2 Overall Length | L3 Projection Length | D2 Shank Size/Style | Ramp Angle Using .031" R Insert | Insert Series |
|---|---|---|---|---|---|---|---|---|
| 1KJ1D-0601279R01 | 0.625 | 1 | 1.25 | 3.25 | 1.22 | .625 W | 7 | TH_S06 |
| 1KJ1D-0702084R01 | 0.725 | 2 | 2.00 | 4.00 | 1.80 | .750 W | 3.3 | TH_S06 |
| 1KJ1D-0701184R01 | 0.750 | 2 | 1.25 | 3.25 | 1.05 | .750 W | 3.3 | TH_S06 |
| 1KJ1D-0701784R01 | 0.750 | 2 | 1.75 | 3.75 | 1.55 | .750 W | 3.3 | TH_S06 |
| 1KJ1D-0703084R01 | 0.750 | 2 | 3.00 | 5.00 | 2.80 | .750 W | 3.3 | TH_S06 |
| 1KJ1D-0801784R01 | 0.875 | 2 | 1.75 | 3.75 | 1.75 | .750 W | 3 | TH_S06 |
| 1KJ1D-1001784R01 | 1.000 | 3 | 1.75 | 3.75 | 1.75 | .750 W | 2.8 | TH_S06 |
| 1KJ1D-1001780R01 | 1.000 | 3 | 1.75 | 4.00 | 1.55 | 1.00 W | 2.8 | TH_S06 |
| 1KJ1D-1003784R01 | 1.000 | 3 | 3.75 | 6.00 | 3.55 | .75 W | Not Recommended | TH_S06 |
| 1KJ1D-1201784R01 | 1.250 | 4 | 1.75 | 3.75 | 1.75 | .750 W | 1.8 | TH_S06 |
| 1KJ1D-1201780R01 | 1.250 | 5 | 1.75 | 4.00 | 1.75 | 1.00 W | 1.8 | TH_S06 |
| 1KJ1D-1501784R01 | 1.500 | 5 | 1.75 | 3.75 | 1.75 | .750 W | 1.3 | TH_S06 |
| 1KJ1D-1501780R01 | 1.500 | 6 | 1.75 | 4.00 | 1.75 | 1.00 W | 1.3 | TH_S06 |
| 1KJ1D-1502281R01 | 1.500 | 6 | 2.25 | 4.50 | 2.25 | 1.25 W | 1.3 | TH_S06 |
| 1KJ1G-1201784R01 | 1.250 | 3 | 1.75 | 3.75 | 1.75 | .750 W | 3.2 | TH_S10 |
| 1KJ1G-1202281R01 | 1.250 | 2 | 2.25 | 4.50 | 2.05 | 1.25 W | 3.2 | TH_S10 |
| 1KJ1G-1202281R02 | 1.250 | 3 | 2.25 | 4.50 | 2.05 | 1.25 W | 3.2 | TH_S10 |
| 1KJ1G-1204281R01 | 1.250 | 3 | 4.25 | 6.50 | 4.05 | 1.25 W | Not Recommended | TH_S10 |
| 1KJ1G-1502281R01 | 1.500 | 3 | 2.25 | 4.50 | 2.20 | 1.25 W | 2 | TH_S10 |
| 1KJ1G-1502281R01 | 1.500 | 4 | 2.25 | 4.50 | 2.20 | 1.25 W | 2 | TH_S10 |
| 1KJ1G-1504281R01 | 1.500 | 3 | 4.25 | 6.50 | 4.25 | 1.25W | Not Recommended | TH_S10 |
| 1KJ1G-2002281R01 | 2.000 | 5 | 2.25 | 4.50 | 2.25 | 1.25 W | 1.5 | TH_S10 |
| 1KJ1P-1502281R01 | 1.500 | 3 | 2.25 | 4.50 | 2.25 | 1.25 W | 3.6 | TH_S13 |
| 1KJ1P-1504281R01 | 1.500 | 3 | 4.25 | 6.50 | 4.25 | 1.25 W | Not Recommended | TH_S13 |
| 1KJ1P-2002281R01 | 2.000 | 4 | 2.25 | 4.50 | 2.25 | 1.25 W | 2.2 | TH_S13 |


Operating Guidelines on page 60-61.

NEW GOLD GOLD·RUSH

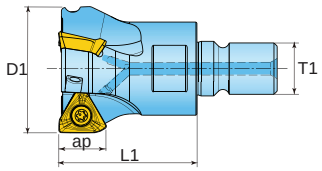


## HIPOS•TRIO™ SERIES 1KJ1_X (TOP•ON STYLE)

### 0 DEGREE LEAD ENDMILL

Shoulder | Channel | Ramp | Corkscrew | Coolant






| Cutter Number | D1 Nominal Diameter | Number of Inserts | L1 Extension Length | T1 Adaption | Wrench Size | Ramp Angle Using .031" R Insert | Insert Series |
|---|---|---|---|---|---|---|---|
| 1KJ1D-07015X6R01 | 0.750 | 2 | 1.50 | M10 | 15mm | 3.3 | TH_S06 |
| 1KJ1D-10015X7R01 | 1.000 | 2 | 1.50 | M12 | 17mm | 2.8 | TH_S06 |
| 1KJ1D-10015X7R02 | 1.000 | 3 | 1.50 | M12 | 17mm | 2.8 | TH_S06 |
| 1KJ1D-12017X8R01 | 1.250 | 3 | 1.75 | M16 | 22mm | 1.8 | TH_S06 |
| 1KJ1D-12017X8R02 | 1.250 | 5 | 1.75 | M16 | 22mm | 1.8 | TH_S06 |
| 1KJ1D-15017X8R01 | 1.500 | 5 | 1.75 | M16 | 22mm | 1.3 | TH_S06 |
| 1KV1D-10015X7R01 | 1.000 | 3 | 1.50 | M12 | 17mm | NA | TH_S06 |
| 1KV1D-12017X8R01 | 1.250 | 5 | 1.75 | M16 | 22mm | NA | TH_S06 |
| 1KJ1G-12017X8R01 | 1.250 | 3 | 1.50 | M16 | 22mm | 3.2 | TH_S10 |
| 1KJ1G-15017X8R01 | 1.500 | 4 | 1.75 | M16 | 22mm | 2 | TH_S10 |

Operating Guidelines on page 60-61.

# HIPOS-TRIO™ SERIES KJ

## 0 DEGREE LEAD FACEMILL


Shoulder


Channel

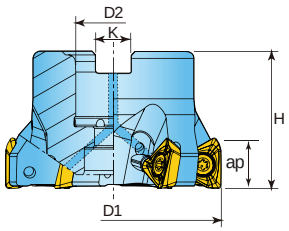

Ramp


Corkscrew


Facing


Coolant






| Cutter Number | D1 Effective Diameter | Number of Inserts | H Height | D2 Bore Diameter | Retention Bolt | Optional Coolant Bolt | K Keyway | Coolant | Ramp Angle Using .031" R Insert | Insert Series |
|---|---|---|---|---|---|---|---|---|---|---|
| KJ5D-15R01 | 1.500 | 6 | 1.57 | 0.50 | SD-04-85 | - | 0.25 | Y | 1 | TH_S06 |
| KJ5D-20R01 | 2.000 | 7 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | Y | 1 | TH_S06 |
| KJ6D-30R01 | 3.000 | 9 | 1.75 | 1.00 | SD-08-46 | SD-08-92 | 0.38 | Y | 0.4 | TH_S06 |
| KJ5G-20R01 | 2.000 | 5 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | Y | 1.5 | TH_S10 |
| KJ5G-25R01 | 2.500 | 6 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | Y | 1.1 | TH_S10 |
| KJ6G-30R01 | 3.000 | 5 | 1.75 | 1.00 | SD-08-46 | SD-08-92 | 0.38 | Y | 0.8 | TH_S10 |
| KJ5G-30R01 | 3.000 | 8 | 1.75 | 1.00 | SD-08-46 | SD-08-92 | 0.38 | Y | 0.8 | TH_S10 |
| KJ6G-40R01 | 4.000 | 8 | 1.75 | 1.50 | - | - | 0.62 | N | 0.6 | TH_S10 |
| KJ5G-40R01 | 4.000 | 10 | 1.75 | 1.50 | - | - | 0.62 | N | 0.6 | TH_S10 |
| KJ6G-50R01 | 5.000 | 11 | 2.00 | 1.50 | - | - | 0.62 | N | 0.5 | TH_S10 |
| KJ6P-30R01 | 3.000 | 6 | 1.75 | 1.00 | SD-08-46 | SD-08-92 | 0.38 | Y | 1.3 | TH_S13 |
| KJ6P-40R01 | 4.000 | 6 | 1.75 | 1.50 | - | - | 0.62 | N | 1 | TH_S13 |
| KJ5P-40R01 | 4.000 | 8 | 1.75 | 1.50 | - | - | 0.62 | N | 1 | TH_S13 |
| KJ6P-50R01 | 5.000 | 9 | 2.00 | 1.50 | - | - | 0.62 | N | 0.8 | TH_S13 |
| KJ6P-60R01 | 6.000 | 8 | 2.00 | 1.50 | - | - | 0.62 | N | 0.6 | TH_S13 |
| KJ5P-60R01 | 6.000 | 12 | 2.00 | 1.50 | - | - | 0.62 | N | 0.6 | TH_S13 |

Operating Guidelines on page 60-61.



NEW GOLD GOLD-RUSH

## INSERTS

**TH_S**






**TH_S_FR**






**TH_S_FR-P**






| Part Number | Application | R Corner | a Wiper | t Thick. | ap Cut Depth | Grade | IN10K | IN2505 | IN2510 | IN2530 | IN2540 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| THLS060404R | Multi-Purpose | .015"R | 0.051 | 0.157 | 0.275 | | | X | | | X |
| THLS060408R | Multi-Purpose | .031"R | 0.035 | 0.157 | 0.275 | | | X | X | X | |
| THLS060408FR | Hi-Temp | .031"R | 0.035 | 0.157 | 0.275 | | | X | | X | |
| THES060408R | Multi-Purpose, Ground Periphery | .031"R | 0.035 | 0.157 | 0.275 | | | X | | | |
| THES060404FR-P | Ground/Polished for Aluminum | .015"R | 0.051 | 0.157 | 0.275 | | X | | | | |
| THES060408FR-P | Ground/Polished for Aluminum | .031"R | 0.035 | 0.157 | 0.275 | | X | | | | |
| THLS100508R | Multi-Purpose | .031"R | 0.063 | 0.197 | 0.433 | | | X | X | X | X |
| THLS100508FR | Hi-Temp | .031"R | 0.063 | 0.197 | 0.433 | | | X | | X | |
| THLS100508R | Multi-Purpose | .031"R | 0.063 | 0.197 | 0.433 | | | X | | | |
| THES100516R | Multi-Purpose, Ground Periphery | .062"R | 0.031 | 0.197 | 0.433 | | | X | | | |
| THES100508FR-P | Ground/Polished for Aluminum | .031"R | 0.063 | 0.197 | 0.433 | | X | | | | |
| THLS130608R | Multi-Purpose | .031"R | 0.078 | 0.236 | 0.59 | | | X | X | X | X |
| THLS130608FR | Hi-Temp | .031"R | 0.078 | 0.236 | 0.59 | | | X | | X | |
| THLS130616R | Multi-Purpose | .062"R | 0.047 | 0.236 | 0.59 | | | X | | X | |
| THES130608FR-P | Ground/Polished for Aluminum | .031"R | 0.078 | 0.236 | 0.59 | | X | | | | |

## HARDWARE



Insert Screw



Driver

| | | |
|---|---|---|
| KJ_D | SM25-065-R0 | DS-T08W |
| KJ_G | SM40-100-R0 | DS-T15T |
| KJ_P | SM45-125-R0 | DS-T20T |

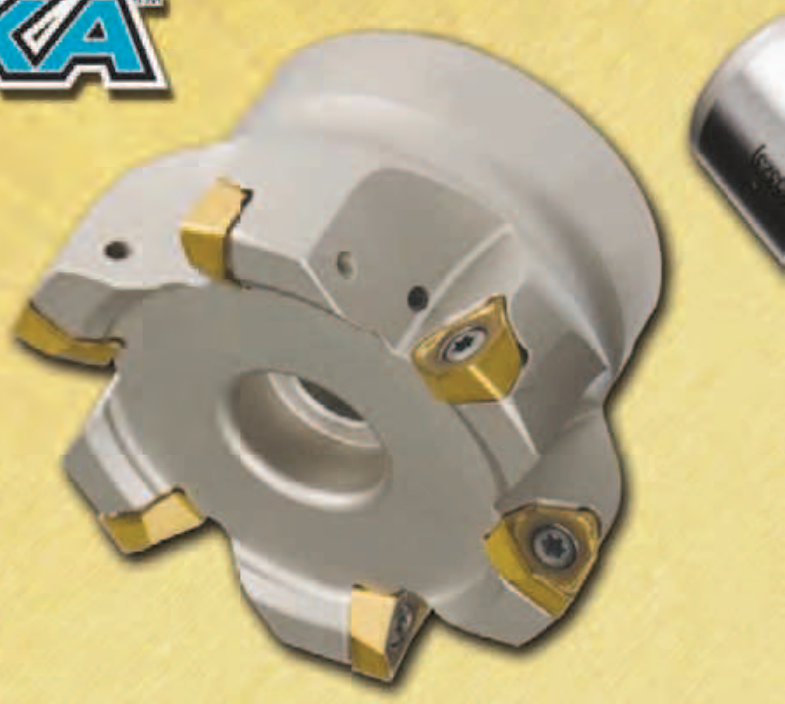


GOLD•RUSH
Member MC Group
Ingersoll Cutting Tools

# DIPOS•HEXA™ 6D 90

## DOUBLE SIDED POSITIVE INSERT WITH 6 CUTTING EDGES

- Diameter Range From 1.00" to 6.00"
- Helical Cutting Edge for 90 Degree Cutting
- Dovetail Insert Pocket Design Provides Increased Security and Insert Clamping
- Internal Coolant Supply
- Double Sided 6 Corner Insert

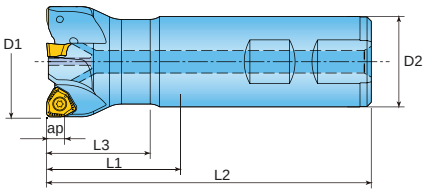


## DIPOS•HEXA™ SERIES 1DJ1F, 1DJ1P

### 0 DEGREE LEAD ENDMILL






| Cutter Number | D1 Effective Diameter | Number of Inserts | L1 Extension Length | L2 Overall Length | L3 Projection Length | D2 Shank Size/Style | Insert Series |
|---|---|---|---|---|---|---|---|
| 1DJ1F-1001584R01 | 1.000 | 2 | 1.50 | 3.75 | 1.50 | .750 W | WNGU09 |
| 1DJ1F-1001780R01 | 1.000 | 2 | 1.75 | 4.00 | 1.55 | 1.00 W | WNGU09 |
| 1DJ1F-1003780R01 | 1.000 | 2 | 3.75 | 6.00 | 3.55 | 1.00 W | WNGU09 |
| 1DJ1F-1201584R01 | 1.250 | 3 | 1.50 | 3.75 | 1.50 | .750 W | WNGU09 |
| 1DJ1F-1202281R01 | 1.250 | 3 | 2.25 | 4.50 | 2.22 | 1.25 W | WNGU09 |
| 1DJ1F-1204281R01 | 1.250 | 3 | 4.25 | 6.50 | 4.22 | 1.25 W | WNGU09 |
| 1DJ1F-1502281R01 | 1.500 | 4 | 2.25 | 4.50 | 2.25 | 1.25 W | WNGU09 |
| 1DJ1P-1202281R01 | 1.250 | 2 | 2.25 | 4.50 | 2.22 | 1.25 W | WNGU13 |
| 1DJ1P-1204281R01 | 1.250 | 2 | 4.25 | 6.50 | 4.22 | 1.25 W | WNGU13 |
| 1DJ1P-1502281R01 | 1.500 | 3 | 2.25 | 4.50 | 2.22 | 1.25 W | WNGU13 |
| 1DJ1P-1504281R01 | 1.500 | 3 | 4.25 | 6.50 | 4.22 | 1.25 W | WNGU13 |
| 1DJ1P-2002281R01 | 2.000 | 5 | 2.25 | 4.50 | 2.22 | 1.25 W | WNGU13 |


Operating Guidelines on page 61.

NEW GOLD GOLD•RUSH

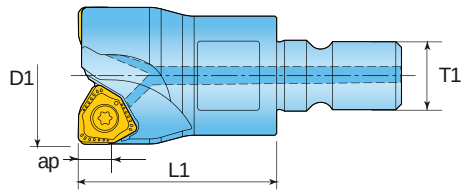


## DIPOS•HEXA™ SERIES 1DJ1F, 1DJ1P (TOP•ON STYLE)

### 0 DEGREE LEAD ENDMILL

Shoulder | Channel | Facing | Coolant






| Cutter Number | D1 Effective Diameter | Number of Inserts | T1 Adaption | L1 Extension Length | Wrench Size | Insert Series |
|---|---|---|---|---|---|---|
| 1DJ1F-10015X7R01 | 1.000 | 2 | M12 | 1.50 | 17mm | WNGU09 |
| 1DJ1F-12017X8R01 | 1.250 | 3 | M16 | 1.75 | 22mm | WNGU09 |
| 1DJ1F-15017X8R01 | 1.500 | 4 | M16 | 1.75 | 22mm | WNGU09 |
| 1DJ1P-12017X8R01 | 1.250 | 2 | M16 | 1.75 | 22mm | WNGU13 |
| 1DJ1P-15017X8R01 | 1.500 | 3 | M16 | 1.75 | 22mm | WNGU13 |
| 1DJ1P-15017X8R02 | 1.500 | 4 | M16 | 1.75 | 22mm | WNGU13 |

Operating Guidelines on page 61.



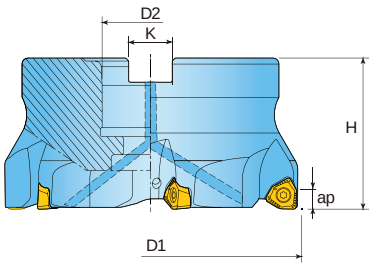
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Member IMC Group Ingersoll Cutting Tools

# DIPOS•HEXA™ SERIES DJ

## 0 DEGREE LEAD FACEMILL






| Cutter Number | D1 Effective Diameter | Number of Inserts | H Height | D2 Bore Diameter | Retention Bolt | Optional Coolant Bolt | K Keyway | Coolant | Insert Series |
|---|---|---|---|---|---|---|---|---|---|
| DJ5F-20R01 | 2.000 | 5 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | Y | WNGU09 |
| DJ5F-25R01 | 2.500 | 6 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | Y | WNGU09 |
| DJ5F-30R01 | 3.000 | 7 | 1.75 | 1.00 | SD-08-46 | SD-08-92 | 0.38 | Y | WNGU09 |
| DJ6P-20R01 | 2.000 | 4 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | Y | WNGU13 |
| DJ5P-25R01 | 2.500 | 6 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | Y | WNGU13 |
| DJ5P-30R01 | 3.000 | 7 | 1.75 | 1.00 | SD-08-46 | SD-08-92 | 0.38 | Y | WNGU13 |
| DJ5P-40R01 | 4.000 | 8 | 2.00 | 1.50 | SD-12-82 | SD-12-99 | 0.62 | Y | WNGU13 |
| DJ6P-60R01 | 6.000 | 12 | 2.00 | 1.50 | - | - | 0.62 | N | WNGU13 |

Operating Guidelines on page 61.

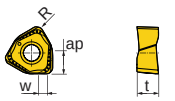


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## INSERTS

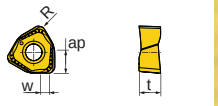
**WNGU09**






**WNGU13**






| Part Number | Application | R Corner | W Wiper | t Thick. | ap Cut Depth | Grade | IN2505 | IN2510 | IN2530 | IN2540 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNGU090404R | Multi-Purpose | .015"R | 0.093 | 0.187 | 0.244 | | X | | | | | | |
| WNGU090405R | Multi-Purpose | .020"R | 0.093 | 0.187 | 0.244 | | X | | | | | | |
| WNGU090408R | Multi-Purpose | .031"R | 0.077 | 0.187 | 0.244 | | X | X | X | X | | | |
| WNGU090410R | Multi-Purpose | .039"R | 0.069 | 0.187 | 0.244 | | X | | | | | | |
| WNGU090416R | Multi-Purpose | .062"R | 0.045 | 0.187 | 0.244 | | X | | | | | | |
| WNGU130604R | Multi-Purpose | .015"R | 0.086 | 0.265 | 0.362 | | X | | | | | | |
| WNGU130608R | Multi-Purpose | .031"R | 0.078 | 0.265 | 0.362 | | X | X | X | X | | | |
| WNGU130616R | Multi-Purpose | .062"R | 0.047 | 0.265 | 0.362 | | X | X | X | X | | | |

## HARDWARE


Insert Screw


Driver

| | | |
|---|---|---|
| WNGU09 | SM30-085-10 | DS-T09W |
| WNGU13 | SM40-100-R0 | DS-T15T |



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Member MC Group Ingersoll Cutting Tools

# HIPOS·ALU
ALU AIR

## HIGH SPEED ALUMINUM MACHINING

- Exceptional Productivity for Aluminum and Non-Ferrous Material Machining
- Can Be Applied to Rough and Finish Machining
- Various Corner Radii From R.015 to R.197 Available
- Secure, Stable and Unique "V" Bottom Insert Design
- No Movement During High Ramp Machining

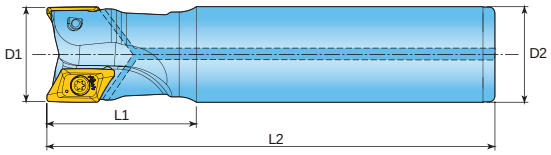


## HIPOS·ALU SERIES 1AX1K

### 0 DEGREE LEAD ENDMILL






| Cutter Number | D1 Effective Diameter | D2 Shank Size/Style | L1 Extension Length | L2 Overall Length | # Flutes Effective | Ramp Angle | Max RPM |
|---|---|---|---|---|---|---|---|
| 1AX1K-07022S7R01 | 0.75 | .750 Cylindrical | 2.20 | 5.00 | 1 | 25 | 39,420 |
| 1AX1K-10022S1R01 | 1.00 | 1.00 Cylindrical | 2.20 | 4.50 | 2 | 22 | 38,420 |
| 1AX1K-10042S1R01 | 1.00 | 1.00 Cylindrical | 4.20 | 6.50 | 2 | 22 | 38,420 |
| 1AX1K-12022S9R01 | 1.25 | 1.25 Cylindrical | 2.20 | 4.50 | 3 | 16.5 | 34,000 |
| 1AX1K-12042S9R01 | 1.25 | 1.25 Cylindrical | 4.20 | 6.50 | 3 | 16.5 | 34,000 |
| 1AX1K-15040S5R01 | 1.50 | 1.50 Cylindrical | 4.06 | 6.75 | 3 | 11.5 | 30,430 |

* Prebalanced to G6.3 @ 20,000 RPM

Operating Guidelines on page 62.



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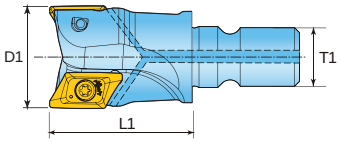


## HIPOS•ALU SERIES 1AX1K (TOP•ON STYLE)

### 0 DEGREE LEAD ENDMILL

Shoulder Channel Coolant






| Cutter Number | D1 Effective Diameter | Number of Inserts | T1 Adaption | L1 Extension Length | Wrench Size | Ramp Angle | Max RPM |
|---|---|---|---|---|---|---|---|
| 1AX1K-07013X6R01 | 0.75 | 1 | M10 | 1.38 | 15mm | 25 | 38,420 |
| 1AX1K-10017X7R01 | 1.00 | 2 | M12 | 1.75 | 17mm | 22 | 38,420 |
| 1AX1K-12017X8R01 | 1.25 | 3 | M16 | 1.75 | 22mm | 16.5 | 34,000 |
| 1AX1K-15017X8R01 | 1.50 | 3 | M16 | 1.75 | 22mm | 11.5 | 30,430 |

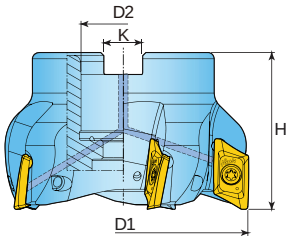
Operating Guidelines on page 62.

## HIPOS•ALU SERIES AX6K

### 0 DEGREE LEAD FACEMILL






| Cutter Number | D1 Effective Diameter | Number of Inserts | H Height | D2 Bore Diameter | Retention Bolt | Optional Coolant Bolt | K Keyway | Ramp Angle | Max. RPM |
|---|---|---|---|---|---|---|---|---|---|
| AX6K-20R01 | 2.00 | 2 | 2.000 | 0.750 | SD-06-46 | SD-06-89 | 0.31 | 9.5 | 27,200 |
| AX6K-20R02 | 2.00 | 3 | 2.000 | 0.750 | SD-06-46 | SD-06-89 | 0.31 | 9.5 | 27,200 |
| AX6K-25R01 | 2.50 | 3 | 2.000 | 1.000 | SD-08-46 | SD-08-92 | 0.38 | 7 | 24,140 |
| AX6K-30R01 | 3.00 | 3 | 2.000 | 1.000 | SD-08-46 | SD-08-92 | 0.38 | 5 | 21,420 |
| AX6K-30R02 | 3.00 | 5 | 2.000 | 1.000 | SD-08-46 | SD-08-92 | 0.38 | 5 | 21,420 |
| AX6K-40R01 | 4.00 | 5 | 2.375 | 1.500 | SD-12-82 | SD-12-99 | 0.62 | 3.5 | 19,210 |

* Prebalanced to G6.3 @ 20,000 RPM

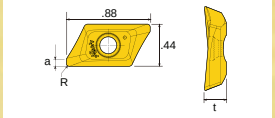
Operating Guidelines on page 62.



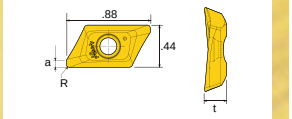
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## INSERTS

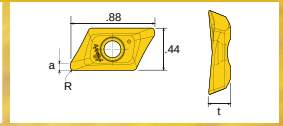
### XECT160504

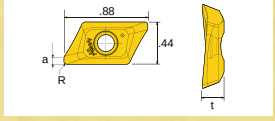

### XECT160508

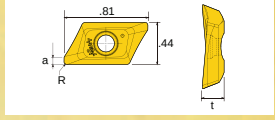

### XECT160516

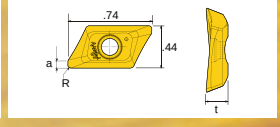

### XECT160524


### XECT160532


### XECT160550


| Part Number | Application | R Corner | a Wiper | t Thickness | ap Cut Depth | Grade IN15K |
|---|---|---|---|---|---|---|
| XECT160504R-P | Grd/Polished | 0.015" R | .063 | .23 | .625 | X |
| XECT160508R-P | Grd/Polished | 0.031" R | .047 | .23 | .625 | X |
| XECT160516R-P | Grd/Polished | 0.062" R | .016 | .23 | .625 | X |
| XECT160524R-P | Grd/Polished | 0.093" R | .016 | .23 | .625 | X |
| XECT160532R-P | Grd/Polished | 0.125" R | .016 | .23 | .625 | X |
| XECT160550R-P | Grd/Polished | 0.197" R | - | .23 | .625 | X |

## HARDWARE


Insert Screw


Driver

| | | |
|---|---|---|
| 1AX1K-07022S7R01 | SM40-079-20 | DS-T15T |
| 1AX1K-10022S1R01 | SM40-079-20 | DS-T15T |
| 1AX1K-10042S1R01 | SM40-079-20 | DS-T15T |
| 1AX1K-12022S9R01 | SM40-093-20 | DS-T15T |
| 1AX1K-12042S9R01 | SM40-093-20 | DS-T15T |
| 1AX1K-15040S5R01 | SM40-093-20 | DS-T15T |
| 1AX1K-07013X6R01 | SM40-079-20 | DS-T15T |
| 1AX1K-10017X7R01 | SM40-079-20 | DS-T15T |
| 1AX1K-12017X8R01 | SM40-093-20 | DS-T15T |
| 1AX1K-15017X8R01 | SM40-093-20 | DS-T15T |
| AX6K-20R01 | SM40-093-20 | DS-T15T |
| AX6K-20R02 | SM40-093-20 | DS-T15T |
| AX6K-25R01 | SM40-093-20 | DS-T15T |
| AX6K-30R01 | SM40-093-20 | DS-T15T |
| AX6K-30R02 | SM40-093-20 | DS-T15T |
| AX6K-40R01 | SM40-093-20 | DS-T15T |



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# FORM•MASTER F™ HIGH-FEED

## HIGH FEED CUTTERS

- Particularly Suitable for High Feed Machining
- Low Cutting Forces
- 6 Corner Inserts for Cost Effective Machining
- Excellent Chip Cvacuation
- Through Coolant Cutter Bodies
- Minimum Diameter 16mm

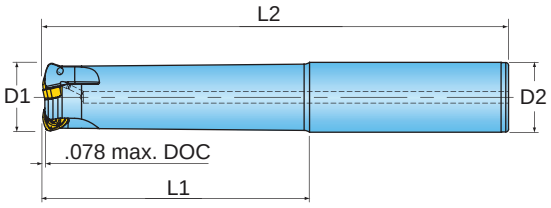


## FORM•MASTER F™ SERIES 1DG1H

### HIGH FEED ENDMILL WITH 6 INDEXES

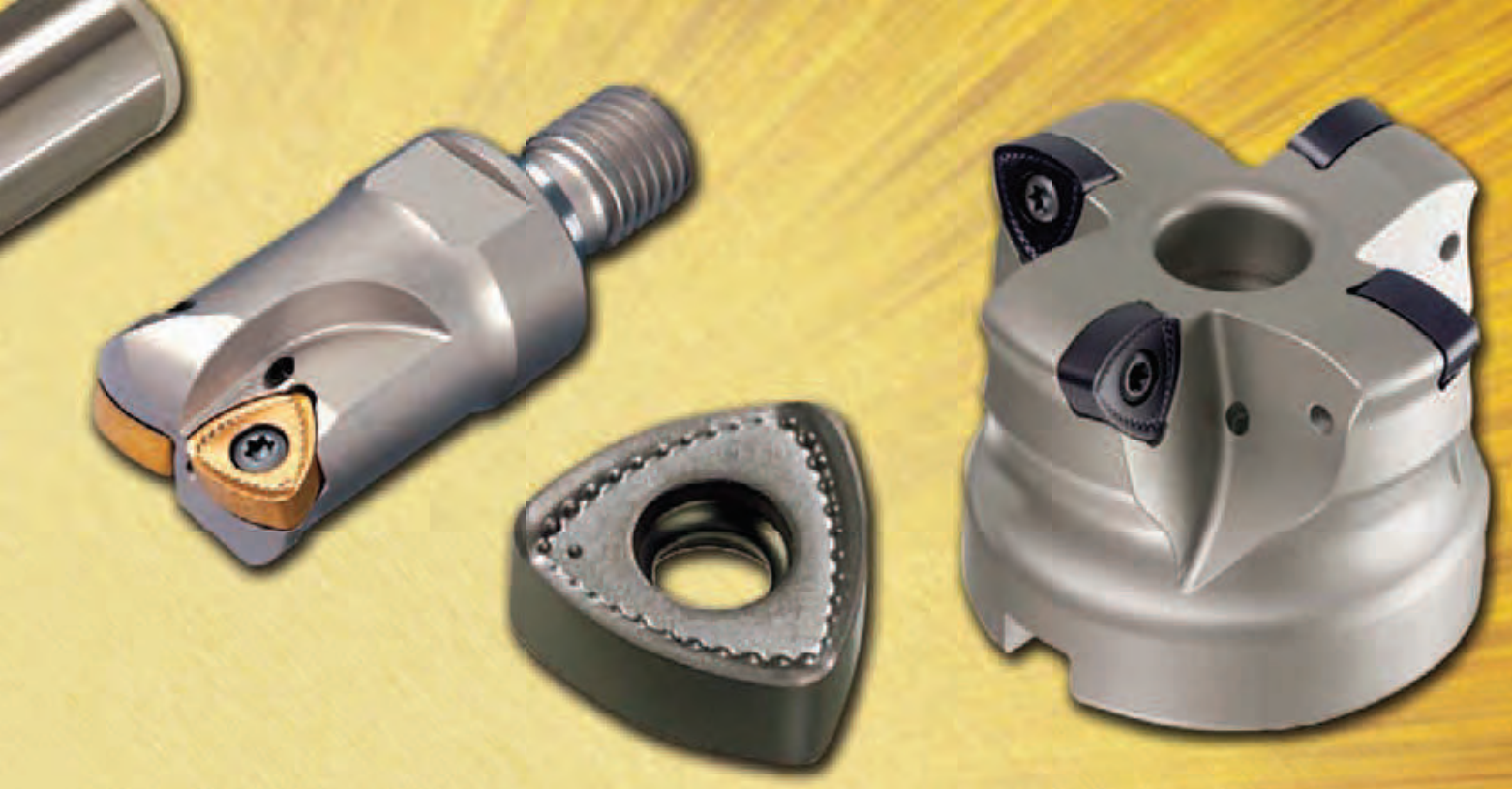





| Cutter Number | D1 Nom. Dia. | L1 Extension Length | L2 Overall Length | D2 Shank Size/Style | Number of Inserts | Coolant Thru | Max. Ramp Angle |
|---|---|---|---|---|---|---|---|
| 1DG1H-1202781R01 | 1.250 | 2.750 | 5.00 | 1.250" Weldon | 2 | Yes | 3.0 |
| 1DG1H-12057S9R01 | 1.250 | 4.750 | 8.00 | 1.250" Cylindrical | 2 | Yes | 3.0 |
| 1DG1H-1503386R01 | 1.500 | 3.310 | 6.00 | 1.500" Weldon | 3 | Yes | 1.7 |
| 1DG1H-15073S5R01 | 1.500 | 5.727 | 10.00 | 1.500" Cylindrical | 3 | Yes | 1.7 |

Operating Guidelines on page 62.

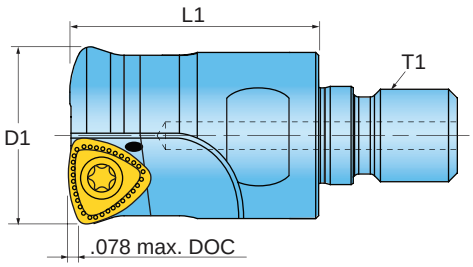


## FORMMASTER™ SERIES 1DG1H (TOP•ON STYLE)

### HIGH FEED MODULAR ENDMILL WITH 6 INDEXES






| Cutter Number | D1 Nom. Dia. | Number of Inserts | L1 Extension Length | T1 Adaption | Max. Ramp Angle | Wrench Size |
|---|---|---|---|---|---|---|
| 1DG1H-12017X8R01 | 1.250 | 2 | 1.75 | M16 | 3 | 22mm |
| 1DG1H-15017X8R01 | 1.500 | 3 | 1.75 | M16 | 1.75 | 22mm |

Operating Guidelines on page 62.



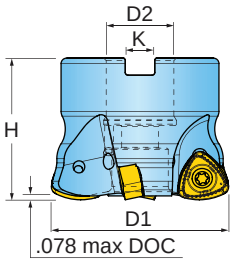
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# FORMMASTER F™ SERIES DG6H

## HIGH FEED FACEMILL WITH 6 INDEXES






| Cutter Number | D1 Effective Diameter | Number of Inserts | H Height | D2 Bore Dia. | K Keyway | Ramp Angle |
|---|---|---|---|---|---|---|
| DG6H-20R01 | 2.000 | 3 | 1.570 | 0.750 | 0.312 | 1.0 |
| DG6H-20R02 | 2.000 | 4 | 1.570 | 0.750 | 0.312 | 1.0 |
| DG6H-25R01 | 2.500 | 4 | 1.570 | 0.750 | 0.312 | .5 |
| DG6H-30R01 | 3.000 | 5 | 1.750 | 1.000 | 0.375 | .5 |
| DG6H-30R02 | 3.000 | 5 | 2.000 | 1.250 | 0.500 | .5 |
| DG6H-40R01 | 4.000 | 6 | 2.375 | 1.500 | 0.625 | .4 |
| DG6H-60R01 | 6.000 | 8 | 2.375 | 1.500 | 0.625 | .2 |

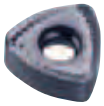
Operating Guidelines on page 62.

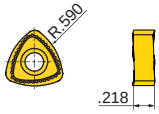


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## INSERTS

### UNEU1205R






| Part Number | Application | Grade | IN2530 | IN2505 | IN2540 | IN6530 | | | |
|---|---|---|---|---|---|---|---|---|---|
| UNEU1205R | High-Feed - 0.118" R* | | X | X | X | X | | | |

*Program Radius

## HARDWARE


Screw


Driver


Retention Bolt


(Optional) Coolant Bolt

| | | | | |
|---|---|---|---|---|
| DG6H-20R01 | SM40-120-20 | DS-T15T | SD-06-46 | SD-06-89 |
| DG6H-20R02 | SM40-120-20 | DS-T15T | SD-06-46 | SD-06-89 |
| DG6H-25R01 | SM40-120-20 | DS-T15T | SD-06-46 | SD-06-89 |
| DG6H-30R01 | SM40-120-20 | DS-T15T | SD-08-46 | SD-08-92 |
| DG6H-30R02 | SM40-120-20 | DS-T15T | SD-10-47 | SD-10-99 |
| DG6H-40R01 | SM40-120-20 | DS-T15T | SD-12-82 | SD-12-99 |
| DG6H-60R01 | SM40-120-20 | DS-T15T | SD-12-82 | SD-12-99 |



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# DIPOS•TETRA™ 4D 90

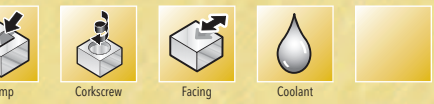
## 90 DEGREE LINE WITH 4 CUTTING EDGES

- High Density Cutter Maximizes Productivity
- High Positive Cutting Edges - Smooth Cutting Action
- Thick Insert Design - Stable and Reliable Performance
- Ground Edge & Top Polished Insert Available for Aluminum Machining

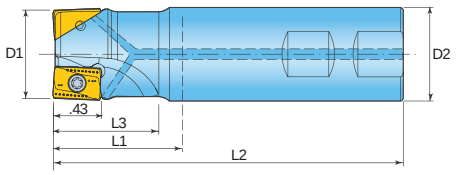


## DIPOS•TETRA™ SERIES 1TJ1Q

### 0 DEGREE LEAD ENDMILL





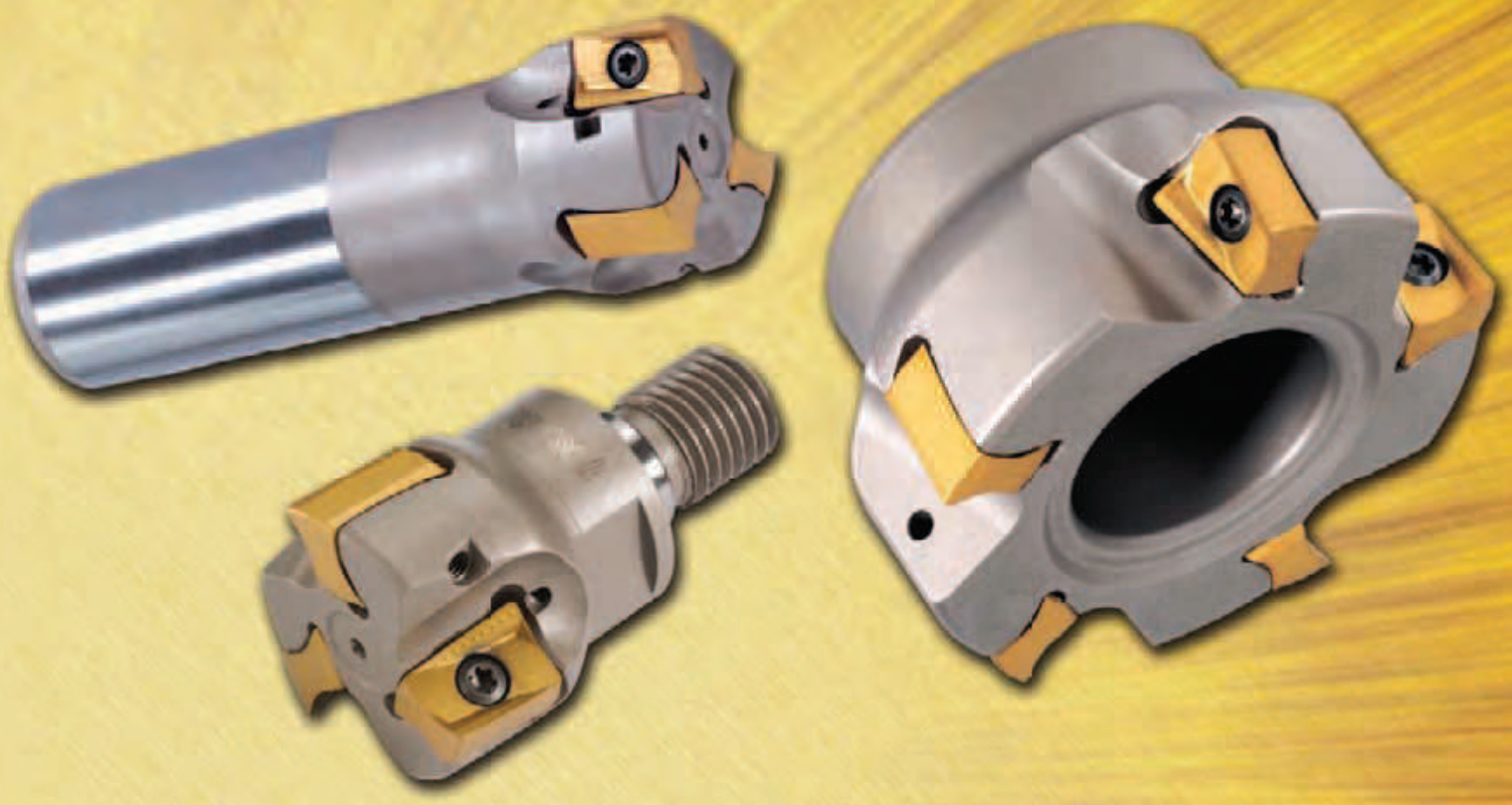




| Cutter Number | D1 Effective Diameter | L1 Extension Length | L2 Overall Length | L3 Projection Length | D2 Shank Size/Style | # of Inserts | Ramp Angle |
|---|---|---|---|---|---|---|---|
| 1TJ1Q-1001784R01 | 1.000 | 1.75 | 3.75 | 1.75 | .750 W | 2 | 1.7 |
| 1TJ1Q-1001780R01 | 1.000 | 1.75 | 4.00 | 1.55 | 1.00 W | 2 | 1.7 |
| 1TJ1Q-1003780R01 | 1.000 | 3.75 | 6.00 | 3.55 | 1.00 W | 2 | 1.7 |
| 1TJ1Q-1201784R01 | 1.250 | 1.75 | 3.75 | 1.75 | .750 W | 3 | 1.1 |
| 1TJ1Q-1202281R01 | 1.250 | 2.25 | 4.50 | 2.22 | 1.25 W | 3 | 1.1 |
| 1TJ1Q-1204281R01 | 1.250 | 4.25 | 6.50 | 4.22 | 1.25 W | 3 | 1.1 |
| 1TJ1Q-1502281R01 | 1.500 | 2.25 | 4.50 | 2.25 | 1.25 W | 4 | .8 |
| 1TJ1Q-2002281R01 | 2.000 | 2.25 | 4.50 | 2.22 | 1.25 W | 5 | .6 |

Operating Guidelines on page 62.



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## DIPOS•TETRA™ SERIES 1TJ1Q (TOP•ON STYLE)

### 0 DEGREE LEAD ENDMILL


Shoulder


Channel

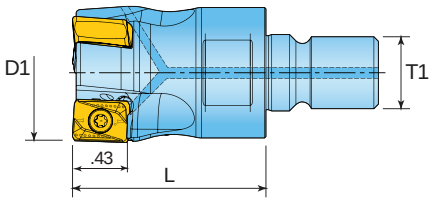

Ramp


Corkscrew


Facing


Coolant






| Cutter Number | D1 Effective Diameter | T1 Adaption | L1 Extension Length | Number of Inserts | Wrench Size | Ramp Angle |
|---|---|---|---|---|---|---|
| 1TJ1Q-1005X7R01 | 1.000 | M12 | 1.50 | 2 | 17mm | 1.7 |
| 1TJ1Q-12017X8R01 | 1.250 | M16 | 1.75 | 3 | 22mm | 1.1 |
| 1TJ1Q-15017X8R01 | 1.500 | M16 | 1.75 | 4 | 22mm | .8 |

Operating Guidelines on page 62.



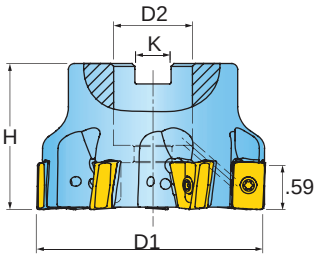
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# DIPOS•TETRA™ SERIES TJ5Q, TJ6Q

## 0 DEGREE LEAD FACEMILL






| Cutter Number | D1 Effective Diameter | # of Inserts | H Height | D2 Bore Diameter | Retention Bolt | Optional Coolant Bolt | K Keyway | Ramp Angle |
|---|---|---|---|---|---|---|---|---|
| TJ5Q-20R01 | 2.000 | 6 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | .6 |
| TJ6Q-20R01 | 2.000 | 3 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | .6 |
| TJ6Q-25R01 | 2.500 | 6 | 1.57 | 0.75 | SD-06-46 | SD-06-89 | 0.31 | .5 |
| TJ5Q-30R01 | 3.000 | 9 | 1.75 | 1.00 | SD-08-46 | SD-08-92 | 0.38 | .3 |
| TJ6Q-30R01 | 3.000 | 7 | 1.75 | 1.00 | SD-08-46 | SD-08-92 | 0.38 | .3 |
| TJ5Q-40R01 | 4.000 | 11 | 2.00 | 1.50 | SD-12-82 | SD-12-99 | 0.62 | .2 |
| TJ6Q-40R01 | 4.000 | 7 | 2.00 | 1.50 | SD-12-82 | SD-12-99 | 0.62 | .2 |

Operating Guidelines on page 62.

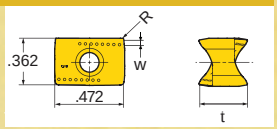


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## INSERTS

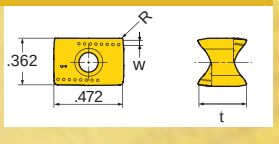
### ANHU120604FR-P





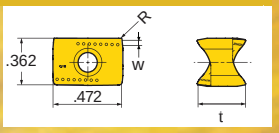

### ANHU120604R





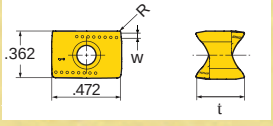

### ANHU120608FR-P





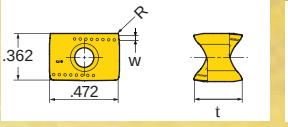

### ANHU120608R






### ANHU120616R






| Part Number | Application | Corner | w Wiper | t Thick. | Cut Depth | Grade | IN10K | IN2505 | IN2510 | IN2530 | IN2540 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANHU120604R | Multi-Purpose | .015" R | 0.060 | 0.338 | 0.43 | | | X | | | | | |
| ANHU120608R | Multi-Purpose | .031" R | 0.043 | 0.338 | 0.43 | | | X | X | X | X | | |
| ANHU120616R | Multi-Purpose | .062" R | 0.028 | 0.338 | 0.43 | | | X | | | | | |
| ANHU120604FR-P | Ground/Polished for Alum. | .015" R | 0.060 | 0.338 | 0.43 | | X | | | | | | |
| ANHU120608FR-P | Ground/Polished for Alum. | .031" R | 0.047 | 0.338 | 0.43 | | X | | | | | | |

## HARDWARE



Screw



Driver

| | | |
|---|---|---|
| ANHU12 | SM35-088-10 | DS-T10T |



GOLD•RUSH
Member MC Group Ingersoll Cutting Tools

# DIPOS•TETRA™ 4D 90

## DOUBLE YOUR CUTTING EDGES FROM 2 TO 4!

- Two Sided Insert Adds Value by Doubling You Cutting Edges!
- Thick and Robust Insert Adds Durability to Demanding Cutting Conditions
- Double Positive Geometry Benefits Machining Efficiency and Slices Super Alloy Msterials
- Integrated Wiper Flat Produces Exceptional Surface Finishes
- Coolant Through the Tool Offered
- Various Corner Radii Offered

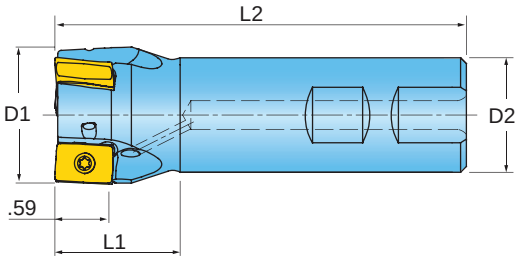


## DIPOS•TETRA™ SERIES 1TJ1N

### 0 DEGREE LEAD ENDMILL WITH 4 INDEXES






| Cutter Number | D1 Nominal Diameter | L1 Extension Length | L2 Overall Length | D2 Shank Size/Style | Number of Inserts | Ramp Angle |
|---|---|---|---|---|---|---|
| 1TJ1N-1202281R01 | 1.250 | 2.25 | 4.50 | 1.250" Weldon | 2 | 1.2 |
| 1TJ1N-1204281R01 | 1.250 | 4.25 | 6.50 | 1.250" Weldon | 2 | 1.2 |
| 1TJ1N-1206281R01 | 1.250 | 6.25 | 8.50 | 1.250" Weldon | 2 | 1.2 |
| 1TJ1N-1502281R01 | 1.500 | 2.25 | 4.50 | 1.250" Weldon | 3 | 1.1 |
| 1TJ1N-1504281R01 | 1.500 | 4.25 | 6.50 | 1.250" Weldon | 3 | 1.1 |
| 1TJ1N-2002281R01 | 2.000 | 2.25 | 4.50 | 1.250" Weldon | 4 | 1.0 |

Operating Guidelines on page 63.



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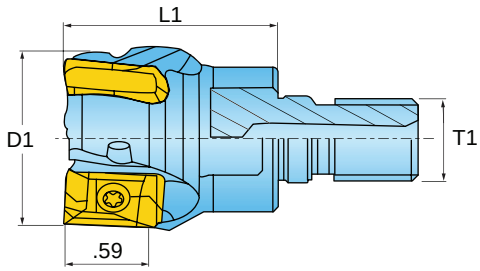


## DIPOS•TETRA™ SERIES 1TJ1N (TOP•ON STYLE)

### 0 DEGREE LEAD ENDMILL WITH 4 INDEXES






| Cutter Number | D1 Nom. Dia. | T1 Adaption | L1 Extension Length | Number of Inserts | Wrench Size | Ramp Angle |
|---|---|---|---|---|---|---|
| 1TJ1N-12015X8R01 | 1.250 | M16 | 1.50 | 2 | 22mm | 1.2 |
| 1TJ1N-15015X8R01 | 1.500 | M16 | 1.50 | 3 | 22mm | 1.1 |

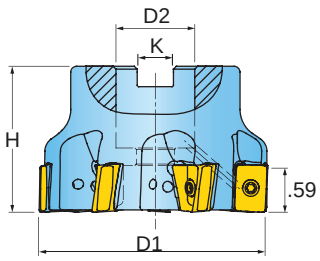
Operating Guidelines on page 63.

# DIPOS•TETRA™ SERIES TJ5N, TJ6N

## 0 DEGREE LEAD FACEMILL WITH 4 INDEXES






| Cutter Number | D1 Nominal Diameter | Number of Inserts | H Height | D2 Bore Dia. | K Keyway | Bolt Circle Diameter | Ramp Angle |
|---|---|---|---|---|---|---|---|
| TJ5N-20R01 | 2.000 | 4 | 1.570 | 0.750 | 0.312 | NA | 1.0 |
| TJ6N-20R01 | 2.000 | 3 | 1.570 | 0.750 | 0.312 | NA | 1.0 |
| TJ5N-25R01 | 2.500 | 5 | 1.750 | 1.000 | 0.375 | NA | .6 |
| TJ5N-30R01 | 3.000 | 7 | 1.750 | 1.000 | 0.375 | NA | .5 |
| TJ6N-30R01 | 3.000 | 5 | 1.750 | 1.000 | 0.375 | NA | .5 |
| TJ5N-40R01 | 4.000 | 8 | 2.000 | 1.500 | 0.625 | NA | .35 |
| TJ6N-40R01 | 4.000 | 5 | 2.000 | 1.500 | 0.625 | NA | .35 |
| TJ5N-50R01 | 5.000 | 10 | 2.000 | 1.500 | 0.625 | NA | .25 |
| TJ6N-50R01 | 5.000 | 7 | 2.000 | 1.500 | 0.625 | NA | .25 |
| TJ5N-60R01 | 6.000 | 11 | 2.480 | 1.500 | 0.625 | NA | .15 |
| TJ6N-60R01 | 6.000 | 8 | 2.480 | 1.500 | 0.625 | NA | .15 |
| TJ5N-80R01 | 8.000 | 14 | 2.480 | 2.500 | 1.000 | 4.00 | .05 |

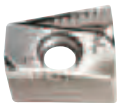
Operating Guidelines on page 63.

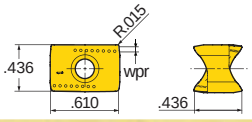


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## INSERTS

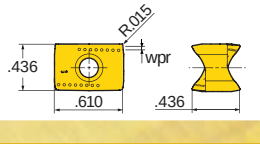
### ANHU160704FR-P



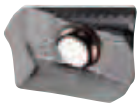


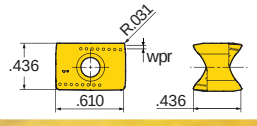

### ANHU160704R





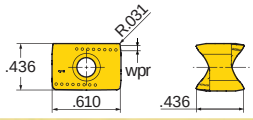

### ANHU160708FR



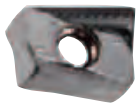


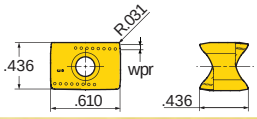

### ANHU160708FR-P





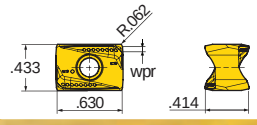

### ANHU160708R






### ANHU160716R






| Part Number | Applications | Corner | Grade | IN10K | IN2510 | IN2530 | IN2505 | IN2540 | INDD15 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANHU160704FR-P | Ground/Polished for Alum. | 0.015" R | | X | | | | | | | | |
| ANHU160704R | Multi-Purpose | 0.015" R | | | | X | | | | | | |
| ANHU160708FR | Hi-Temp/Ti | 0.031" R | | | | X | | | | | | |
| ANHU160708FR-P | Ground/Polished for Alum. | 0.031" R | | X | | | | | | | | |
| ANHU160708R | Multi-Purpose | 0.031" R | | | X | X | X | X | X | | | |
| ANHU160716R | Multi-Purpose | 0.062" R | | | X | X | X | X | | | | |

## HARDWARE


Screw


Driver


Retention Bolt


(Optional) Coolant Bolt

| | | | | |
|---|---|---|---|---|
| 1TJ1N | SM40-120-20 | DS-T15T | - | - |
| TJ5N-20R01 | SM40-120-20 | DS-T15T | SD-06-46 | SD-06-89 |
| TJ6N-20R01 | SM40-120-20 | DS-T15T | SD-06-46 | SD-06-89 |
| TJ5N-25R01 | SM40-120-20 | DS-T15T | SD-08-46 | SD-08-92 |
| TJ5N-30R01 | SM40-120-20 | DS-T15T | - | - |
| TJ6N-30R01 | SM40-120-20 | DS-T15T | - | - |
| TJ5N-40R01 | SM40-120-20 | DS-T15T | - | - |
| TJ6N-40R01 | SM40-120-20 | DS-T15T | - | - |
| TJ5N-50R01 | SM40-120-20 | DS-T15T | - | - |
| TJ6N-50R01 | SM40-120-20 | DS-T15T | - | - |
| TJ5N-60R01 | SM40-120-20 | DS-T15T | - | - |
| TJ6N-60R01 | SM40-120-20 | DS-T15T | - | - |
| TJ5N-80R01 | SM40-120-20 | DS-T15T | - | - |



GOLD•RUSH
Member MC Group Ingersoll Cutting Tools

# DIPOS•TETRA™ 4D 45

## HIGH SHEER 45° LEAD WITH 4 CUTTING EDGES

- Combination of High Positive Insert with 45° Entry Angle: Extremely Smooth and Silent Cutting Action
- High Helix 4 Corner Insert
- Excellent Surface Finish with Wide Wiper Flat
- Maximum .31" Depth of Cut

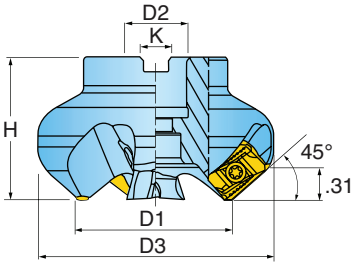


## DIPOS•TETRA™ SERIES 1TN1N

### 45 DEGREE LEAD FACEMILL WITH 4 INDEXES






| Cutter Number | D1 Nominal Diameter | D3 Overall Diameter | Number of Inserts | D2 Bore Dia. | H Height | K Keyway |
|---|---|---|---|---|---|---|
| TN1N-20R01 | 2.000 | 2.68 | 4 | 0.750 | 1.750 | 0.312 |
| TN1N-30R01 | 3.000 | 3.68 | 5 | 1.000 | 1.750 | 0.375 |
| TN1N-30R02 | 3.000 | 3.68 | 7 | 1.000 | 1.750 | 0.375 |
| TN1N-40R01 | 4.000 | 4.67 | 6 | 1.500 | 2.375 | 0.625 |
| TN1N-40R02 | 4.000 | 4.67 | 8 | 1.500 | 2.375 | 0.625 |
| TN1N-60R01 | 6.000 | 6.67 | 10 | 1.500 | 2.375 | 0.625 |

Operating Guidelines on page 63.



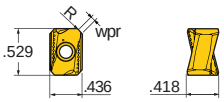
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## INSERTS

### ANHU1607ANR






| Part Number | Applications | Corner | Grade | IN2510 | IN2530 | IN2540 |
|---|---|---|---|---|---|---|
| ANHU1607ANR | Multi-Purpose | 0.015" R | | X | X | X |

## HARDWARE


Screw


Driver

| | | |
|---|---|---|
| | SM40-120-20 | DS-T15T |



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Member MC Group Ingersoll Cutting Tools

# FORMOMASTER R™ PROFILE

## ECONOMICAL DOUBLE SIDED INSERT FOR MOLD & DIE

- Anti-Rotation Insert Clamping System
- Two Different Double Sided Insert Designs, Round & Serrated
- Free Cutting Geometry for All Materials
- Serrated Style Insert for Extended Reach Applications Provides Increased Stability
- Though the Tool Coolant, Delivered to the Cutting Edge

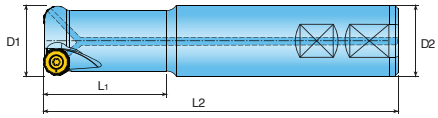


## FORMOMASTER R™ SERIES 1DE1H

### BUTTON ENDMILL WITH 8-16 INDEXES






| Cutter Number | D1 Nominal Diameter | L1 Extension Length | Number of Inserts | L2 Overall Length | D2 Shank Size/Style |
|---|---|---|---|---|---|
| 1DE1H-1202781R01 | 1.250 | 2.750 | 2 | 5.000 | 1.250 Weldon |
| 1DE1H-1202281R01 | 1.250 | 2.250 | 2 | 6.000 | 1.250 Weldon |
| 1DE1H-1202081R01 | 1.250 | 2.000 | 2 | 9.000 | 1.250 Weldon |
| 1DE1H-1502786R01 | 1.500 | 2.750 | 3 | 5.000 | 1.500 Weldon |
| 1DE1H-1502286R01 | 1.500 | 2.250 | 3 | 6.000 | 1.500 Weldon |
| 1DE1H-1502086R01 | 1.500 | 2.000 | 3 | 9.000 | 1.500 Weldon |


Operating Guidelines on page 63.

NEW GOLD GOLD·RUSH

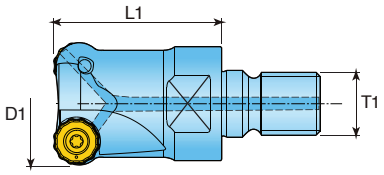


## FORMMASTER R™ SERIES 1DE1H (TOP•ON STYLE)

### BUTTON ENDMILL WITH 8-16 INDEXES

Ramping | Corkscrew | Pocket | Facing | Contour | Coolant






| Cutter Number | D1 Nom. Dia. | L1 Extension Length | T1 Thread Size | Number of Inserts | Coolant |
|---|---|---|---|---|---|
| 1DE1H-12015XR01 | 1.250 | 1.500 | M16 | 3 | X |
| 1DE1H-15015XR01 | 1.500 | 1.500 | M16 | 3 | X |

Operating Guidelines on page 63.



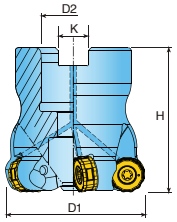
GOLD•RUSH
Member IMC Group Ingersoll Cutting Tools

# FORMOMASTER R™ SERIES DE6H

## BUTTON FACEMILL WITH 8-16 INDEXES






| Cutter Number | D1 Nominal Diameter | Number of Inserts | H Height | D2 Bore Diameter | K Keyway |
|---|---|---|---|---|---|
| DE6H-20R01 | 2.000 | 5 | 1.750 | 0.750 | 0.312 |
| DE6H-25R01 | 2.500 | 6 | 1.750 | 0.750 | 0.312 |
| DE6H-30R01 | 3.000 | 7 | 1.750 | 1.000 | 0.375 |

Operating Guidelines on page 63.

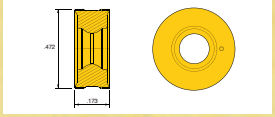


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## INSERTS

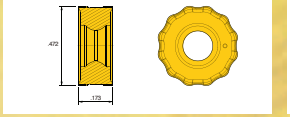
**RNLU1205MON-M**





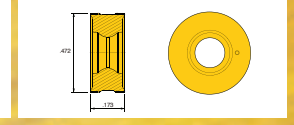
**RNLU1205MON-S**





**RNLU1205MON-P**





| Part Number | Applications | Grade | IN2540 | IN6530 | IN2530 | IN2505 | IN10K | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RNLU1205MON-M | Standard - 6.000 mm R | | X | X | X | X | | | | | |
| RNLU1205MON-S | Serrated - 6.000 mm R | | X | X | X | X | | | | | |
| RNLU1205MON-P | Grd/Pol for Al - 6.000 mm R | | | | | | X | | | | |

## HARDWARE



Screw



Driver

| | |
|---|---|
| SM40-110-00 | DS-T15T |



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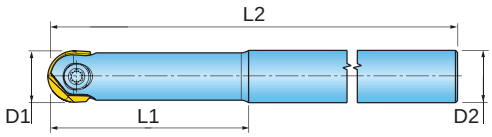
## FINISH•BALL™ SERIES 12A9, 12A5

### BALL NOSE ENDMILL

Ramping | Corkscrew | Pocket | Contour

### STEEL

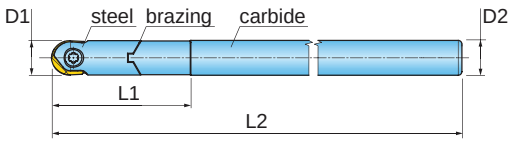





| Cutter Number | D1 Effective Diameter | D2 Shank Size/Style | L1 Extension | L2 Overall Length | Effective Cutting Edge | Insert Series |
|---|---|---|---|---|---|---|
| 12A9F-03017S4R01 | 0.375 | .500" Cylindrical | 1.85 | 6.00 | 2 | 09 |
| 12A9H-05019S4R01 | 0.500 | .500" Cylindrical | 1.92 | 7.00 | 2 | 12 |
| 12A9K-06015S6R01 | 0.625 | .625" Cylindrical | 1.58 | 8.00 | 2 | 15 |
| 12A9M-07018S7R01 | 0.750 | .750" Cylindrical | 1.85 | 8.00 | 2 | 19 |
| 12A9R-10018S1R01 | 1.000 | 1.000" Cylindrical | 1.81 | 8.00 | 2 | 25 |
| 12A9S-12030S9R01 | 1.250 | 1.250" Cylindrical | 3.03 | 11.81 | 2 | 31 |

### CARBIDE






| Cutter Number | D1 Effective Diameter | D2 Shank Size/Style | L1 Extension | L2 Overall Length | Effective Cutting Edges | Insert Series |
|---|---|---|---|---|---|---|
| 12A5F-03015R8R01 | 0.375 | .500" Cylindrical | 1.50 | 6.00 | 2 | 09 |
| 12A5H-05015S4R02 | 0.500 | .500" Cylindrical | 1.50 | 4.00 | 2 | 12 |
| 12A5H-05015S4R01 | 0.500 | .500" Cylindrical | 1.50 | 7.00 | 2 | 12 |
| 12A5K-06018S6R02 | 0.625 | .625" Cylindrical | 1.88 | 4.00 | 2 | 15 |
| 12A5K-06018S6R01 | 0.625 | .625" Cylindrical | 1.88 | 7.00 | 2 | 15 |
| 12A5M-07022S7R02 | 0.750 | .750" Cylindrical | 2.25 | 4.00 | 2 | 19 |
| 12A5M-07022S7R01 | 0.750 | .750" Cylindrical | 2.25 | 7.00 | 2 | 19 |


Operating Guidelines on page 64.

NEW GOLD GOLD•RUSH

# BALL NOSE CUTTING SYSTEM FOR DIE & MOLD COUNTOUR MILLING

- Ultra Stable Clamping System and Excellent Repeatability
- Through the Tool Coolant, Delivered to the Cutting Edge (Top•On)
- Premium Ground Cutter Bodies
- Die & Mold, Aero Space and General Purpose
- End Mill, Top-On (Modular) and Solid Carbide (Brazed Shanks)

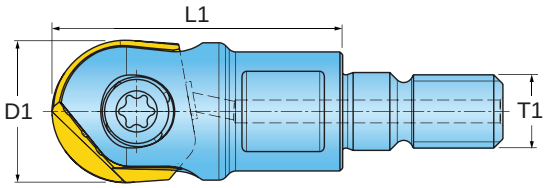


## FINISH•BALL™ SERIES 12A9 (TOP•ON STYLE)

### BALL NOSE ENDMILL






| Cutter Number | D1 Effective Diameter | T1 Thread Size | L1 Extension | Effective Cutting Edges | Wrench Size | Insert Series |
|---|---|---|---|---|---|---|
| 12A9F-03011X5R01 | 0.375 | M8 .500" Cylindrical | 1.85 | 2 | 10mm | 09 |
| 12A9H-05011X5R01 | 0.500 | M8 .500" Cylindrical | 1.92 | 2 | 10mm | 12 |
| 12A9K-06015X5R01 | 0.625 | M8 .625" Cylindrical | 1.58 | 2 | 10mm | 15 |
| 12A9M-07016X6R01 | 0.750 | M10 .750" Cylindrical | 1.85 | 2 | 15mm | 19 |
| 12A9R-07021X7R01 | 1.000 | M12 1.000" Cylindrical | 1.81 | 2 | 17mm | 25 |
| 12A9S-10023X7R01 | 1.250 | M12 1.250" Cylindrical | 3.03 | 2 | 17mm | 31 |

Operating Guidelines on page 64.



GOLD•RUSH
Member IMC Group Ingersoll Cutting Tools

## INSERTS

**NQHG**



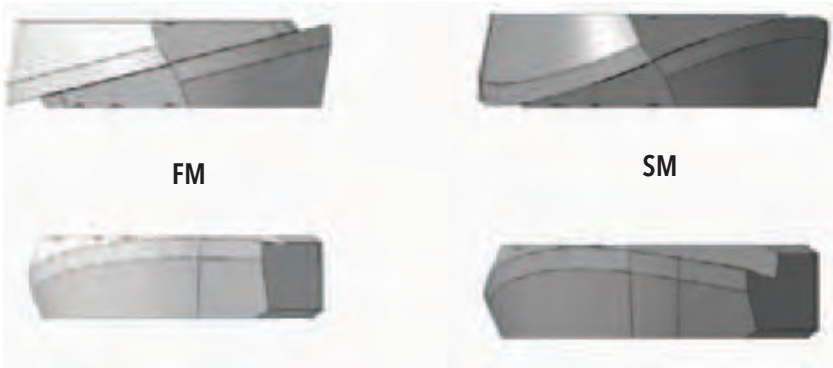



**GQHG**






| Eff. Dia. | Part Number | Applications | R Corner | Grade | IN2005 | IN2006 | IN05S |
|---|---|---|---|---|---|---|---|
| 0.375 | NQHG090200R-FM | Ball Nose, coolant through | 0.188 | | X | X | |
| 0.500 | NQHG120300R-FM | Ball Nose, coolant through | 0.250 | | X | X | |
| 0.625 | NQHG150400R-FM | Ball Nose, coolant through | 0.312 | | X | X | |
| 0.750 | NQHG190500R-FM | Ball Nose, coolant through | 0.375 | | X | X | |
| 1.000 | NQHG250600R-FM | Ball Nose, coolant through | 0.500 | | X | X | |
| 1.250 | NQHG310700R-FM | Ball Nose, coolant through | 0.625 | | X | X | |
| 0.375 | NQHG090200R-SM | Ball Nose, coolant through | 0.188 | | X | X | X |
| 0.500 | NQHG120300R-SM | Ball Nose, coolant through | 0.250 | | X | X | X |
| 0.625 | NQHG150400R-SM | Ball Nose, coolant through | 0.312 | | X | X | |
| 0.750 | NQHG190500R-SM | Ball Nose, coolant through | 0.375 | | X | X | X |
| 1.000 | NQHG250600R-SM | Ball Nose, coolant through | 0.500 | | X | X | X |
| 1.250 | NQHG310700R-SM | Ball Nose, coolant through | 0.625 | | X | X | |
| 0.375 | GQHG090208R01 | Backdraft Blade, coolant through | 0.031 | | X | X | |
| 0.500 | GQHG120308R01 | Backdraft Blade, coolant through | 0.031 | | X | X | |
| 0.500 | GQHG120316R01 | Backdraft Blade, coolant through | 0.062 | | X | X | |
| 0.625 | GQHG150408R01 | Backdraft Blade, coolant through | 0.031 | | X | X | |
| 0.625 | GQHG150416R01 | Backdraft Blade, coolant through | 0.062 | | X | X | |
| 0.750 | GQHG190508R01 | Backdraft Blade, coolant through | 0.031 | | X | X | |
| 0.750 | GQHG190516R01 | Backdraft Blade, coolant through | 0.062 | | X | X | |
| 0.750 | GQHG190532R01 | Backdraft Blade, coolant through | 0.125 | | X | X | |
| 1.000 | GQHG250608R01 | Backdraft Blade, coolant through | 0.031 | | X | X | |
| 1.000 | GQHG250616R01 | Backdraft Blade, coolant through | 0.016 | | X | X | |
| 1.000 | GQHG250632R01 | Backdraft Blade, coolant through | 0.125 | | X | X | |



FINISH•BALL™

| HARDWARE |  Screw |  Driver |
|---|---|---|
| 12A9F-03017S4R01 | SM30-083-B1 | DS-TP10S |
| 12A9F-03011X5R01 | SM30-083-B1 | DS-TP10S |
| 12A5F-03015R8R01 | SM30-083-B1 | DS-TP10S |
| 12A8F-03013S4R01 | SM30-083-B1 | DS-TP10S |
| 12A8F-03018S4R01 | SM30-083-B1 | DS-TP10S |
| 12A9H-05019S4R01 | SM40-106-B1 | DS-TP15S |
| 12A9H-05011X5R01 | SM40-106-B1 | DS-TP15S |
| 12A5H-05015S4R02 | SM40-106-B1 | DS-TP15S |
| 12A5H-05015S4R01 | SM40-106-B1 | DS-TP15S |
| 12A8H-05025S4R01 | SM40-106-B1 | DS-TP15S |
| 12A9K-06015S6R01 | SM50-139-B1 | DS-T20T |
| 12A9K-06015X5R01 | SM50-139-B1 | DS-T20T |
| 12A5K-06018S6R02 | SM50-139-B1 | DS-T20T |
| 12A5K-06018S6R01 | SM50-139-B1 | DS-T20T |
| 12A9M-07018S7R01 | SM60-167-B1 | DS-T25T |
| 12A9M-07016X6R01 | SM60-167-B1 | DS-T25T |
| 12A9M-07021X7R01 | SM60-167-B1 | DS-T25T |
| 12A5M-07022S7R02 | SM60-167-B1 | DS-T25T |
| 12A5M-07022S7R01 | SM60-167-B1 | DS-T25T |
| 12A8M-07035S7R01 | SM60-167-B1 | DS-T25T |
| 12A9R-10018S1R01 | SM70-210-B1 | DS-T25T |
| 12A9R-10023X7R01 | SM70-210-B1 | DS-T25T |
| 12A9S-12030S9R01 | SM80-250-B1 | DS-T30T |

PRO·TRIO PROFILE

## ROUGH BALL FOR TRIPLE FEED RATES!

- 3 Flute Design Enables Increased Feed Rates
- Unique Double-Sided Insert with 2 Cutting Edges
- Highly Stable Cutting Performance with Exceptionally Strong Cutting Edges
- Coolant Through Provides Excellent Chip Evacuation

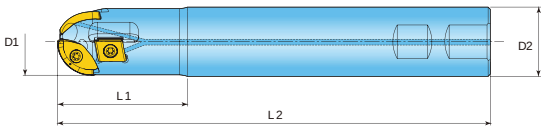


## PRO·TRIO SERIES 2TW7K

### BALL NOSE ENDMILL WITH 3 FLUTES





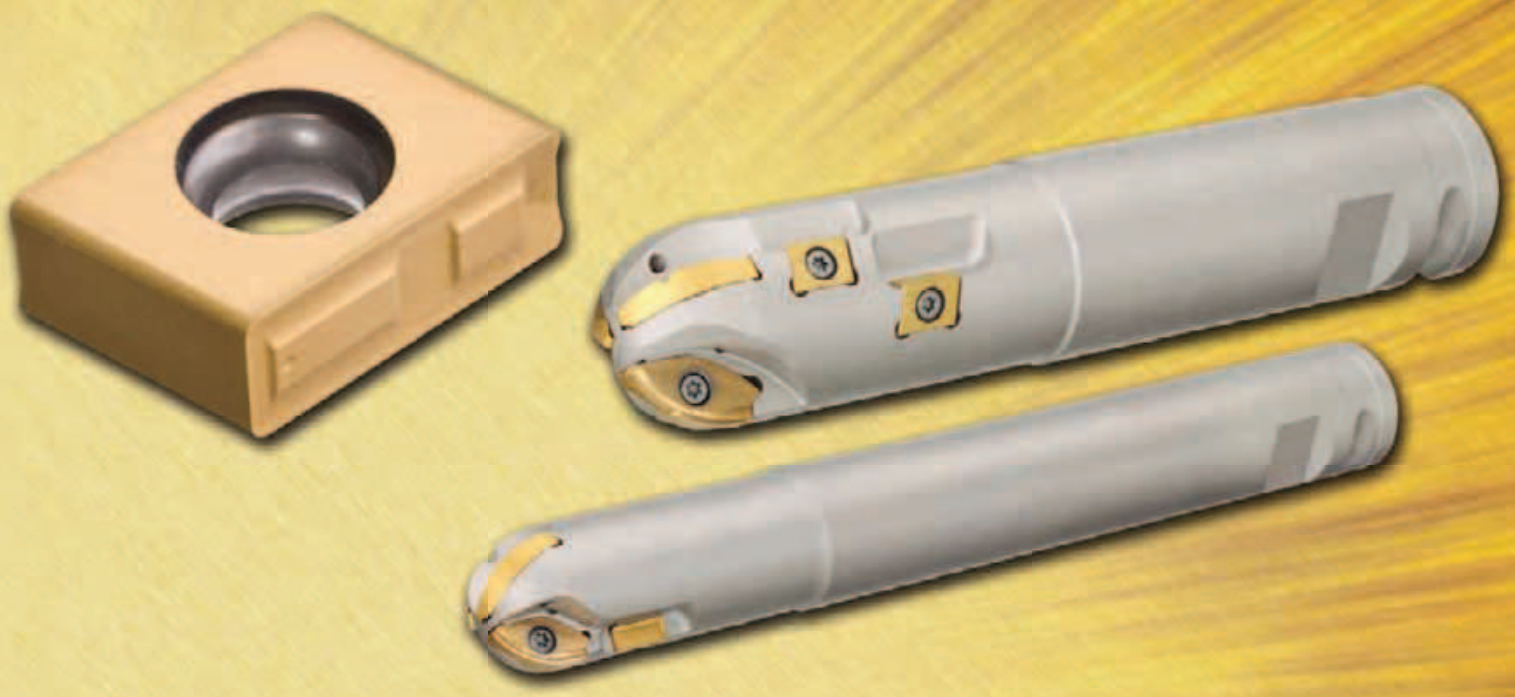




| Cutter Number | D1 Effective Diameter | D2 Shank Size/Style | L1 Extension | L2 Overall Length | Effective Cutting Edges |
|---|---|---|---|---|---|
| 2TW7K-1203781R01 | 1.250 | 1.250 Weldon | 3.720 | 6.000 | 3 |
| 2TW7K-1205281R01 | 1.250 | 1.250 Weldon | 5.220 | 7.500 | 3 |
| 2TW7K-1504381R01 | 1.500 | 1.500 Weldon | 4.340 | 7.000 | 3 |
| 2TW7K-1506381R01 | 1.500 | 1.500 Weldon | 6.340 | 9.000 | 3 |
| 2TW7K-2004781R01 | 2.000 | 2.000 Weldon | 4.750 | 8.000 | 3 |
| 2TW7K-2007581R01 | 2.000 | 2.000 Weldon | 7.750 | 11.000 | 3 |

Operating Guidelines on page 64.

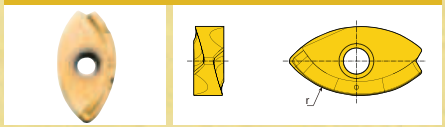


NEW GOLD GOLD·RUSH

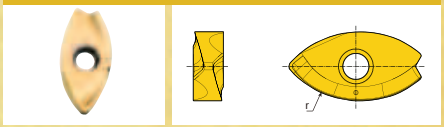


## INSERTS

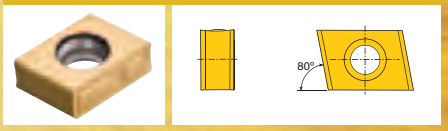
**NCEU...R**



**NCEU...R-P**



**DCM**




| Cutter Dia. | Cutter Number | Center Ball Station | Side Ball Station | Side Station | Grade | IN2505 | IN2530 | IN6530 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.250 | 2TW7K-1203781R01 | NCEU320500R (1) | NCEU320500R-P (2) | DCM323R01 (2) | | X | X | X | | | | |
| 1.250 | 2TW7K-1205281R01 | NCEU320500R (1) | NCEU320500R-P (2) | DCM323R01 (2) | | X | X | X | | | | |
| 1.500 | 2TW7K-1504381R01 | NCEU380600R (1) | NCEU380600R-P (2) | DCM323R01 (4) | | X | X | X | | | | |
| 1.500 | 2TW7K-1506381R01 | NCEU380600R (1) | NCEU380600R-P (2) | DCM323R01 (4) | | X | X | X | | | | |
| 2.000 | 2TW7K-2004781R01 | NCEU500700R (1) | NCEU500700R-P (2) | DCM324R01 (4) | | X | X | X | | | | |
| 2.000 | 2TW7K-2007581R01 | NCEU500700R (1) | NCEU500700R-P (2) | DCM324R01 (4) | | X | X | X | | | | |

## HARDWARE


Screw

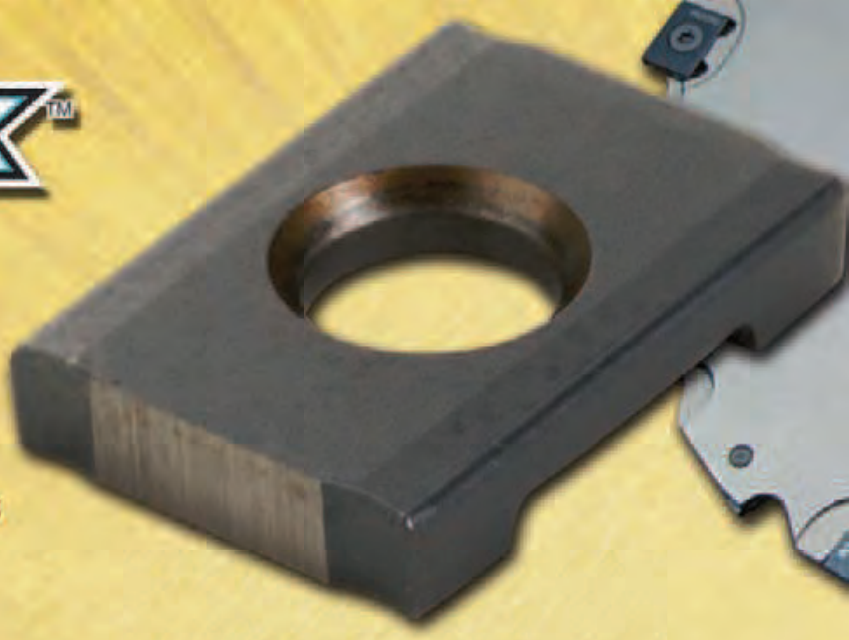

Driver

| | | |
|---|---|---|
| 2TW7K-1203781R01 | SM40-093-20 | DS-T15T |
| 2TW7K-1205281R01 | SM40-093-20 | DS-T15T |
| 2TW7K-1504381R01 | SM40-093-20 | DS-T15T |
| 2TW7K-1506381R01 | SM40-093-20 | DS-T15T |
| 2TW7K-2004781R01 | SM50-113-20 | DS-T20T |
| 2TW7K-2007581R01 | SM50-113-20 | DS-T20T |



GOLD-RUSH
Member IMC Group Ingersoll Cutting Tools

# THIN-MAX™ TANGENTIAL



## SUPER-MAX PERFORMANCE IN A THIN SLOTTER DESIGN

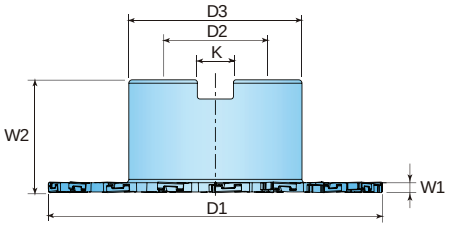
- Diameters from Ø3.00" thru Ø8.00"
- Cutting Widths Ranging From .125" thru .312"
- 4 Insert Indexes with Wiper For Smooth Finishes
- Same Insert for Both RH and LH Stations

## THIN-MAX™ SERIES 38J5V

### RADIAL SLOTTER

Slotting






| Cutter Number | W1 Cutter Width | D1 Nom. Diameter | D2 Bore Diameter | W2 Hub Width | D3 Hub Diameter | K Keyway | Total # of Inserts | # of Effective Inserts | Insert Series |
|---|---|---|---|---|---|---|---|---|---|
| 38J5V-02015D1R01 | 0.156 | 2.500 | 0.7500 | 1.370 | 1.180 | 0.312 | 8 | 4 | IEE311-001 |
| 38J5V-03015D1R01 | 0.156 | 3.000 | 0.7500 | 1.500 | 1.500 | 0.312 | 10 | 5 | IEE311-001 |
| 38J5V-04015D3R01 | 0.156 | 4.000 | 1.0000 | 1.500 | 1.750 | 0.375 | 12 | 6 | IEE311-001 |
| 38J5V-06015D5R01 | 0.156 | 6.000 | 1.5000 | 2.000 | 3.000 | 0.625 | 18 | 9 | IEE311-001 |
| 38J5V-02018D1R01 | 0.187 | 2.500 | 0.7500 | 1.370 | 1.180 | 0.312 | 8 | 4 | IEE312-001 |
| 38J5V-03015D1R01 | 0.187 | 3.000 | 0.7500 | 1.500 | 1.500 | 0.312 | 10 | 5 | IEE312-001 |
| 38J5V-04018D3R01 | 0.187 | 4.000 | 1.0000 | 1.500 | 1.750 | 0.375 | 12 | 6 | IEE312-001 |
| 38J5V-06018D5R01 | 0.187 | 6.000 | 1.5000 | 2.000 | 3.000 | 0.625 | 18 | 9 | IEE312-001 |
| 38J5V-03025D1R01 | 0.250 | 3.000 | 0.7500 | 1.500 | 1.500 | 0.312 | 10 | 5 | IXE412-001 |
| 38J5V-04025D3R01 | 0.250 | 4.000 | 1.0000 | 1.500 | 1.750 | 0.375 | 12 | 6 | IXE412-001 |
| 38J5V-06025D5R01 | 0.250 | 6.000 | 1.5000 | 2.000 | 3.000 | 0.625 | 14 | 7 | IXE412-001 |
| 38J5V-04031D3R01 | 0.312 | 4.000 | 1.0000 | 1.500 | 1.750 | 0.375 | 12 | 6 | IXE413-001 |
| 38J5V-06031D5R01 | 0.312 | 6.000 | 1.5000 | 2.000 | 3.000 | 0.625 | 14 | 7 | IXE413-001 |
| 38J5V-04037D3R01 | 0.375 | 4.000 | 1.0000 | 1.500 | 1.750 | 0.375 | 12 | 6 | IXE414-001 |
| 38J5V-06037D5R01 | 0.375 | 6.000 | 1.5000 | 2.000 | 3.000 | 0.625 | 14 | 7 | IXE414-001 |
| 38J5V-0803758R01 | 0.375 | 8.000 | 1.5000 | 2.000 | 3.800 | 0.625 | 18 | 9 | IXE414-001 |


Operating Guidelines on page 65.

NEW GOLD GOLD-RUSH

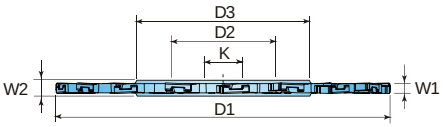


## THINOMAX™ SERIES 38J5V

### AXIAL SLOTTER

Slotting






| Cutter Number | W1 Cutter Width | D1 Nom. Diameter | D2 Bore Diameter | W2 Hub Width | D3 Hub Diameter | K Keyway | Total # of Inserts | # of Effective Inserts | Insert Series |
|---|---|---|---|---|---|---|---|---|---|
| 38J5V-03015AF-01 | 0.156 | 3.000 | 1.0000 | 0.3750 | 1.600 | 0.250 | 10 | 5 | IEE311-001 |
| 38J5V-04015AF-01 | 0.156 | 4.000 | 1.0000 | 0.3750 | 1.800 | 0.250 | 12 | 6 | IEE311-001 |
| 38J5V-06015AG-01 | 0.156 | 6.000 | 1.2500 | 0.3750 | 1.900 | 0.312 | 18 | 9 | IEE311-001 |
| 38J5V-03018AF-01 | 0.187 | 3.000 | 1.0000 | 0.3750 | 1.600 | 0.250 | 10 | 5 | IEE312-001 |
| 38J5V-04018AF-01 | 0.187 | 4.000 | 1.0000 | 0.3750 | 1.800 | 0.250 | 12 | 6 | IEE312-001 |
| 38J5V-06018AG-01 | 0.187 | 6.000 | 1.2500 | 0.3750 | 1.900 | 0.312 | 18 | 9 | IEE312-001 |
| 3VJ5V-04025AF-01 | 0.250 | 4.000 | 1.0000 | 0.3750 | 1.800 | 0.250 | 12 | 6 | IXE412-001 |
| 3VJ5V-06025AG-01 | 0.250 | 6.000 | 1.2500 | 0.3750 | 1.900 | 0.312 | 14 | 7 | IXE412-001 |
| 3VJ5V-08025AH-01 | 0.250 | 8.000 | 1.5000 | 0.3750 | 2.750 | 0.375 | 18 | 9 | IXE412-001 |
| 3VJ5V-04031AG-01 | 0.312 | 4.000 | 1.2500 | 0.3750 | 2.000 | 0.312 | 12 | 6 | IXE413-001 |
| 3VJ5V-06031AG-01 | 0.312 | 6.000 | 1.2500 | 0.3750 | 2.300 | 0.312 | 14 | 7 | IXE413-001 |
| 3VJ5V-08031AH-01 | 0.312 | 8.000 | 1.5000 | 0.3750 | 2.750 | 0.375 | 18 | 9 | IXE413-001 |
| 3VJ5V-04037AG-01 | 0.375 | 4.000 | 1.2500 | 0.3750 | 2.000 | 0.312 | 10 | 5 | IXE414-001 |
| 3VJ5V-06037AG-01 | 0.375 | 6.000 | 1.2500 | 0.3750 | 2.300 | 0.312 | 14 | 7 | IXE414-001 |
| 3VJ5V-08037AH-01 | 0.375 | 8.000 | 1.5000 | 0.3750 | 2.750 | 0.375 | 18 | 9 | IXE414-001 |
| 38J5V-0803758R01 | 0.375 | 8.000 | 1.5000 | 2.000 | 3.800 | 0.625 | 18 | 9 | NXE324-001 |

Operating Guidelines on page 65.

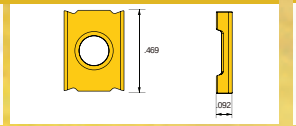


GOLD-RUSH
Member MC Group Ingersoll Cutting Tools

## INSERTS

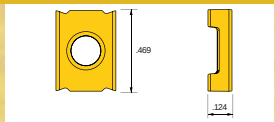
### IEE311-001





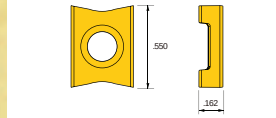

### IEE312-001





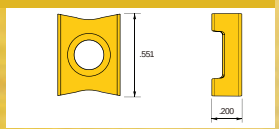

### IXE412-001





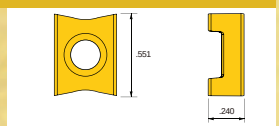

### IXE413-001






### IXE414-001






| Cutter Number | Corner Configuration | Application | Grade | IN2505 | IN2515 | IN2530 | IN2540 | IN6515 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| IEE311-001 | 8 X .020 R | Multi-Purpose | | X | X | X | X | X | | |
| IEE312-001 | 8 X .020 R | Multi-Purpose | | X | X | X | X | X | | |
| IXE412-001 | 8 X .020 R | Multi-Purpose | | X | X | X | X | X | | |
| IXE413-001 | 8 X .020 R | Multi-Purpose | | X | X | X | X | X | | |
| IXE414-001 | 8 X .020 R | Multi-Purpose | | X | X | X | X | X | | |

## THINoMAX™

| HARDWARE |  Screw |  Driver |
|---|---|---|
| | SM35-034-50 | DS-T09W |
| | SM35-042-50 | DS-T09W |
| | SM40-058-50 | DS-T15T |
| | SM40-070-50 | DS-T15T |
| | SM40-080-50 | DS-T15T |

# GOLD•MAX6

DI-TRIO 90° LINE

## PRECISION AND PRODUCTIVITY IN A HELICAL MAXLINE DESIGN

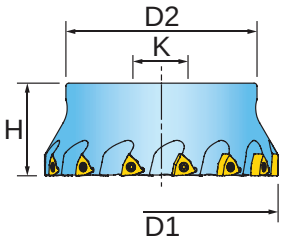
- 6 Cutting Edges With Integrated Wiper Technology
- .275" Max DOC Produces True 90° Shoulders
- Helical/High Positive Geometry for Clean Shearing Action
- Primary Land on Cutting Edge for Added Edge Strength
- Durable Tangentially Mounted Insert with Patented Dove Tail Style Seating

## GOLD•MAX6 SERIES 9J6G

### 0 DEGREE LEAD FACEMILL






| Cutter Number | D1 Nom. Diameter | Number of Inserts | H Height | D2 Bore Diameter | K Keyway |
|---|---|---|---|---|---|
| 9J6G-01R01 | 1.500 | 4 | 1.570 | 0.500 | 0.250 |
| 9J6G-02R01 | 2.000 | 4 | 1.500 | 0.750 | 0.312 |
| 9J6G-02R02 | 2.000 | 5 | 1.570 | 0.750 | 0.312 |
| 9J6G-02R03 | 2.500 | 5 | 1.570 | 0.750 | 0.312 |
| 9J6G-02R04 | 2.500 | 7 | 1.570 | 0.750 | 0.312 |
| 9J6G-03R01 | 3.000 | 7 | 2.375 | 1.000 | 0.375 |
| 9J6G-03R02 | 3.000 | 9 | 2.375 | 1.000 | 0.375 |
| 9J6G-04R01 | 4.000 | 8 | 2.3750 | 1.5000 | 0.625 |
| 9J6G-04R02 | 4.000 | 11 | 2.3750 | 1.5000 | 0.625 |
| 9J6G-05R01 | 5.000 | 11 | 2.3750 | 1.5000 | 0.625 |
| 9J6G-05R02 | 5.000 | 14 | 2.3750 | 1.5000 | 0.625 |
| 9J6G-06R01 | 6.000 | 14 | 2.3750 | 1.5000 | 0.625 |
| 9J6G-06R01 | 6.000 | 18 | 2.3750 | 1.5000 | 0.625 |

Operating Guidelines on page 65.



NEW GOLD GOLD•RUSH

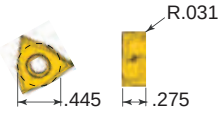




## INSERTS

**WFM-34R100**






| Cutter Number | Corner Configuration | Application | Grade | IN2505 | IN2515 | IN2530 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| WFM-34R100 | 8 X .031R | Multi-Purpose | | X | X | X | | | | |

## HARDWARE


Screw


Driver

| | | |
|---|---|---|
| | SM40-120-20 | DS-T15T |

GOLD-MAX 8

DI-QUAD 90° LINE

## DOUBLE-SIDED TANGENTIAL TECHNOLOGY

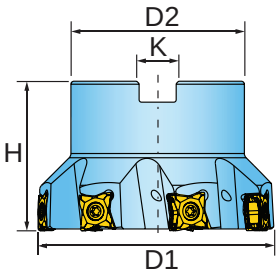
- Cutter Diameters from Ø2.00" thru Ø8.00"
- 8 Cutting Edges with Integrated Wiper Technology
- High Positive Geometry Produces True 90° Shoulders
- Unique Multifaceted Insert Offers High Efficiency and Productivity
- Stable Insert Seating Promotes Longer Tool Life

## SERIES VJ6K

### 0 DEGREE LEAD FACEMILL



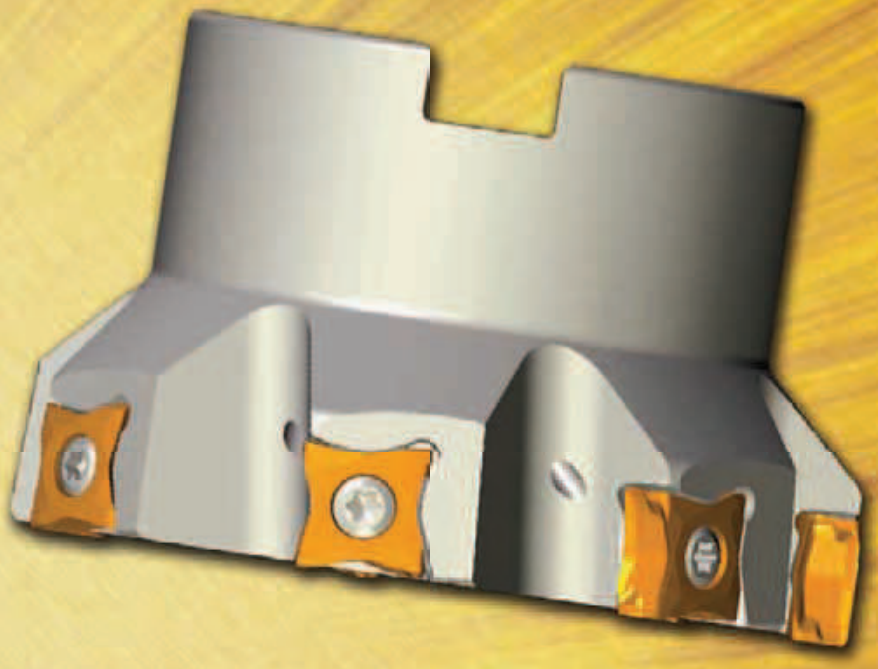



| Cutter Number | D1 Nom. Diameter | Number of Inserts | H Height | D2 Bore Diameter | K Keyway | Bolt Circle |
|---|---|---|---|---|---|---|
| VJ6V-02R01 | 2.000 | 5 | 1.500 | 0.750 | 0.32 | - |
| VJ6K-02R02 | 2.500 | 6 | 1.570 | 1.000 | 0.38 | - |
| VJ6K-03R01 | 3.000 | 8 | 2.375 | 1.000 | 0.38 | - |
| VJ6K-04R01 | 4.000 | 9 | 2.375 | 1.500 | 0.63 | - |
| VJ6K-06R01 | 6.000 | 13 | 2.375 | 1.500 | 0.63 | - |
| VJ6K-08R01 | 8.000 | 16 | 2.375 | 2.500 | 1.00 | 4.00 |

Operating Guidelines on page 66.





## INSERTS

### SGM-44R001






| Cutter Number | Corner Configuration | Application | Grade | IN2505 | IN2515 | IN2530 | IN2540 | IN6515 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SGM-44R001 | 8 X .031R | Multi-Purpose | | X | X | X | X | X | | |

## HARDWARE



Screw



Driver

| | | |
|---|---|---|
| | SM40-120-20 | DS-T15T |

| HiPos Trio - 6mm I.C. - Series 1KJ1D, 1KV1D, KJ5D, KJ6D | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | Feed per Insert | IN10K | IN2505 | IN2510 | IN2530 | IN2540 | Coolant |
| Aluminum | 6061 T6, 7075 T6, 2024 | - | 1500 - 8000 | .003 - .006 | 1 | | | | | Yes |
| Cast Iron | Gray | 150 - 250 | 500 - 1200 | .002 - .006 | | 2 | 1 | | | No |
| | Nodular | | 400 - 800 | | | | | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 600 - 1200 | .002 - .006 | | 2 | | 1 | 3 | No |
| | High Carbon F-6180, Nitralloy 52100 | 250 - 400 | 400 - 600 | .002 .005 | | | | | | |
| | Alloyed Steel 4140, 4340, 6150 | 150 - 300 | 400 - 800 | | | | | | | |
| | Tool Steel A-6, D-1, D-2, P20 | Up to 300 | | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 400 - 800 | .002 - .005 | | 2 | | 1 | 3 | May not be required at high speeds |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 500 - 1000 | | | | | | | |
| | 13-8 PH | - | 200 - 400 | | | | | | | Yes |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy, Waspalloy | - | 75-120 | .002 - .004 | | 2 | 3 | 1 | | Yes |
| Titanium | 6AL-4V | - | 100 - 150 | .002 - .005 | | 2 | | 1 | | Yes |

| HiPos Trio - 10mm I.C. - Series 1KJ1G, KJ5G, KJ6G | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | Feed per Insert | IN10K | IN2505 | IN2510 | IN2530 | IN2540 | Coolant |
| Aluminum | 6061 T6, 7075 T6, 2024 | - | 1500 - 8000 | .004 - .010 | 1 | | | | | |
| Cast Iron | Gray | 150 - 250 | 300 - 1000 | .004 - .010 | | 2 | 1 | | | No |
| | Nodular | | 300 - 600 | | | | | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 400 - 1000 | .004 - .010 | | 2 | | 1 | 3 | No |
| | High Carbon F-6180, Nitralloy 52100 | 250 - 400 | 350 - 500 | .004 - .008 | | | | | | |
| | Alloyed Steel 4140, 4340, 6150 | 150 - 300 | 300 - 700 | .004 - .010 | | | | | | |
| | Tool Steel A-6, D-1, D-2, P20 | Up to 300 | | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 300 - 700 | .004 - .010 | | 2 | | 1 | 3 | May not be required at high speeds |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 400 - 900 | | | | | | | |
| | 13-8 PH | - | 200 - 400 | | | | | | | Yes |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy, Waspalloy | - | 75-120 | .003 - .006 | | 2 | 3 | 1 | | Yes |
| Titanium | 6AL-4V | - | 100 - 150 | .005 - .008 | | 2 | | 1 | | Yes |



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| HiPos Trio - 13mm I.C. - Series 1KJ1P, KJ5P, KJ6P | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | Feed per Insert | IN10K | IN2505 | IN2510 | IN2530 | IN2540 | Coolant |
| Aluminum | 6061 T6, 7075 T6, 2024 | - | 1500 - 8000 | .004 - .010 | 1 | | | | | |
| Cast Iron | Gray | 150 - 250 | 300 - 1000 | .004 - .010 | | 2 | 1 | | | No |
| | Nodular | | 300 - 600 | | | | | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 400 - 1000 | .004 - .010 | | 2 | | 1 | 3 | No |
| | High Carbon F-6180, Nitralloy 52100 | 250 - 400 | 350 - 500 | .004 - .008 | | | | | | |
| | Alloyed Steel 4140, 4340, 6150 | 150 - 300 | 300 - 700 | .004 - .010 | | | | | | |
| | Tool Steel A-6, D-1, D-2, P20 | Up to 300 | | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 300 - 700 | .004 - .010 | | 2 | | 1 | | May not be required at high speeds |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 400 - 900 | | | | | | | |
| | 13-8 PH | - | 200 - 400 | | | | | | | Yes |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy, Waspalloy | - | 75-120 | .003 - .006 | | 2 | 3 | 1 | | Yes |
| Titanium | 6AL-4V | - | 100 - 150 | .005 - .008 | | 2 | | 1 | | Yes |

| DiPos Hexa - Series 1DJ1F, DJ5F, 1DJ1P, DJ5P, DJ6P | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | Feed per Insert | | IN2505 | IN2510 | IN2530 | IN2540 | Coolant |
| Cast Iron | Gray | 150 - 250 | 300 - 1000 | .004 - .010 | | 2 | 1 | | | No |
| | Nodular | | 300 - 600 | | | | | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 400 - 1000 | .004 - .010 | | 2 | | 1 | 3 | No |
| | High Carbon F-6180, Nitralloy 52100 | 250 - 400 | 350 - 500 | .004 - .008 | | | | | | |
| | Alloyed Steel 4140, 4340, 6150 | 150 - 300 | 300 - 700 | .004 - .010 | | | | | | |
| | Tool Steel A-6, D-1, D-2, P20 | Up to 300 | | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 300 - 700 | .004 - .010 | | 2 | | 1 | | May not be required at high speeds |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 400 - 900 | | | | | | | |
| | 13-8 PH | - | 200 - 400 | | | | | | | Yes |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy, Waspalloy | - | 75-120 | .003 - .006 | | 2 | 3 | 1 | | Yes |
| Titanium | 6AL-4V | - | 100 - 150 | .005 - .008 | | 2 | | 1 | | Yes |



GOLD•RUSH
Member MC Group Ingersoll Cutting Tools

| HiPos Alu - Series TE90XE, TFM90XE | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | Feed per Insert | | | | | IN15K | Coolant |
| Aluminum | 6061 T6, 7075 T6, 2024 | - | 1000 - 10000 | .008 - .020 | | | | | 1 | Yes |

| FormMaster F - Series DG6H, 1DG1H | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | Feed per Insert | | IN2030 | IN2505 | IN2540 | IN6530 | Coolant |
| Steel | Mild 1018 - 1045 | 125 - 425 | 300 - 650 | .035 - .157 | | 1 | | | | No |
| | Low Alloy 4140, 8620, 4340 | 150 - 425 | | | | 1 | 1 | 3 | 4 | |
| | Med Alloy P20, S7, H13, O1, A2 | | 300 - 700 | | | | | | | |
| Stainless Steel | Free Machining 303, 416 | 150 - 425 | 200 - 550 | .030 - .100 | | 1 | 2 | 3 | 4 | No |
| | 300 Series 304, 310, 316 | | | | | | | | | |
| | 400 Series 410, 420, 15-5PH, 17-4 PH | | | | | | | | | |
| | PH Series 13-8 | | | | | | | | | |
| Hardened Steel | ALL | - | 200 - 400 | .030 - .075 | | 1 | 2 | | | No |

| DiPos TETRA - Series 1TJ1Q, TJ5Q, TJ6Q, 2TJ3Q | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | Feed per Insert | IN10K | IN2505 | IN2510 | IN2530 | IN2540 | Coolant |
| Aluminum | 6061 T6, 7075 T6, 2024 | - | 1500 - 8000 | .004 - .010 | 1 | | | | | Yes |
| Cast Iron | Gray | 150 - 250 | 300 - 1000 | .004 - .010 | | 2 | 1 | | | No |
| | Nodular | | 300 - 600 | | | | | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 400 - 1000 | .004 - .010 | | | | | | |
| | High Carbon F-6180, Nitralloy 52100 | 250 - 400 | 350 - 500 | .004 - .008 | | 2 | | 1 | 3 | No |
| | Alloyed Steel 4140, 4340, 6150 | 150 - 300 | 300 - 700 | .004 - .010 | | | | | | |
| | Tool Steel A-6, D-1, D-2, P20 | Up to 300 | | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 300 - 550 | .004 - .010 | | 2 | | 1 | 3 | May not be required at high speeds |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 350 - 600 | | | | | | | |
| | 13-8 PH | - | 200 - 400 | | | | | | | Yes |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy, Waspalloy | - | 75-120 | .003 - .006 | | 2 | | 1 | | Yes |
| Titanium | 6AL-4V | - | 100 - 150 | .005 - .008 | | 2 | | 1 | | Yes |

| DiPos TETRA - Series 1TJ1N, 2TJ3N, TJ5N, TJ6N, TN1N | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | Feed per Insert | IN10K | IN2505 | IN2510 | IN2530 | IN2540 | Coolant |
| Aluminum | 6061-T6, 7075-T6, 2024 | - | 1500 - 8000 | .004 - .018 | 1 | | | | | Yes |
| Cast Iron | Gray | 150 - 250 | 300 - 1000 | .004 - .010 | | 2 | 1 | | | No |
| | Nodular | | 300 - 600 | | | | | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 400 - 1000 | .004 - .010 | | 2 | | 1 | 3 | No |
| | High Carbon F-6180, Nitralloy 52100 | 250 - 400 | 350 - 500 | .004 - .008 | | | | | | |
| | Alloyed Steel 4140, 4340, 6150 | 150 - 300 | 300 - 700 | .004 - .010 | | | | | | |
| | Tool Steel A-6, D-1, D-2, P20 | Up to 300 | | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 300 - 550 | .004 - .010 | | 2 | | 1 | 3 | May not be required at high speeds |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 350 - 600 | | | | | | | |
| | 13-8 PH | - | 200 - 400 | | | | | | | Yes |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy, Waspalloy | - | 75-120 | .003 - .006 | | 2 | | 1 | | Yes |
| Titanium | 6AL-4V | - | 100 - 150 | .005 - .008 | | 2 | | 1 | | Yes |

| FormMaster R - Series 1DE1H, DE6H | | | | Feed per Insert | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material | | Brinnell Hardness | SFM | RNLU1205 MON-S | RNLU1205 MON-M | RNLU1205 MON-P | IN10K | IN2005 | IN2015 | IN2030 | IN2040 | Coolant |
| Aluminum | 6061 T6, 7075 T6 | - | 1600 - 3300 | - | - | .005-.050 | 1 | | | | | Yes |
| Cast Iron | Gray | 150 - 250 | 500 - 800 | .007 - .020 | .015 - .035 | | | 2 | 1 | | | No |
| | Nodular | | 450 - 800 | | | | | | | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 500 - 700 | .007 - .020 | .015 - .035 | | | 1 | 3 | 2 | | No |
| | High Carbon F-6180 | 250 - 400 | 450 - 500 | .007 - .020 | .015 - .040 | | | 1 | 3 | 2 | 3 | |
| | Alloyed Steel 4140 | 150 - 300 | | | | | | | | | | |
| | Tool Steel P20 - H13 | Up to 300 | | | | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | Up to 320 | 250 - 500 | .005 - .015 | .011 - .020 | | | 2 | 3 | 1 | | Yes |
| | 400 Series 15-5 PH, 17-4 PH | | | | | | | | | | | |
| | 13-8 PH | | | | | | | | | | | |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy | - | 50 - 250 | .005 - .015 | .003 - .012 | | | 2 | 3 | 1 | | Yes |
| Titanium | 6AL-4V | - | 50 - 250 | .004 - .015 | .003 - .012 | | | 2 | | 1 | | Yes |



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| FinishBall - Series 12A9, 12A5, 12A8<br>Material | | Brinnell Hardness | SFM | Feed per Insert | IN005 | IN006 | IN05S | Coolant |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 6061-T6, 7075-T6 | - | 1000 - 8000 | .003 - .025 | 2 | | 1 | Yes |
| Cast Iron | Gray | 150 - 250 | 500 - 1200 | .002 - .015 | 1 | | | No |
| | Nodular | | 400 - 800 | | | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 600 - 1200 | .002 - .008 | 1 | | | No |
| | High Carbon F-6180 | 250 - 400* | 400 - 600 | .002 - .015 | 2 | 1 | | |
| | Alloyed Steel 4140 | 150 - 300 | 400 - 800 | | 1 | 2 | | |
| | Tool Steel P20 - H13 | Up to 460* | | | 2 | 1 | | |
| Stainless Steel | 300 Series, 304, 316 | - | 400 - 600 | .003 - .010 | 1 | 2 | | No |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 350 - 600 | | | | | |
| | 13-8 PH | - | 250 - 400 | | | | | Yes |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy | - | 75-120 | .002 - .008 | 1 | 2 | | Yes |
| Titanium | 6AL-4V | - | 80 - 150 | .003 - .007 | 1 | 2 | | Yes |

*58 Rc & Above use IN2006

| Pro-Trio - Series 2TW7K<br>Material | | Brinnell Hardness | SFM | Feed per Insert | IN2505 | Coolant |
|---|---|---|---|---|---|---|
| Cast Iron | Gray | 150 - 250 | 500 - 1200 | .002 - .025 | 1 | No |
| | Nodular | | 400 - 800 | | | |
| Steel | Low Carbon 1018, 8620 | 150 - 250 | 600 - 1200 | .002 - .015 | 1 | No |
| | High Carbon F-6180 | 250 - 400* | 400 - 600 | .002 - .025 | 1 | |
| | Alloyed Steel 4140 | 150 - 300 | 400 - 800 | | | |
| | Tool Steel P20 - H13 | Up to 460* | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 400 - 600 | .003 - .010 | 1 | No |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 350 - 600 | | | |
| | 13-8 PH | - | 250 - 400 | | | Yes |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy | - | 75-120 | .002 - .008 | 1 | Yes |
| Titanium | 6AL-4V | - | 80 - 150 | .003 - .007 | 1 | Yes |

*58 Rc & Above use IN2006



NEW GOLD GOLD·RUSH

| ThinMax - Series 38J5V, 3VJ5V<br>Material | | Brinnell Hardness | SFM | Feed per Insert | IN2505 | IN2515 | IN2530 | IN2540 | Coolant |
|---|---|---|---|---|---|---|---|---|---|
| Cast Iron | Gray | 150 - 250 | 400 - 750 | .003 - .008 | 2 | 1 | | | No |
| | Nodular | | 300 - 650 | | | | | | |
| Steel | Low Carbon 1018, 8620 | 100 - 250 | 250 - 500 | .003 - .008 | 2 | | 1 | 3 | No |
| | High Carbon F-6180, Nitralloy 52100 | 250 - 400 | 250 - 350 | .005 - .010 | | | | | |
| | Alloyed Steel 4140, 4340, 6150 | 150 - 300 | 250 - 400 | | | | | | |
| | Tool Steel A-6, D-1, D-2, P20 | Up to 300 | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 250 - 400 | .005 - .010 | 2 | | 1 | | Yes |
| | 400 Series 15-5 PH, 17-4 PH | Up to 320 | 300 - 600 | | | | | | |
| | 13-8 PH | - | 200 - 250 | | | | | | |
| Nickel Alloys | Inconel 600, 706, 718, 903, Hastelloy, Waspalloy | - | 75-120 | .003 - .006 | 2 | | 1 | | Yes |
| Titanium | 6AL-4V | - | 100 - 150 | .004 - .008 | 2 | | 1 | | Yes |

| GoldMax 6 - Series 9J5G, 9J6G<br>Material | | Brinnell Hardness | SFM | Feed per Insert | IN2505 | IN2515 | IN2530 | Coolant |
|---|---|---|---|---|---|---|---|---|
| Cast Iron | Gray | 150 - 250 | 400 - 750 | .003 - .010 | | 1 | | No |
| | Nodular | | 300 - 650 | | | | | |
| Steel | Low Carbon 1018, 8620 | 100 - 250 | 250 - 500 | .003 - .010 | 2 | | 1 | No |
| | High Carbon F-6180 | 250 - 400 | 200 - 350 | .003 - .008 | | | 3 | |
| | Alloyed Steel 4140, 4340 | 150 - 300 | 250 - 400 | | | | | |
| | Tool Steel A-6, D-1, D-2 | Up to 300 | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 400 - 600 | .003 - .008 | 2 | | 1 | May not be required at high speeds |
| | 400 Series 15-5 PH | Up to 320 | 300 - 600 | | | | | |
| | 13-8 PH | - | 200 - 600 | | | | | Yes |
| Nickel Alloys | Inconel, Hastelloy, Waspalloy | - | 75-120 | .003 - .006 | 2 | | 1 | Yes |
| Titanium | 6AL-4V | - | 100 - 200 | .003 - .005 | 2 | | 1 | Yes |



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| GoldMax 8 - Series VJ6V<br>Material | | Brinnell Hardness | SFM | Feed per Insert | IN15K | IN2505 | IN2515 | IN6515 | IN2530 | IN2040 | Coolant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| Aluminum | 6061-T6, 7075-T6, 2024 | - | 1500 - 8000 | .004 - .018 | 1 | | | | | | Yes |
| Cast Iron | Gray | 150 - 250 | 400 - 750 | .004 - .015 | | 2 | 1 | 1* | | | No |
| | Nodular | | 300 - 650 | | | | | | | | |
| Steel | Low Carbon 1018, 8620 | 100 - 250 | 350 - 650 | .004 - .012 | | 2 | | | 1 | 3 | No |
| | High Carbon F-6180 | 250 - 400 | 300 - 600 | .004 - .010 | | 2 | | | 1 | 3 | |
| | Alloyed Steel 4140, 4340 | 150 - 300 | 250 - 500 | .004 - .010 | | | | | | | |
| | Tool Steel A-6, D-1, D-2 | Up to 300 | | | | | | | | | |
| Stainless Steel | 300 Series, 304, 316 | - | 250 - 450 | .004 - .010 | | 2 | | | 1 | 3 | May not be required at high speeds |
| | 400 Series 15-5 PH | Up to 320 | 300 - 600 | | | | | | | | |
| | 13-8 PH | - | 200 - 400 | | | | | | | | Yes |
| Nickel Alloys | Inconel, Hastelloy, Waspalloy | - | 75-120 | .003 - .006 | | 2 | | | 1 | | Yes |
| Titanium | 6AL-4V | - | 100 - 150 | .003 - .008 | | 2 | | | 1 | | Yes |

*IN6515 preferred for higher SFM


GOLD•RUSH
Member IMC Group
Ingersoll
Cutting Tools



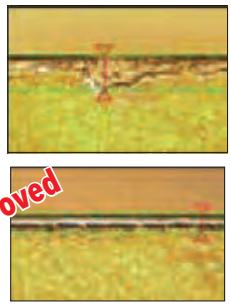

# GOLD·RUSH GRADES FOR STEEL

## The ingenious solution that takes cutting tool materials to another level

### Features

Excellent surface finish on the workpiece
Improved coating adhesion and insert chipping resistance
Stable and extended tool life in continuous and interrupted cutting operations
Reduced cutting friction and minimized built-up edge on exotic materials

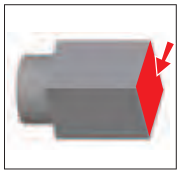
### Benefit of new cutting edge technology




**Material**: 0.2% Carbon Steel (HB145-160)

**Insert**: CNMG 432 TT8115

**Cutting Condition**
V=330 sfm
f=.004 ipr
d=.120"
Facing, Interrupted cut



## GOLD RUSH GRADES FOR STEEL APPLICATIONS

**TT8115 (CVD)** P05 — P25

- For high speed continuous turning on steels
- Excellent wear and heat-resistance

**TT8125 (CVD)** P15 — P35

- For a wide range of steel turning applications
- Very good combination of wear resistance and toughness
- For general use on steels

**TT5100 (CVD)** P20 — P40

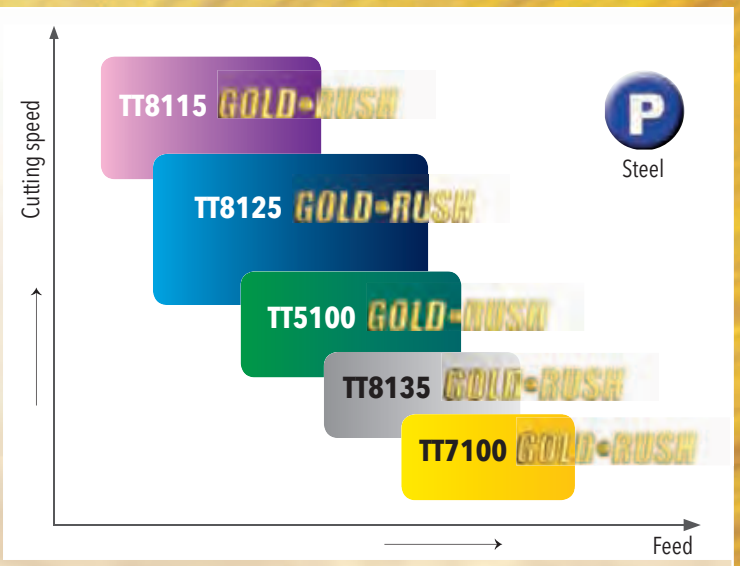
- For a wide range of turning operations on mild steel, low carbon steel and low carbon alloy steels
- Excellent chipping and sticking resistance

**TT8135 (CVD)** P25 — P40

- Tough carbide substrate with good fracture resistance
- For a wide range of medium to roughing applications at low cutting speed on steels
- For heavy turning

**TT7100 (CVD)** P30 — P45

- Very tough carbide substrate base with a CVD coating
- Excellent toughness and chipping resistance
- For heavy turning




## GOLD RUSH GRADES FOR STAINLESS STEELS AND HIGH-TEMP ALLOY APPLICATIONS

**TT5080 (PVD)** M05 — M15 / S05 — S15

- For turning a wide range of high-temp alloys
- Very hard submicron substrate with good fracture toughness

**TT9215 (CVD)** M10 — M25 / S10 — S25

- Excellent wear resistance
- For high cutting speed & continuous cutting on stainless steels

**TT9080 (PVD)** M10 — M30 / S15 — S25

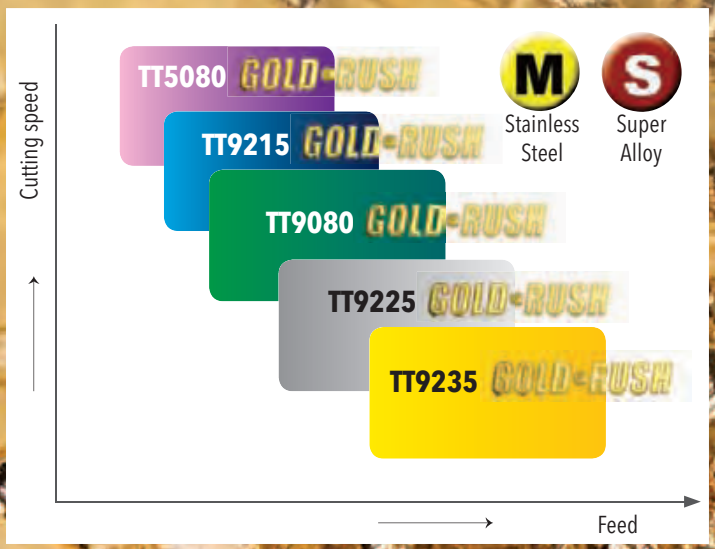
- For general machining of stainless steels and high-temp alloys
- Submicron substrate with good fracture toughness

**TT9225 (CVD)** M20 — M35 / S20 — S35

- Good combination of insert wear resistance & fracture toughness
- For general use on stainless steels
- Suitable for continuous and interrupted cutting on stainless steels

**TT9235 (CVD)** M30 — M45 / S30 — S45

- Excellent fracture resistance & toughness
- For low cutting speed & interrupted cutting on stainless steels

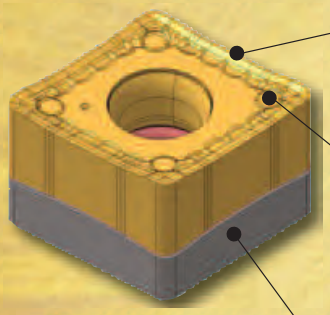




GOLD DUTY

# HB CHIPBREAKER
## FOR SEMI HEAVY TURNING

- Low cutting forces and an optimized chipbreaker suitable for semi heavy machining
- Hook lever clamping system gives unique contact surface with large convex double sided insert
- Unique insert and shim profile offer maximum stability in semi-heavy machining
- 3 dimensional geometry that is exchangeable with the ISO standard holder



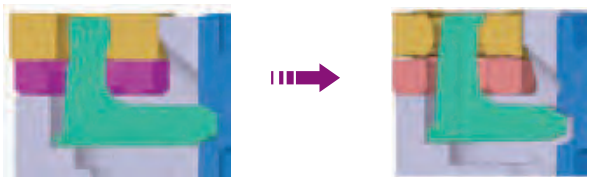
- **Double-sided semi-heavy turning insert**
  √ Low cutting force
  √ Optimized chipbreaker suitable for semi heavy machining
- **Stable contact surface with four rest pads**
  √ Unique seat contact with large convex surface



- **Exclusive seat**
  √ 3 dimensional geometry
  √ Exchangeable with ISO Standard P-type holders

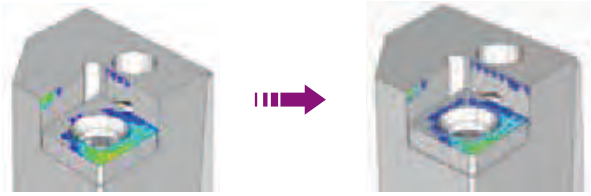
Contact Surface

## CLAMPING FEATURES OF INSERT



Conventional Lever Type (P-Type Holders)

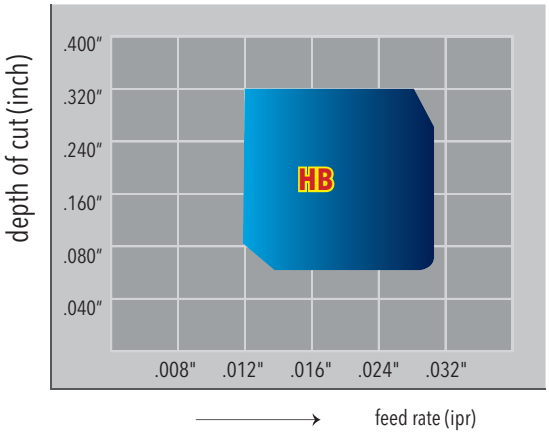
Hook Lever Type (H-Type Holders)



Poor clamping strength due to single directional force

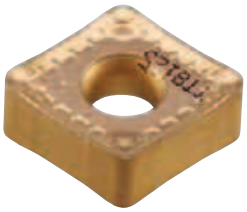
More stable clamping from multidirectional force

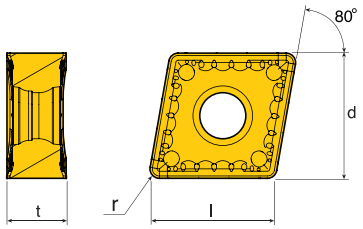
## CHIP CONTROL RANGE




- Insert: CNMX 553 HB
- Cutting speed: 500 sfm
- Material: 0.45% Carbon Steel

## GOLD•DUTY CNMX HB



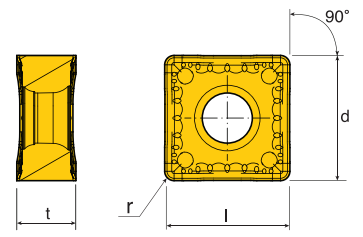



| ANSI Description | ISO Description | feed (ipr) | ap (inch) | Dimensions (inch) l | d | t | r | Grade | TT8115 | TT8125 | TT5080 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMX 553 HB | CNMX 160712 HB | .012-.031 | .060-.315 | .583 | .625 | .272 | .047 | | ● | ● | ● |
| CNMX 554 HB | CNMX 160716 HB | .012-.031 | .060-.315 | .567 | .625 | .272 | .063 | | ● | ● | |

● = P ○ = M ● = K ● = N ● = S ○ = H

## GOLD•DUTY SNMX HB



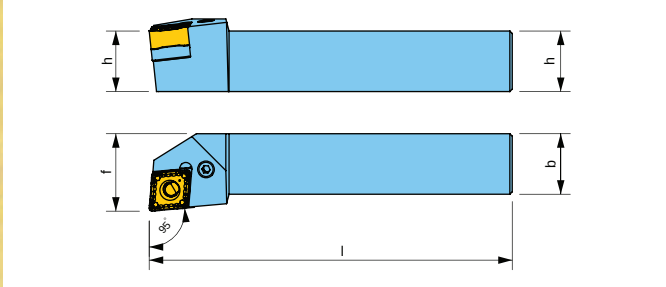



| ANSI Description | ISO Description | feed (ipr) | ap (inch) | Dimensions (inch) l | d | t | r | Grade | TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|---|---|
| SNMX 553 HB | SNMX 150712 HB | .012-.031 | .060-.315 | .583 | .625 | .272 | .047 | | ● | ● |
| SNMX 554 HB | SNMX 150716 HB | .012-.031 | .060-.315 | .567 | .625 | .272 | .063 | | ● | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H

## HCLNR/L

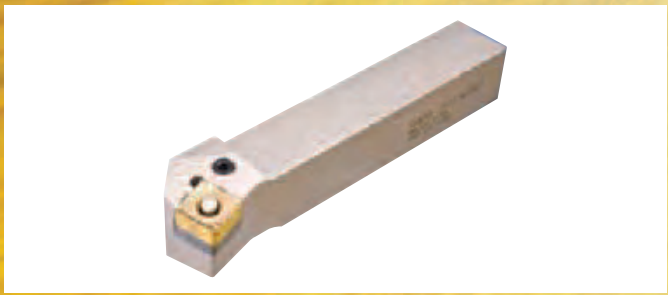


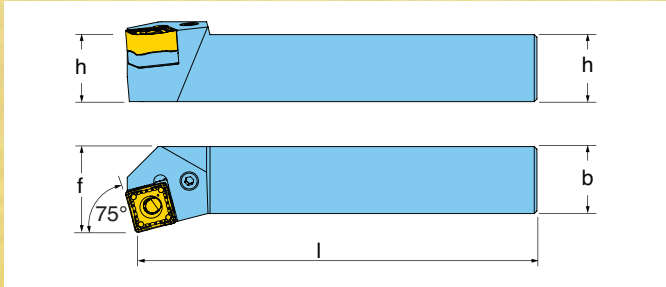



| Designation | Dimensions (inch) h | b | l | f |
|---|---|---|---|---|
| HCLNR/L 16-55D | 1.00 | 1.00 | 6.0 | 1.25 |
| HCLNR/L 20-55E | 1.25 | 1.25 | 7.0 | 1.50 |

| HARDWARE | Insert | Lever | Screw | Shim | Shim Pin | Shim Pin Punch | Wrench |
|---|---|---|---|---|---|---|---|
| HCLNR/L 16-55D | CNMX 55□ HB | LCL 16-NX | LCS 5-L25.5 | LSC 54-NX | LSP 5 | SPP 5-6 | L-W 3 |
| HCLNR/L 20-55E | CNMX 55□ HB | LCL 16-NX | LCS 5-L25.5 | LSC 54-NX | LSP 5 | SPP 5-6 | L-W 3 |

## HSKNR/L

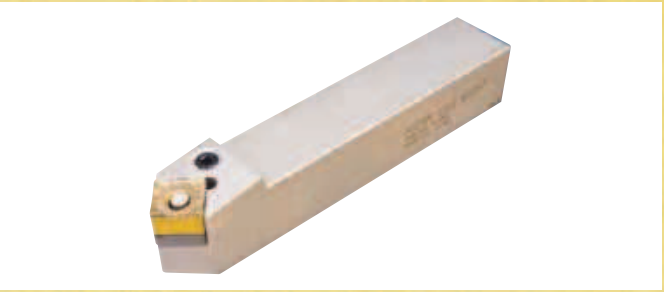


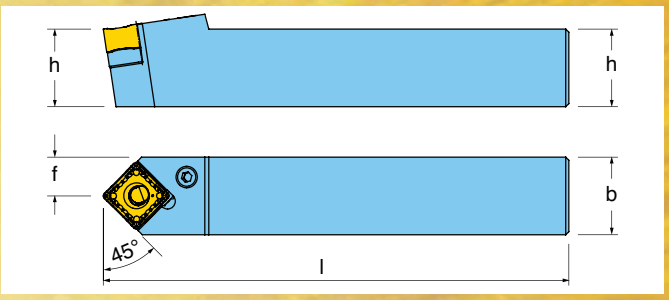



| Designation | Dimensions (inch) h | b | l | f |
|---|---|---|---|---|
| HSKNR/L 16-55D | 1.00 | 1.00 | 6.0 | 1.25 |
| HSKNR/L 20-55E | 1.25 | 1.25 | 7.0 | 1.50 |

| HARDWARE | Insert | Lever | Screw | Shim | Shim Pin | Shim Pin Punch | Wrench |
|---|---|---|---|---|---|---|---|
| HSKNR/L 16-55D | SNMX 55□ HB | LCL 16-NX | LCS 5-L25.5 | LSS 54-NX | LSP 5 | SPP 5-6 | L-W 3 |
| HSKNR/L 20-55E | SNMX 55□ HB | LCL 16-NX | LCS 5-L25.5 | LSS 54-NX | LSP 5 | SPP 5-6 | L-W 3 |

## GOLD DUTY HSDNN



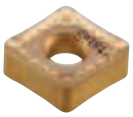



| Designation | Dimensions (inch) h | b | l | f |
|---|---|---|---|---|
| HSDNN 16-55D | 1.00 | 1.00 | 6.0 | .500 |
| HSDNN 20-55E | 1.25 | 1.25 | 7.0 | .625 |

| HARDWARE | Insert | Lever | Screw | Shim | Shim Pin | Shim Pin Punch | Wrench |
|---|---|---|---|---|---|---|---|
| HSDNN 16-55D | SNMX 55□ HB | LCL 16-NX | LCS 5-L25.5 | LSS 54-NX | LSP 5 | SPP 5-6 | L-W 3 |
| HSDNN 20-55E | SNMX 55□ HB | LCL 16-NX | LCS 5-L25.5 | LSS 54-NX | LSP 5 | SPP 5-6 | L-W 3 |

## REPLACEMENT SEATS FOR ISO LEVER LOCKING HOLDERS (P-TYPE HOLDERS)

Ingersoll offers several replacement seats that are exchangeable with ISO Lever Lock Holders. However, for best performance, Ingersoll recommends that the HB insert be used with its exclusive H-type holder to maximize tool life.

| Description | Shape | Seat for H-type Holder | Seat for ISO Lever Lock (P-type) Holder |
|---|---|---|---|
| CNMX 55_ |  | LSC 54-NX | LSC 53-NX<br>LSC 53-NXS |
| SNMX 55_ |  | LSS 54-NX | LSS 53-NX<br>LSS 53-NXS |

LSC 53-NX: Same IC as Insert IC
LSC 53-NXS: Slightly smaller size than Insert IC

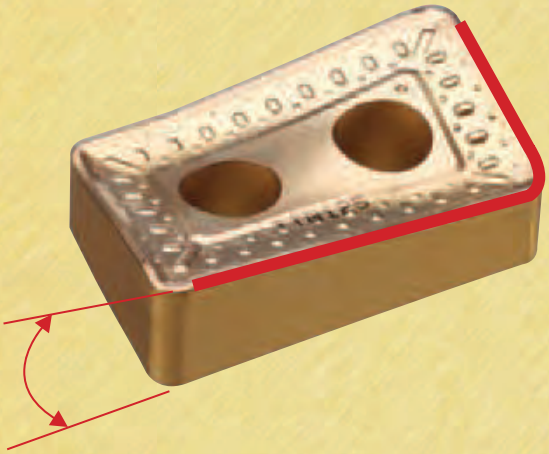


# ToFORCE

## 40 MM HELIX CUTTING EDGE

### FOR LARGE PART MACHINING IN THE WIND POWER, SHIPBUILDING AND POWER PLANT INDUSTRIES

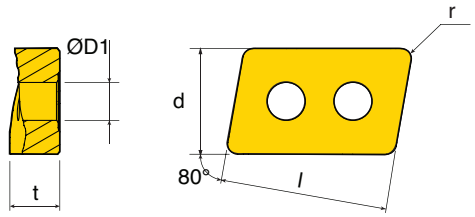
- High helix cutting edge
- Double lever clamping for maximum stability
- Unique geometry provides low cutting force
- 40mm cutting edge allows cutting depths up to 1.25"
- Suitable for low to medium-powered machines
- Facing and external turning possible
- Available in left hand and right hand
- 80 degree corner angle allows it to be used in the same manner as CNMG/CNMM Inserts
- 95 degree entrance angle allows facing and external machining






## LNMM HX



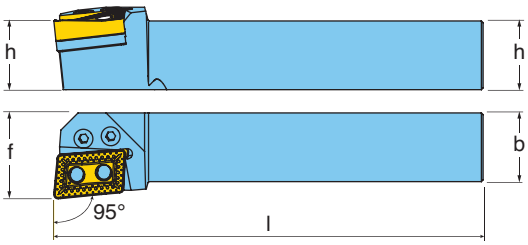



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Dimensions (inch) d | l | t | D1 | Grade TT8125 | TT7100 |
|---|---|---|---|---|---|---|---|---|---|
| LNMM 401224R/L-HX | LNMM 401224R/L-HX | .028-.059 | .236-1.260 | 1.00 | 1.574 | .094 | .360 | ● | ● |

● = P ● = M ● = K ● = N ● = S ● = H

## 2PLLNR/L






| Designation | Dimension (inches) h | b | l | f | Insert | Lever | Screw | Shim | Shim Pin | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | LNMM 401224R/L-HX | LCL 8 | LCS 8-L39 | LN 4025-T6.35 R/L | LSP 8 | L-W 5 |
| 2PLLNR/L L24-4012-10 | 1.50 | 1.50 | 10.0 | 2.00 | | | | | | |
| 2PLLNR/L L32-4012-12 | 2.00 | 2.00 | 12.0 | 2.35 | LNMM 401224R/L-HX | LCL 8 | LCS 8-L39 | LN 4025-T6.35 R/L | LSP 8 | L-W 5 |



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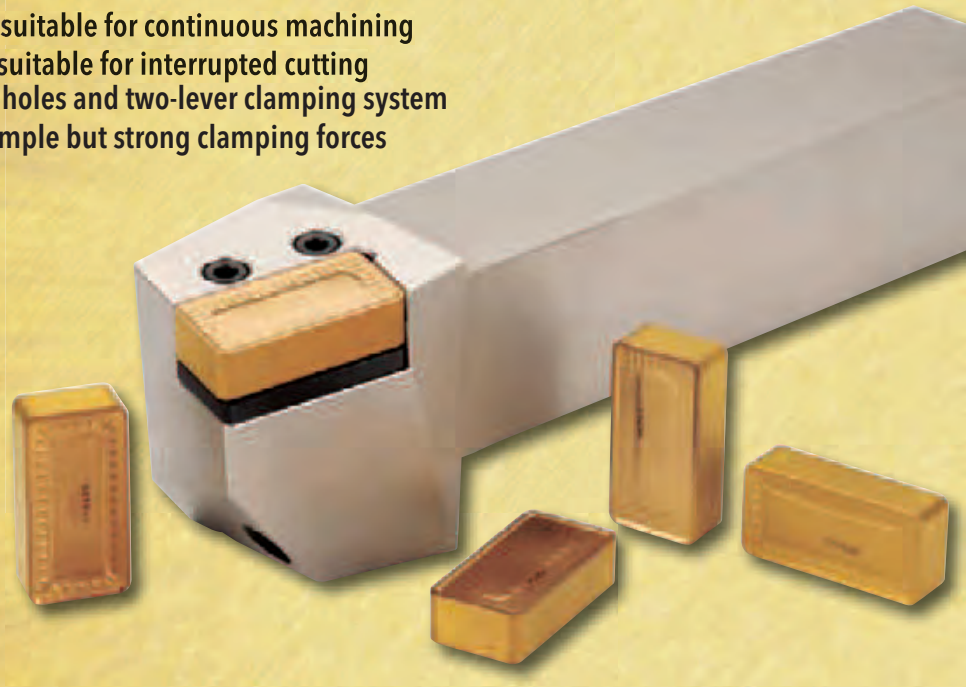



# TOFORCE

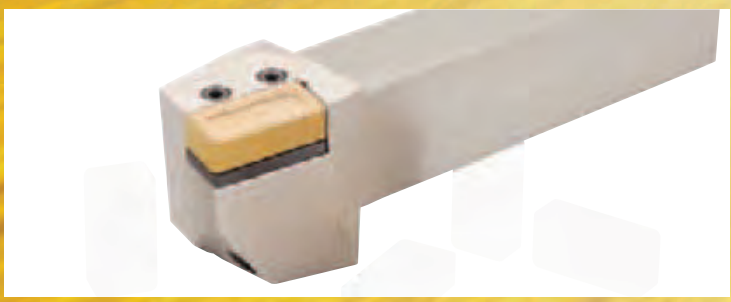
## 50 MM HELIX CUTTING EDGE

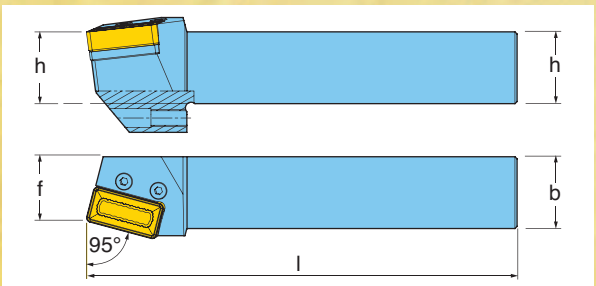
### FOR LARGE PART MACHINING IN THE WIND POWER, SHIPBUILDING AND POWER PLANT INDUSTRIES

- 50mm (1.97") cutting edge enables cutting up to 45mm (1.77") depth of cut
- Rectilinear shaped cutting edge ideal for heavy roughing on high-powered machines
- HD insert suitable for continuous machining
- HY insert suitable for interrupted cutting
- Two blind holes and two-lever clamping system provide simple but strong clamping forces



## 2PLBNR/L

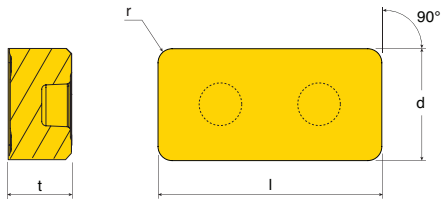





| DESIGNATION | Dimensions (inch) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | h | b | l | f | Insert | Lever | Screw | Shim | Shim Pin | Set Screw | Wrench |
| 2PLBNR/L 32-T5014 | 2.00 | 2.00 | 12.00 | 1.77 | LNMX | LCL 8 | LCS 8-L43 | LN 5025-T6.35 | LSP 8 | SS M12X1.75X25 | L-W 5 |

## LNMX HD



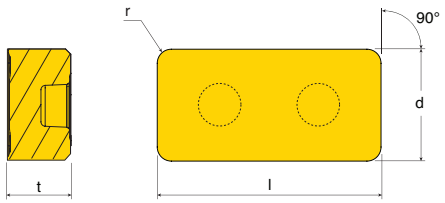



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Dimensions (inch) d | l | t | r | Grade | CT3000 | TT9125 |
|---|---|---|---|---|---|---|---|---|---|---|
| LNMX 501432HD | LNMX 501432 HD | .028-.063 | .236-1.57 | 1.00 | 2.00 | .559 | .126 | | ● | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H

## LNMX HY



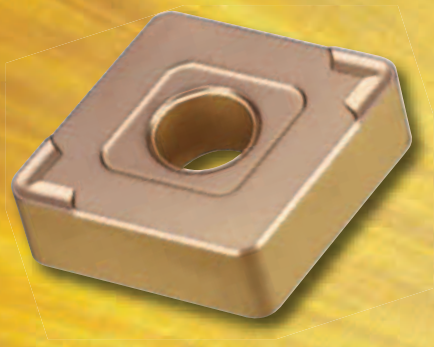



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Dimensions (inch) d | l | t | r | Grade | CT3000 | TT9125 |
|---|---|---|---|---|---|---|---|---|---|---|
| LNMX 501432HY | LNMX 501432 HY | .025-.059 | .197-1.57 | 1.00 | 2.00 | .559 | .126 | | ● | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H

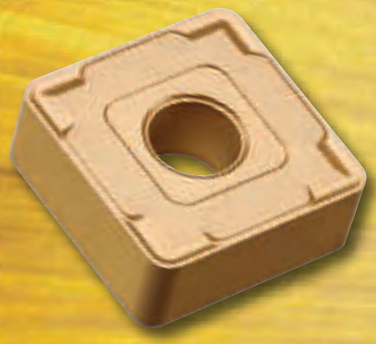


GOLD-RUSH
Member IMC Group Ingersoll Cutting Tools



# DOUBLE SIDED H SERIES CHIPBREAKERS

## NEW DOUBLE-SIDED CHIPBREAKER INSERTS FOR ROUGH AND FINISH MACHINING



Ingersoll introduces a revolutionary new concept for general turning applications. The HB chip breaker delivers low cutting forces and better surface finish in medium to rough machining compared to equivalent CNMG/SNMG inserts, while providing the user with double-sided insert economy not found in CNMM/SNMM, single-sided inserts.

With its optimized configuration, the HB chip breaker geometry provides steady chip evacuation and prolonged tool life with a stable seating configuration. Four rest pads on the top and bottom sides of the insert allow the cutting edge to be positioned higher than the seating surface, resulting in lower cutting forces and excellent chip flow, even at large depths of cut. Unlike most lever-lock holders, the exclusive lever found on Ingersoll's new H-Type holders provides multi-directional clamping force and outstanding stability. The result is a fast indexing clamping system which eliminates the need for a top clamp that often wears out due to interference with the chips.

Customers will experience improved surface quality and higher productivity through this exciting and exclusive alternative to traditional general turning operations... yet another example of Ingersoll's commitment to R&D.

**CNMD**

HT HD HY HZ + T-FORCE



BONUS!

**SNMD**

HT HD HY HZ + T-FORCE



BONUS!

# ToFORCE

## FEATURES

- Utilizes both sides of the insert to improve economy & cost reduction
- Available in a variety of sizes and chip breakers to meet customers specific heavy rough machining requirements
- Economy is further improved by using one tool holder for rough and finish machining

**TYPICAL CNMM/SNMM STYLE**

**SINGLE-SIDED**



upper-side — Rough machining

under-side — Not utilized

**ToFORCE**

**DOUBLE-SIDED!**

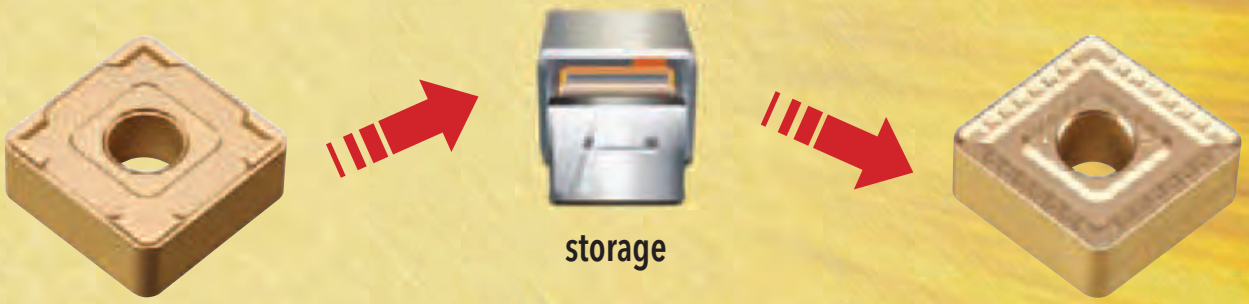


upper-side — Rough machining

under-side — Finish machining

The upper-side of the double sided insert can be used in the same manner as a single-sided insert.
The under-side can then be used when finish machining is required.

## GUIDELINE FOR INSERT USE



under-side

storage

upper-side

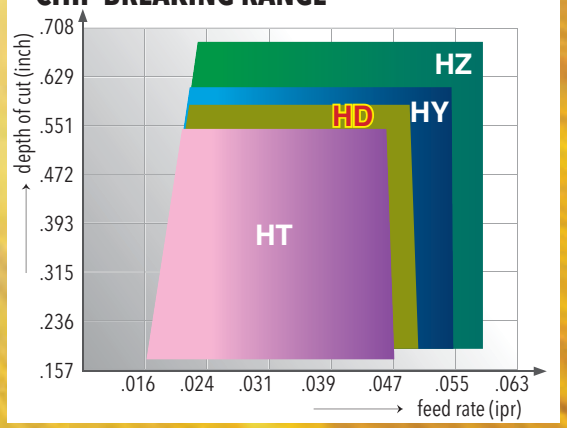
1. Commence operation on finish machining first using the under-side of insert
2. Operate rough machining with the upper-side after edges on under-side are used

### UNDER-SIDE FINISH MACHINING PARAMETERS

| Depth of Cut (inches) | Feed Rate (ipr) |
|---|---|
| .120" - .200" | .024" - (.016"-.032") |

- Insert : CNMD 866 HD
- Cutting speed: 100 m/min
- Material: 0.45% Carbon Steel

### CHIP BREAKING RANGE

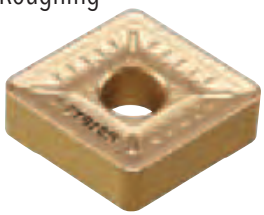




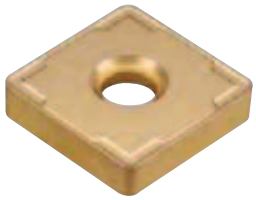

GOLD-RUSH
Member MC Group
Ingersoll Cutting Tools

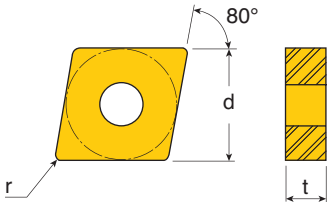
## CNMD HD

Roughing



Finishing






| ANSI Number | ISO Number | feed* (ipr) | DOC* (inch) | Dimensions (inch) d | t | r | Grade | TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|---|
| CNMD 866 HD | CNMD 250924 HD | .022-.059 | .160-.590 | 1.00 | .375 | .094 | | ● | ● |

* See introduction page for finish side parameters

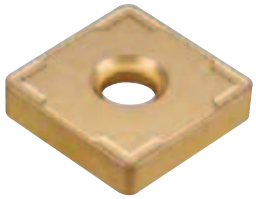
● = P ○ = M ● = K ● = N ● = S ○ = H

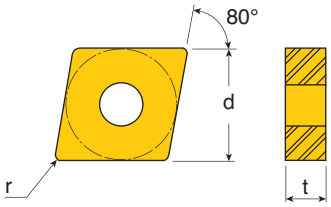
## CNMD HT

Roughing



Finishing






| ANSI Number | ISO Number | feed* (ipr) | DOC* (inch) | Dimensions (inch) d | t | r | Grade | TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|---|
| CNMD 656 HT | CNMD 190624 HT | .014-.035 | .160-.355 | .750 | .250 | .094 | | ● | ● |
| CNMD 866 HT | CNMD 250924 HT | .022-.051 | .200-.470 | 1.00 | .375 | .094 | | ● | ● |

* See introduction page for finish side parameters

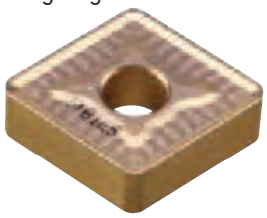
● = P ○ = M ● = K ● = N ● = S ○ = H



NEW GOLD GOLD·RUSH

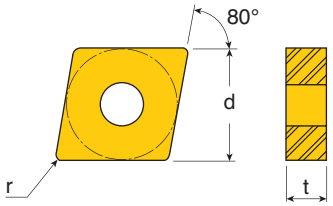
## CNMD HY

Roughing



Finishing





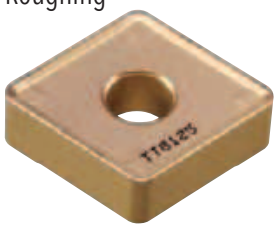

| ANSI Number | ISO Number | feed* (ipr) | DOC* (inch) | Dimensions (inch) d | t | r | Grade | TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|---|
| CNMD 656 HY | CNMD 190624 HY | .020-.043 | .160-.470 | .750 | .250 | .094 | | ● | ● |
| CNMD 866 HY | CNMD 250924 HY | .022-.059 | .160-.590 | 1.00 | .375 | .094 | | ● | ● |

* See introduction page for finish side parameters

● = P ○ = M ● = K ● = N ● = S ○ = H

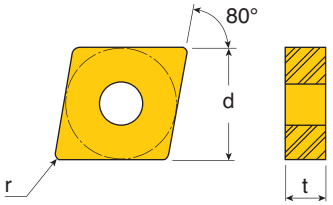
## CNMD HZ

Roughing



Finishing






| ANSI Number | ISO Number | feed* (ipr) | DOC* (inch) | Dimensions (inch) d | t | r | Grade | TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|---|
| CNMD 866 HZ | CNMD 250924 HZ | .022-.059 | .160-.590 | 1.00 | .375 | .094 | | ● | ● |

* See introduction page for finish side parameters

● = P ○ = M ● = K ● = N ● = S ○ = H



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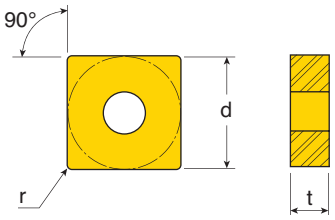
## SNMD HD

Roughing



Finishing





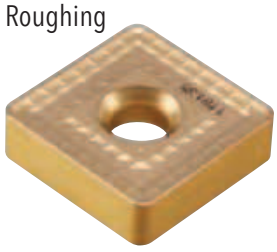

| ANSI Number | ISO Number | feed* (ipr) | DOC* (inch) | Dimensions (inch) d | t | r | Grade | TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|---|
| SNMD 866 HD | SNMD 250924 HD | .022-.059 | .160-.590 | 1.00 | .375 | .094 | | ● | ● |

* See introduction page for finish side parameters

● = P ● = M ● = K ● = N ● = S ○ = H

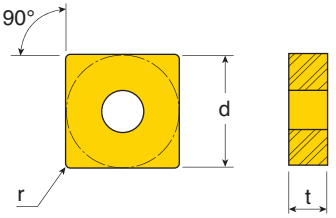
## SNMD HT

Roughing



Finishing






| ANSI Number | ISO Number | feed* (ipr) | DOC* (inch) | Dimensions (inch) d | t | r | Grade | TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|---|
| SNMD 656 HT | SNMD 190624 HT | .022-.047 | .160-.355 | .750 | .250 | .094 | | ● | ● |
| SNMD 866 HT | SNMD 250924 HT | .022-.051 | .200-.470 | 1.00 | .375 | .094 | | | |

* See introduction page for finish side parameters

● = P ● = M ● = K ● = N ● = S ○ = H



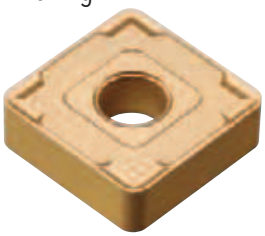
NEW GOLD GOLD·RUSH

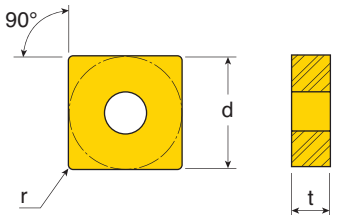
## SNMD HY

Roughing



Finishing






| ANSI Number | ISO Number | feed* (ipr) | DOC* (inch) | Dimensions (inch) d | t | r | Grade TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|
| SNMD 656 HY | SNMD 190624 HY | .020-.043 | .160-.470 | .750 | .250 | .094 | ● | ● |
| SNMD 866 HY | SNMD 250924 HY | .022-.059 | .160-.590 | 1.00 | .375 | .094 | ● | ● |

* See introduction page for finish side parameters

● = P ● = M ● = K ● = N ● = S ● = H

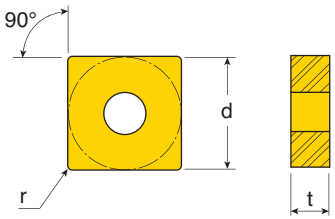
## SNMD HZ

Roughing



Finishing






| ANSI Number | ISO Number | feed* (ipr) | DOC* (inch) | Dimensions (inch) d | t | r | Grade TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|
| SNMD 866 HZ | SNMD 250924 HZ | .022-.059 | .160-.590 | 1.00 | .375 | .094 | ● | ● |

* See introduction page for finish side parameters

● = P ● = M ● = K ● = N ● = S ● = H



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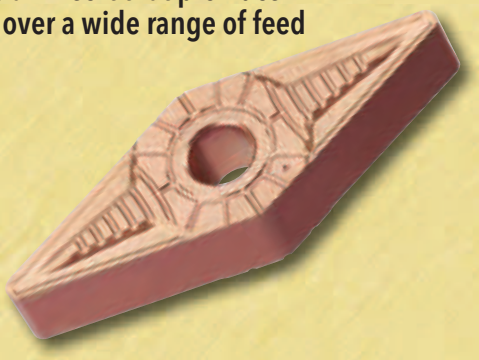


# TOTURN™

## EM CHIPBREAKER
### FOR STAINLESS STEEL MACHINING

Ingersoll previously introduced two new chipbreakers for machining stainless steels and exotic materials: The EA chipbreaker for finish to semi-finish operations in low depths of cut, and the ET chipbreaker for rough machining of these materials. The new EM chipbreaker is designed for medium applications where customers desire a single insert that encompasses many of the same features offered by the EA and ET.

The EM chipbreaker features a sharp land that reduces machining load during medium machining applications, while simultaneously reducing build up material on the cutting edge. The design also includes a broad boss face that dissipates heat on the upper side of the chipbreaker, improving the surface contact ratio while maximizing tool life. The result is an insert that provides stable performance in difficult to machine materials over a wide range of feed rates and cutting depths.



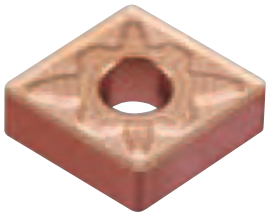
**EM FOR MEDIUM**




**EA FOR FINISHING**

**ET FOR ROUGHING**

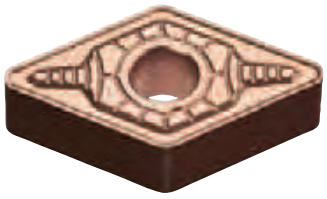
## CNMG EM



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT9215 | TT9225 | TT9235 | TT5080 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| CNMG 432 EM | CNMG 120408 EM | .005-.020 | .020-.200 | | ● | ● | ● | ◑ | ◑ |
| CNMG 433 EM | CNMG 120412 EM | .006-.022 | .020-.200 | | ● | ● | ● | ◑ | ◑ |
| CNMG 434 EM | CNMG 120416 EM | .007-.024 | .020-.200 | | ● | ● | ● | ◑ | ◑ |
| CNMG 542 EM | CNMG 160608 EM | .005-.020 | .020-.250 | | ● | ● | ● | ◑ | |
| CNMG 543 EM | CNMG 160612 EM | .006-.022 | .020-.250 | | ● | ● | ● | ◑ | |
| CNMG 544 EM | CNMG 160616 EM | .007-.024 | .020-.250 | | ● | ● | ● | ◑ | |
| CNMG 642 EM | CNMG 190608 EM | .005-.020 | .020-.315 | | ● | ● | ● | ◑ | |
| CNMG 643 EM | CNMG 190612 EM | .006-.022 | .020-.315 | | ● | ● | ● | ◑ | |
| CNMG 644 EM | CNMG 190616 EM | .007-.024 | .020-.315 | | ● | ● | ● | ◑ | |

● = P ● = M ● = K ● = N ● = S ● = H

## DNMG EM



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT9215 | TT9225 | TT9235 | TT5080 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| DNMG 332 EM | DNMG 110408 EM* | .005-.020 | .020-.160 | | ● | ● | ● | ◑ | |
| DNMG 432 EM | DNMG 150408 EM | .005-.020 | .020-.200 | | ● | ● | ● | ◑ | ◑ |
| DNMG 442 EM | DNMG 150608 EM | .005-.020 | .020-.200 | | ● | ● | ● | ◑ | ◑ |
| DNMG 433 EM | DNMG 150412 EM | .006-.022 | .020-.200 | | ● | ● | ● | ◑ | |
| DNMG 443 EM | DNMG 150612 EM | .006-.022 | .020-.200 | | ● | ● | ● | ◑ | |

*Insert is screw held

● = P ● = M ● = K ● = N ● = S ● = H



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## SNMG EM



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT9215 | TT9225 | TT9235 | TT5080 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| SNMG 432 EM | SNMG 120408 EM | .005-.020 | .031-.200 | | ● | ● | ● | ◑ | ◑ |
| SNMG 433 EM | SNMG 120412 EM | .006-.022 | .031-.200 | | ● | ● | ● | ◑ | ◑ |
| SNMG 543 EM | SNMG 150612 EM | .006-.022 | .031-.250 | | ● | ● | ● | ◑ | |
| SNMG 544 EM | SNMG 150616 EM | .007-.024 | .031-.250 | | ● | ● | ● | ◑ | |
| SNMG 643 EM | SNMG 190612 EM | .006-.022 | .031-.315 | | ● | ● | ● | ◑ | |
| SNMG 644 EM | SNMG 190616 EM | .007-.024 | .031-.315 | | ● | ● | ● | ◑ | |

● = P ● = M ● = K ● = N ● = S ○ = H

## TNMG EM



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT9215 | TT9225 | TT9235 | TT5080 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| TNMG 332 EM | TNMG 160408 EM | .005-.020 | .031-.180 | | ● | ● | ● | ◑ | ◑ |
| TNMG 333 EM | TNMG 160412 EM | .006-.022 | .031-.180 | | ● | ● | ● | ◑ | ◑ |
| TNMG 432 EM | TNMG 220408 EM | .005-.020 | .031-.240 | | ● | ● | ● | ◑ | |
| TNMG 433 EM | TNMG 220412 EM | .006-.022 | .031-.240 | | ● | ● | ● | ◑ | ◑ |

● = P ● = M ● = K ● = N ● = S ○ = H



NEW GOLD GOLD·RUSH

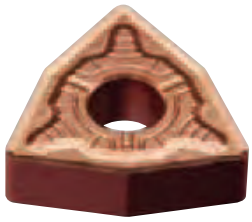
## VNMG EM



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT9215 | TT9225 | TT9235 | TT5080 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| VNMG 332 EM | VNMG 160408 EM | .050-.020 | .031-.140 | | ● | ● | ● | | ◐ |

● = P ● = M ● = K ● = N ● = S ○ = H

## WNMG EM



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT9215 | TT9225 | TT9235 | TT5080 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| WNMG 332 EM | WNMG 060408 EM | .005-.020 | .031-.120 | | ● | ● | ● | ◐ | ◐ |
| WNMG 333 EM | WNMG 060412 EM | .006-.022 | .031-.120 | | ● | ● | ● | ◐ | ◐ |
| WNMG 431 EM | WNMG 080404 EM | .004-.018 | .031-.160 | | ● | ● | ● | ◐ | |
| WNMG 432 EM | WNMG 080408 EM | .005-.020 | .031-.160 | | ● | ● | ● | ◐ | ◐ |
| WNMG 433 EM | WNMG 080412 EM | .005-.022 | .031-.160 | | ● | ● | ● | ◐ | ◐ |

● = P ● = M ● = K ● = N ● = S ○ = H



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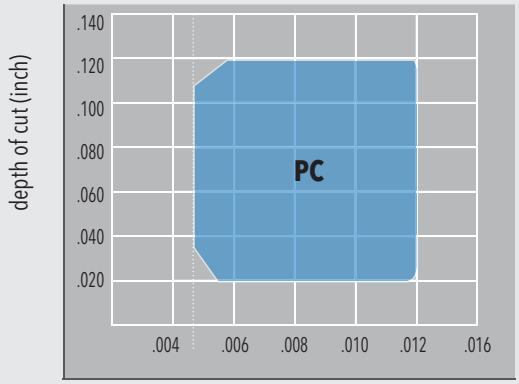
# TOTURN™

## PC CHIPBREAKER FOR POSITIVE INSERTS

### NEW SINGLE SIDED 'PC' CHIPBREAKER FOR SEMI-FINISH AND MEDIUM MACHINING

- Low cutting forces due to its positive rake angle
- Wide chip breaking range
- Suitable for a wide variety of materials
- For semi-finish to medium application
- 5°, 7°, and 11° positive inserts available

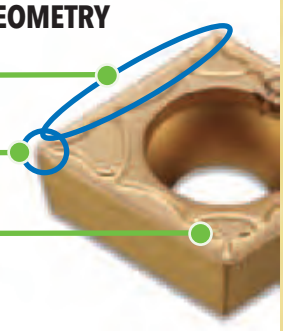
### CHIP CONTROL RANGE




- Insert: CCMT 32.52 (09T308)
- Cutting speed: 650 sfm
- Material: 0.45% Carbon steel

### POSITIVE PC INSERT GEOMETRY

- Slightly Waved cutting Edge
- Dimple Design Low cutting Force
- Wide Groove Smooth Cutting



## VBMT PC - 5° POSITIVE INSERTS WITH PC CHIPBREAKER



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | PV3010 | CT3000 | TT8115 | TT9225 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| VBMT331PC | VBMT160404PC | 0.003 - 0.009 | 0.020 - 0.110 | | | | | | |
| VBMT332PC | VBMT160408PC | 0.004 - 0.011 | 0.020 - 0.110 | | | | | | |
| VBMT333PC | VBMT160412PC | 0.004 - 0.011 | 0.020 - 0.110 | | | | | | |

● = P ● = M ● = K ● = N ● = S ● = H



NEW GOLD GOLD-RUSH

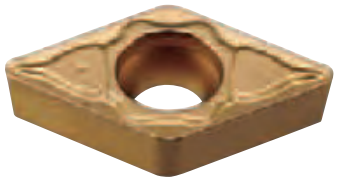
## CCMT PC - 7° POSITIVE, 80° RHOMBIC INSERTS WITH PC CHIPBREAKER



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | CT3000 | TT8115 | TT8125 | TT9225 | TT5100 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|---|
| CCMT21.51PC | CCMT060204PC | 0.002 - 0.007 | 0.007 - 0.079 | | ● | ● | ● | ○ | | ● |
| CCMT21.52PC | CCMT060208PC | 0.003 - 0.010 | 0.010 - 0.079 | | ● | ● | ● | ○ | | ● |
| CCMT32.51PC | CCMT09T304PC | 0.003 - 0.010 | 0.010 - 0.118 | | ● | ● | ● | ○ | ● | ● |
| CCMT32.52PC | CCMT09T308PC | 0.004 - 0.011 | 0.011 - 0.118 | | ● | ● | ● | ○ | ● | ● |
| CCMT431PC | CCMT120404PC | 0.003 - 0.010 | 0.010 - 0.157 | | ● | ● | ● | ○ | | ● |
| CCMT432PC | CCMT120408PC | 0.004 - 0.012 | 0.012 - 0.157 | | ● | ● | ● | ○ | | ● |
| CCMT433PC | CCMT120412PC | 0.005 - 0.014 | 0.014 - 0.157 | | ● | ● | ● | ○ | | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H

## DCMT PC - 7° POSITIVE, 55° RHOMBIC INSERTS WITH PC CHIPBREAKER



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | CT3000 | TT8115 | TT8125 | TT9225 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| DCMT21.51PC | DCMT070204PC | 0.002 - 0.007 | 0.012 - 0.079 | | ● | ● | ● | ○ | ● |
| DCMT21.52PC | DCMT070208PC | 0.003 - 0.010 | 0.016 - 0.079 | | ● | ● | ● | ○ | ● |
| DCMT32.51PC | DCMT11T304PC | 0.003 - 0.010 | 0.014 - 0.118 | | ● | ● | ● | ○ | ● |
| DCMT32.52PC | DCMT11T308PC | 0.004 - 0.011 | 0.020 - 0.118 | | ● | ● | ● | ○ | ● |
| DCMT32.53PC | DCMT11T312PC | 0.005 - 0.013 | 0.020 - 0.118 | | ● | ● | ● | ○ | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H



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## RCMT PC - 7° POSITIVE ROUND INSERTS WITH PC CHIPBREAKER



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT8115 | TT8125 | TT9225 | TT9235 | TT5030 |
|---|---|---|---|---|---|---|---|---|---|
| RCMT120400PC | RCMT120400PC | 0.008 - 0.024 | 0.051 - 0.177 | | ● | ● | ● | ● | ◐ |

● = P ● = M ● = K ● = N ● = S ○ = H

## SCMT PC - 7° POSITIVE SQUARE INSERTS WITH PC CHIPBREAKER



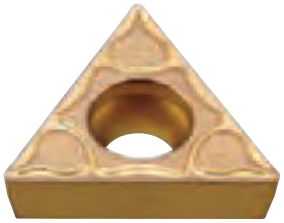
| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | CT3000 | TT8115 | TT8125 | TT9225 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| SCMT32.51PC | SCMT09T304PC | 0.003 - 0.010 | 0.014 - 0.118 | | ◔ | ● | ● | ● | ◔ |
| SCMT32.52PC | SCMT09T308PC | 0.004 - 0.011 | 0.020 - 0.118 | | ◔ | ● | ● | ● | ◔ |
| SCMT431PC | SCMT120404PC | 0.003 - 0.010 | 0.016 - 0.157 | | ◔ | ● | ● | ● | ◔ |
| SCMT432PC | SCMT120408PC | 0.004 - 0.012 | 0.028 - 0.157 | | ◔ | ● | ● | ● | ◔ |
| SCMT433PC | SCMT120412PC | 0.005 - 0.014 | 0.039 - 0.157 | | ◔ | ● | ● | ● | ◔ |

● = P ● = M ● = K ● = N ● = S ○ = H



NEW GOLD GOLD-RUSH

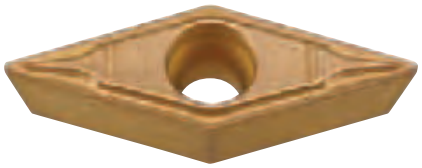
## TCMT PC - 7° POSITIVE TRIANGULAR INSERTS WITH PC CHIPBREAKER



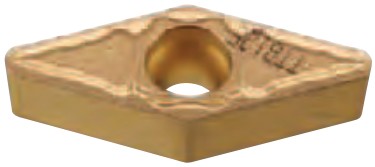
| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | CT3000 | TT8115 | TT8125 | TT9225 | TT9080 |
|---|---|---|---|---|---|---|---|---|---|
| TCMT731PC | TCMT090204PC | 0.002 - 0.007 | 0.012 - 0.079 | | ● | ● | ● | ● | ● |
| TCMT732PC | TCMT090208PC | 0.003 - 0.010 | 0.016 - 0.079 | | ● | ● | ● | ● | ● |
| TCMT21.51PC | TCMT110204PC | 0.002 - 0.008 | 0.012 - 0.098 | | ● | ● | ● | ● | ● |
| TCMT21.52PC | TCMT110208PC | 0.004 - 0.010 | 0.017 - 0.098 | | ● | ● | ● | ● | ● |
| TCMT32.51PC | TCMT16T304PC | 0.003 - 0.010 | 0.014 - 0.118 | | ● | ● | ● | ● | ● |
| TCMT32.52PC | TCMT16T308PC | 0.004 - 0.011 | 0.020 - 0.118 | | ● | ● | ● | ● | ● |
| TCMT32.53PC | TCMT16T312PC | 0.005 - 0.014 | 0.024 - 0.118 | | ● | ● | ● | ● | ● |

● = P ● = M ● = K ● = N ● = S ● = H

## VCMT PC - 7° POSITIVE. 35° RHOMBIC INSERTS WITH PC CHIPBREAKER



VCMT 22x



VCMT 33x

| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | CT3000 | TT8115 | TT8125 | TT9225 | TT5100 |
|---|---|---|---|---|---|---|---|---|---|
| VCMT221PC | VCMT110304PC | 0.002 - 0.008 | 0.004 - 0.067 | | ● | ● | ● | ● | ● |
| VCMT332PC | VCMT160408PC | 0.002 - 0.008 | 0.012 - 0.079 | | ● | ● | ● | ● | |

● = P ● = M ● = K ● = N ● = S ● = H

## CPMT PC - 11° POSITIVE, 80° RHOMBIC INSERTS WITH PC CHIPBREAKER



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | CT3000 | TT8125 | TT9225 | TT5100 | TT5030 |
|---|---|---|---|---|---|---|---|---|---|
| CPMT21.51PC | CPMT060204PC | 0.002 - 0.007 | 0.012 - 0.079 | | ● | | ● | ● | ● |
| CPMT21.52PC | CPMT060208PC | 0.003 - 0.010 | 0.016 - 0.079 | | ● | | ● | ● | ● |
| CPMT32.51PC | CPMT09T304PC | 0.003 - 0.010 | 0.018 - 0.118 | | ● | ● | ● | ● | ● |
| CPMT32.52PC | CPMT09T308PC | 0.004 - 0.012 | 0.024 - 0.118 | | ● | ● | ● | ● | ● |

● = P ● = M ● = K ● = N ● = S ○ = H

## TPMT PC - 11° POSITIVE TRIANGULAR INSERTS WITH PC CHIPBREAKER



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | CT3000 | TT8115 | TT8125 | TT9225 | TT9235 |
|---|---|---|---|---|---|---|---|---|---|
| TPMT731PC | TPMT090204PC | 0.002 - 0.007 | 0.012 - 0.079 | | ● | | ● | ● | ● |
| TPMT21.51PC | TPMT110204PC | 0.002 - 0.008 | 0.016 - 0.098 | | ● | | ● | ● | ● |
| TPMT21.52PC | TPMT110208PC | 0.004 - 0.010 | 0.020 - 0.098 | | ● | | ● | ● | ● |
| TPMT221PC | TPMT110304PC | 0.002 - 0.008 | 0.016 - 0.098 | | ● | | ● | ● | ● |
| TPMT222PC | TPMT110308PC | 0.004 - 0.010 | 0.020 - 0.098 | | ● | ● | ● | ● | ● |
| TPMT32.51PC | TPMT16T304PC | 0.003 - 0.010 | 0.018 - 0.118 | | ● | ● | ● | ● | ● |
| TPMT32.52PC | TPMT16T308PC | 0.004 - 0.012 | 0.020 - 0.118 | | ● | ● | ● | ● | ● |

● = P ● = M ● = K ● = N ● = S ○ = H



NEW GOLD GOLD·RUSH

# TOTURN™

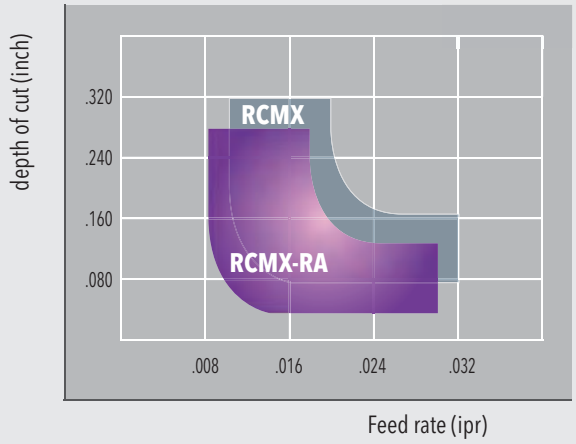
# RA CHIPBREAKER FOR POSITIVE INSERTS

## FOR ROUGH MACHINING OF MEDIUM AND LARGE SIZED COMPONENTS



- Good chip control range at low feed rates and D.O.C
- Suitable for heavy & interrupted machining
- Wide chip control range

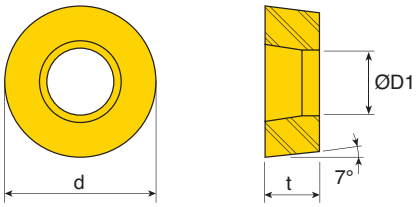
### Chip Control Range




- Insert: RCMX 160600 RA
- Cutting speed: 325 sfm
- Material: 0.45% Carbon steel

## RCMX RA






| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Dimensions (inch) | | | Grade | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | d | t | D1 | | TT8115 | TT8125 | TT8135 |
| RCMX100300RA | RCMX100300RA | 0.008 - 0.020 | 0.039 - 0.157 | 0.394 | 0.125 | 0.142 | | ● | ● | ● |
| RCMX120400RA | RCMX120400RA | 0.010 - 0.024 | 0.079 - 0.197 | 0.472 | 0.187 | 0.165 | | ● | ● | ● |
| RCMX160600RA | RCMX160600RA | 0.014 - 0.030 | 0.098 - 0.276 | 0.630 | 0.250 | 0.205 | | ● | ● | ● |
| RCMX200600RA | RCMX200600RA | 0.016 - 0.035 | 0.118 - 0.354 | 0.787 | 0.250 | 0.256 | | ● | ● | ● |
| RCMX250700RA | RCMX250700RA | 0.020 - 0.047 | 0.138 - 0.472 | 0.984 | 0.312 | 0.283 | | ● | ● | ● |
| RCMX320900RA | RCMX320900RA | 0.024 - 0.059 | 0.157 - 0.591 | 1.260 | 0.375 | 0.374 | | ● | ● | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H



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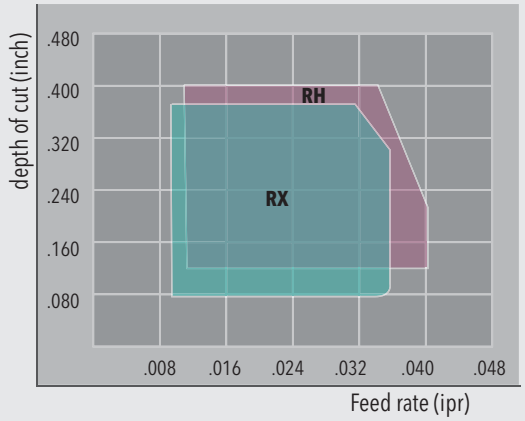
# TOTURN™

## RX CHIPBREAKER FOR ROUGH MACHINING OF LARGE PARTS

- Negative and positive cutting edge: improves stability and machinability
- Helical cutting edge: increases tool life by minimizing cutting resistance
- Applicable to a broad range of workpieces

- Insert : CNMM 644 RX
- Cutting speed(Vc): 325 sfm
- Material: 0.45% Carbon steel

### CHIP CONTROL RANGE




## CNMM RX



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT8115 | TT8125 | TT8135 |
|---|---|---|---|---|---|---|---|
| CNMM432RX | CNMM120408RX | 0.008 - 0.022 | 0.028 - 0.276 | | ● | ● | ● |
| CNMM433RX | CNMM120412RX | 0.010 - 0.028 | 0.039 - 0.276 | | ● | ● | ● |
| CNMM543RX | CNMM160612RX | 0.010 - 0.028 | 0.039 - 0.354 | | ● | ● | ● |
| CNMM544RX | CNMM160616RX | 0.012 - 0.035 | 0.059 - 0.354 | | ● | ● | ● |
| CNMM546RX | CNMM160624RX | 0.014 - 0.047 | 0.079 - 0.354 | | ● | ● | ● |
| CNMM642RX | CNMM190608RX | 0.008 - 0.022 | 0.028 - 0.394 | | ● | ● | ● |
| CNMM643RX | CNMM190612RX | 0.010 - 0.028 | 0.039 - 0.394 | | ● | ● | ● |
| CNMM644RX | CNMM190616RX | 0.012 - 0.035 | 0.059 - 0.394 | | ● | ● | ● |
| CNMM646RX | CNMM190624RX | 0.014 - 0.043 | 0.079 - 0.394 | | ● | ● | ● |
| CNMM856RX | CNMM250724RX | 0.014 - 0.047 | 0.079 - 0.472 | | ● | ● | ● |
| CNMM866RX | CNMM250924RX | 0.014 - 0.047 | 0.079 - 0.472 | | ● | ● | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H



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## TNMM RX



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT8115 | TT8125 | TT8135 |
|---|---|---|---|---|---|---|---|
| TNMM332RX | TNMM160408RX | 0.008 - 0.022 | 0.028 - 0.236 | | ● | ● | ● |
| TNMM333RX | TNMM160412RX | 0.010 - 0.028 | 0.039 - 0.276 | | ● | ● | ● |
| TNMM432RX | TNMM220408RX | 0.008 - 0.022 | 0.028 - 0.295 | | ● | ● | ● |
| TNMM433RX | TNMM220412RX | 0.010 - 0.028 | 0.039 - 0.295 | | ● | ● | ● |
| TNMM434RX | TNMM220416RX | 0.012 - 0.035 | 0.059 - 0.295 | | ● | ● | ● |

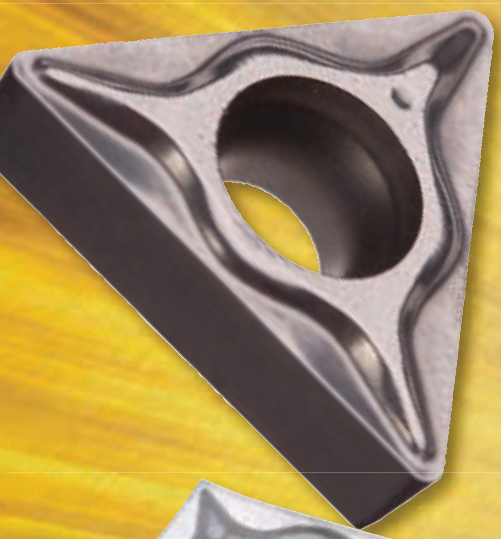
● = P ○ = M ● = K ● = N ● = S ○ = H

## SNMM RX



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT8115 | TT8125 | TT8135 |
|---|---|---|---|---|---|---|---|
| SNMM432RX | SNMM120408RX | 0.008 - 0.022 | 0.028 - 0.276 | | ● | ● | ● |
| SNMM433RX | SNMM120412RX | 0.010 - 0.028 | 0.039 - 0.276 | | ● | ● | ● |
| SNMM543RX | SNMM150612RX | 0.010 - 0.028 | 0.039 - 0.354 | | ● | ● | ● |
| SNMM643RX | SNMM190612RX | 0.010 - 0.028 | 0.039 - 0.394 | | ● | ● | ● |
| SNMM644RX | SNMM190616RX | 0.012 - 0.035 | 0.059 - 0.394 | | ● | ● | ● |
| SNMM646RX | SNMM190624RX | 0.014 - 0.043 | 0.079 - 0.394 | | ● | ● | ● |
| SNMM856RX | SNMM250724RX | 0.014 - 0.047 | 0.079 - 0.472 | | ● | ● | ● |
| SNMM866RX | SNMM250924RX | 0.014 - 0.047 | 0.079 - 0.472 | | ● | ● | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H



TOTURN™ MINI

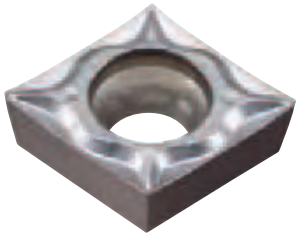
# SA CHIPBREAKER

## GROUND POSITIVE ISO INSERTS FOR HIGH PRECISION TURNING

- Peripherally ground geometry provides high accuracy
- Low cutting forces due to an inclined, sharp cutting edge and wide groove geometry
- Excellent chip control at low feed rates and depths of cut, due to an optimized chip-breaker design
- Grade TT9020 suitable for Swiss sliding head turning centers
- Grade TT5030 ideal for precision aerospace applications



## CCGT SA - -7° POSITIVE, 80° RHOMBIC GROUND INSERTS WITH SA CHIPBREAKER

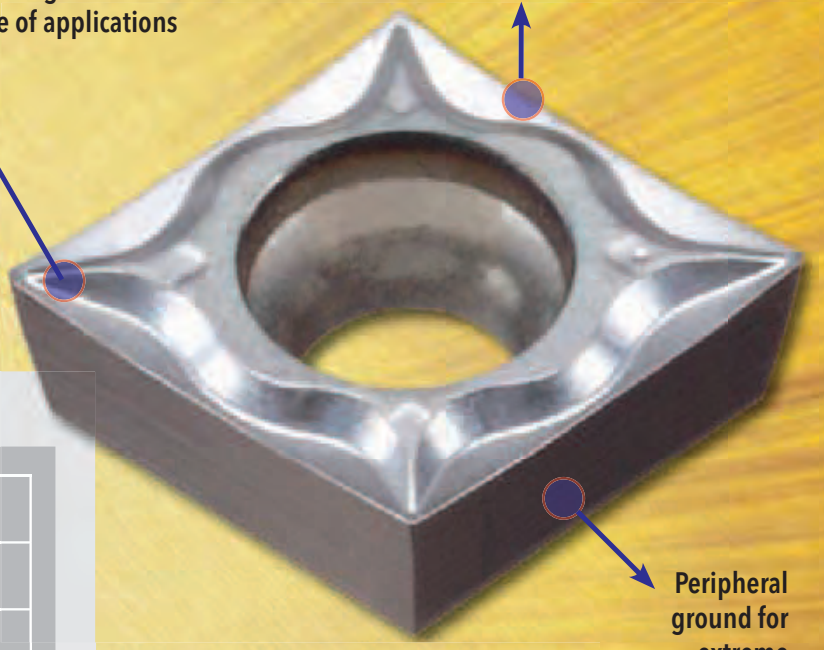


| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade TT5030 | TT9020 |
|---|---|---|---|---|---|
| CCGT 21.50 SA | CCGT 060201 SA | .0008 - .006 | .004 - .060 | | |
| CCGT 21.50.5 SA | CCGT 060202 SA | .0008 - .006 | .004 - .060 | | |
| CCGT 21.51 SA | CCGT 060204 SA | .002 - .008 | .004 - .095 | | |
| CCGT 32.50 SA | CCGT 09T301 SA | .0008 - .006 | .004 - .100 | | |
| CCGT 32.50.5 SA | CCGT 09T302 SA | .0008 - .006 | .004 - .100 | | |
| CCGT 32.51 SA | CCGT 09T304 SA | .002 - .008 | .008 - .100 | | |

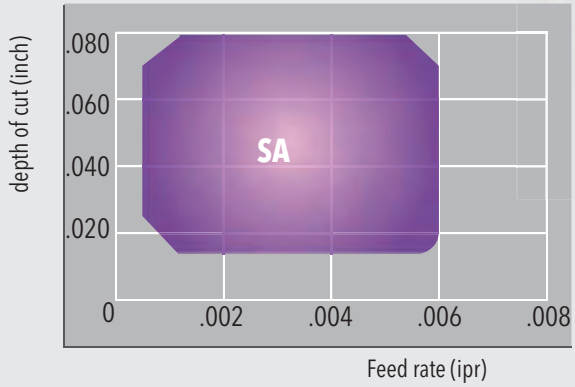
● = P ● = M ● = K ● = N ● = S ○ = H



NEW GOLD GOLD RUSH

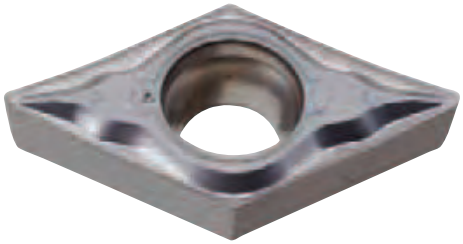



## CHIP CONTROL RANGE




- Insert: CCGT 32.51 SA
- Cutting speed: 650 sfm
- Material: 0.45% Carbon steel

# DCGT SA - -7° POSITIVE, 55° RHOMBIC GROUND INSERTS WITH SA CHIPBREAKER



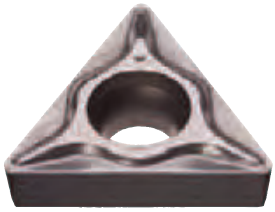
| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade TT5030 | TT9020 |
|---|---|---|---|---|---|
| DCGT 21.50 SA | DCGT 070201 SA | .0008 - .006 | .004 - .060 | | |
| DCGT 21.50.5 SA | DCGT 070202 SA | .0008 - .006 | .004 - .060 | | |
| DCGT 21.51 SA | DCGT 070204 SA | .002 - .008 | .004 - .060 | | |
| DCGT 32.50 SA | DCGT 11T301 SA | .0005 - .004 | .004 - .100 | | |
| DCGT 32.50.5 SA | DCGT 11T302 SA | .0008 - .006 | .004 - .100 | | |
| DCGT 32.51 SA | DCGT 11T304 SA | .001 - .008 | .004 - .100 | | |

● = P ● = M ● = K ● = N ● = S ● = H



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## TCGT SA - -7° POSITIVE, TRIANGULAR GROUND INSERTS WITH SA CHIPBREAKER



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT5030 | TT9020 |
|---|---|---|---|---|---|---|
| TCGT 21.50 SA | TCGT 110201 SA | .0005 - .004 | .004 - .100 | | | |
| TCGT 21.50.5 SA | TCGT 110202 SA | .0008 - .006 | .008 - .100 | | | |
| TCGT 21.50 SA | TCGT 110204 SA | .001 - .008 | .008 - .100 | | | |

● = P ● = M ● = K ● = N ● = S ○ = H

## VBGT SA - -7° POSITIVE, 35° RHOMBIC GROUND INSERTS WITH SA CHIPBREAKER



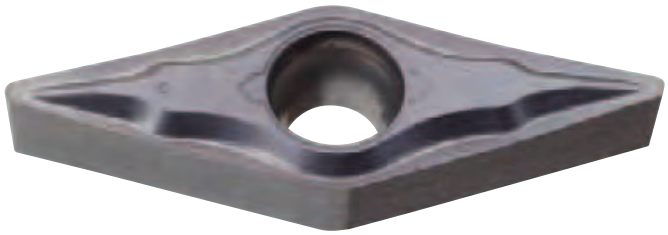
| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade | TT5030 | TT9020 |
|---|---|---|---|---|---|---|
| VBGT 220 SA | VBGT 110301 SA | .0005 - .003 | .004 - .060 | | | |
| VBGT 220.5 SA | VBGT 110302 SA | .0008 - .003 | .008 - .060 | | | |
| VBGT 221 SA | VBGT 110304 SA | .001 - .004 | .008 - .060 | | | |

● = P ● = M ● = K ● = N ● = S ○ = H



NEW GOLD GOLD RUSH

# VCGT SA - -7° POSITIVE, 35° RHOMBIC GROUND INSERTS WITH SA CHIPBREAKER



| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Grade TT5030 | TT9020 |
|---|---|---|---|---|---|
| VCGT 220 | VCGT 110301 SA | .0005 - .003 | .004 - .060 | | |
| VCGT 220.5 SA | VCGT 110302 SA | .0008 - .003 | .008 - .060 | | |
| VCGT 221 SA | VCGT 110304 SA | .001 - .004 | .008 - .060 | | |

= P = M = K = N = S = H



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# T-FEED™

## HF CHIPBREAKER

### FOR HIGH FEED MACHINING

**ECONOMY**

- Utilizes double-sided technology with 6 cutting edges!
- Reduces cycle time, increases productivity
- Double-sided insert offers economical advantages when compared to competitor's inserts

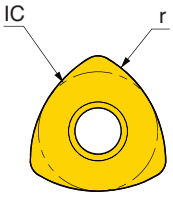
**PERFORMANCE**

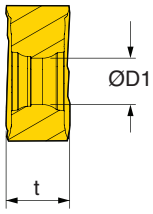
- Optimized chip-breaker geometry designed for high feed machining, up to .118 inches per revolution (3mm/rev)
- Reduced cutting forces and surprisingly smooth cutting action due to a positive, but strong, cutting edge
- Chip thinning principle reduces depth of cut notching, prolonging tool life
- Increased clamping stability from unique and patented, 3-dimensional seat design that works in conjunction with rest pads on insert
- Hook designed lever lock system provides multidirectional clamping force



## BNMX HF





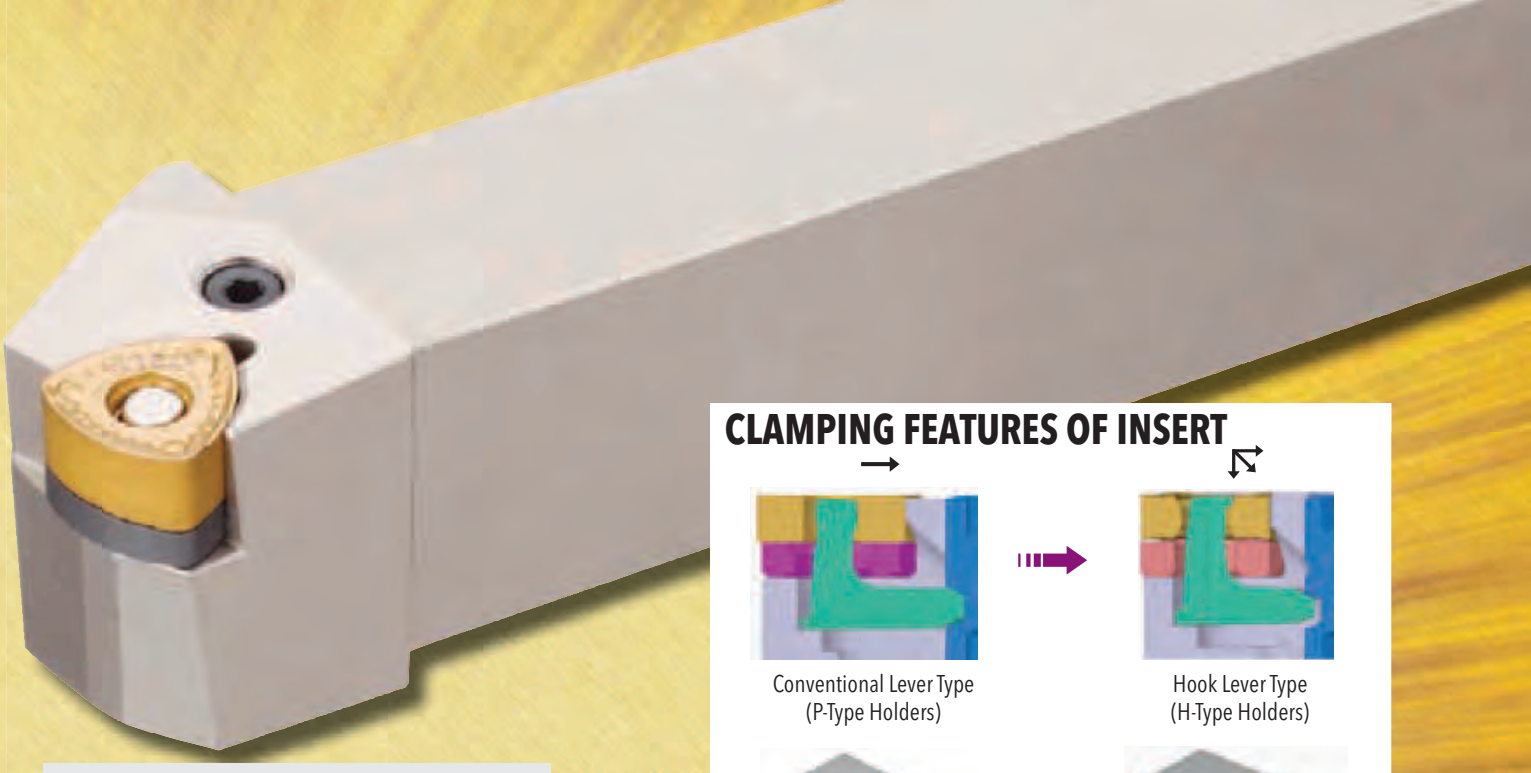




| ANSI Number | ISO Number | feed (ipr) | DOC (inch) | Dimensions (inch) IC | t | r | D1 | Grade TT8115 | TT8125 |
|---|---|---|---|---|---|---|---|---|---|
| BNMX 150720R/L HF | BNMX 150720R/L HF | .020 - .118 | .020 - .100 | .590 | .315 | .590 | 2.44 | ● | ● |

● = P ○ = M ● = K ● = N ● = S ○ = H



NEW GOLD GOLD RUSH



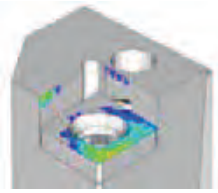
## CLAMPING FEATURES OF INSERT



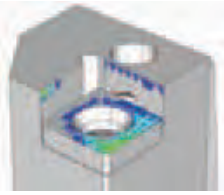
Conventional Lever Type
(P-Type Holders)



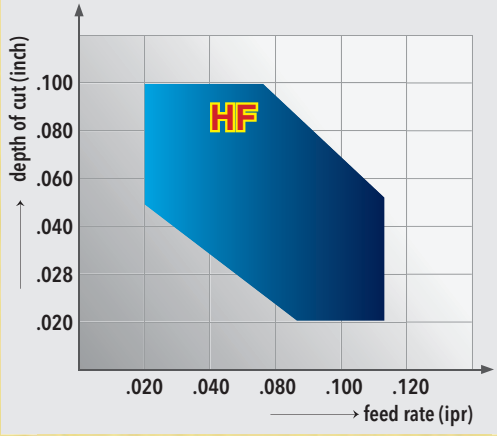
Hook Lever Type
(H-Type Holders)



Poor clamping strength due to single directional force



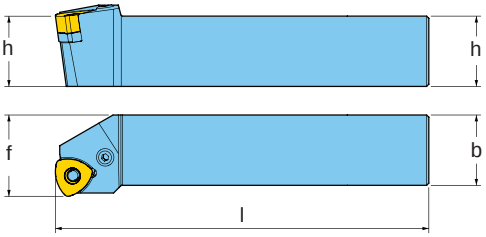
More stable clamping from multidirectional force




- Insert: BNMX 150720 R-HF
- Cutting speed: 150 m/min
- Material: 0.45% Carbon Steel

## HBXNR/L






| DESIGNATION | Dimensions (inch) | | | | Insert | Lever | Screw | Shim | Shim Pin | Shim Pin Punch | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | h | b | l | f | | | | | | | |
| HBXNR/L 16-55D | 1.00 | 1.00 | 6.00 | 1.15 | BNMX 150720R/L-HF | LCL 16-NX | LCS 5-L25.5 | LSB 53 R/L | LSP 5 | SPP 5-6 | L-W3 |
| HBXNR/L 20-55E | 1.25 | 1.25 | 7.00 | 1.45 | BNMX 150720R/L-HF | LCL 16-NX | LCS 5-L25.5 | LSB 53 R/L | LSP 5 | SPP 5-6 | L-W3 |



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TOTURN™ MINI

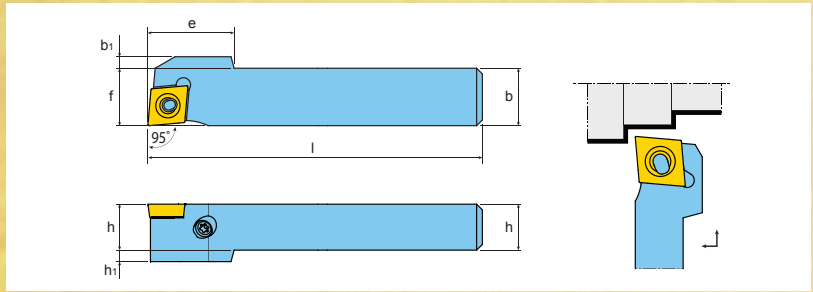
# BACK CLAMPING HOLDER

## QUICK CHANGE HOLDER FOR SWISS TYPE LATHES

- Quick insert changeover with simple lever clamp design
- Both front and side clamping is available with each holder
- Holders use a unique backward and downward multi-directional clamping force
- No limitations – can be used with all Swiss-type turning machines

## BCLCR/L-SH



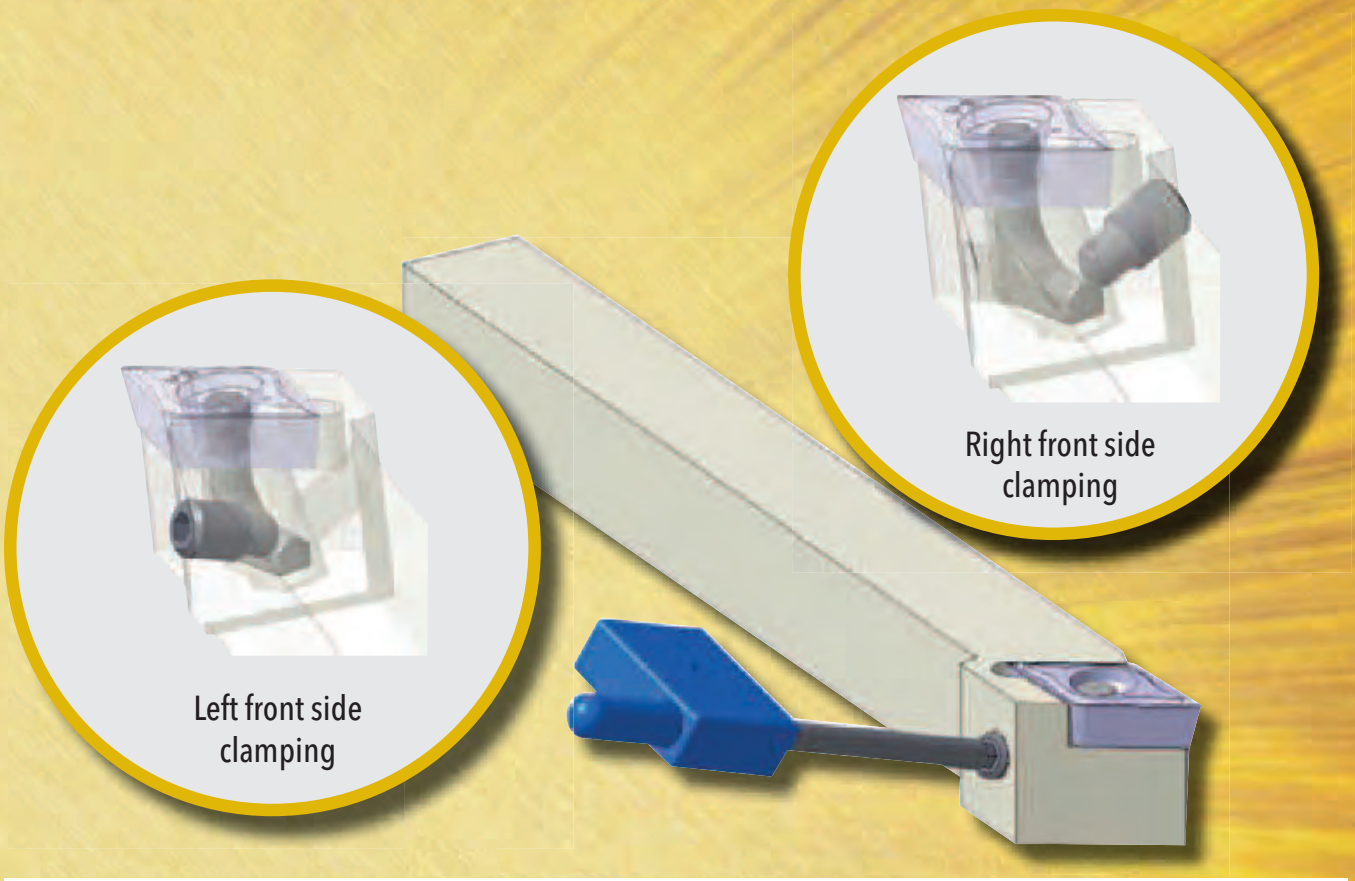



| INCH DESIGNATION | Dimensions (inch) h | h1 | b | b1 | l | f | e | 80° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BCLCR/L 06-2C-SH | .375 | .079 | .375 | .079 | 5.00 | .375 | .591 | CC□T 21.5□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BCLCR/L 08-2C-SH | .500 | | .500 | | 5.00 | .500 | | CC□T 21.5□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BCLCR/L 083C-SH | .500 | | .500 | .079 | 5.00 | .500 | .669 | CC□T 32.5□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |
| BCLCR/L 10-3C-SH | .625 | | .625 | | 5.00 | .625 | | CC□T 32.5□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |

| METRIC DESIGNATION | Dimensions (mm) h | h1 | b | b1 | l | f | e | 80° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BCLCR/L 1212 K06-SH | 12 | 1 | 12 | 2 | 125 | 12 | | CC□T 0602□□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BCLCR/L 1212 K09-SH | 12 | 1 | 12 | 2 | 125 | 12 | 17 | CC□T 09T3□□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |

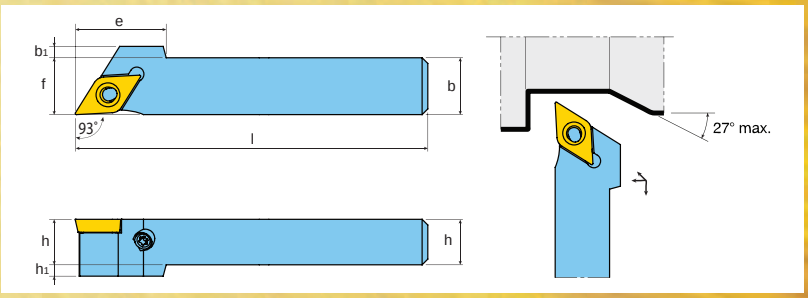


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# BDJCR/L-SH






| DESIGNATION | Dimensions (inch) h | h1 | b | b1 | l | f | e | 55° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BDJCR/L 06-2C-SH | .375 | .079 | .375 | .079 | 5.00 | .375 | .591 | DC□T 21.5□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BDJCR/L 08-2C-SH | .500 | | .500 | | 5.00 | .500 | | DC□T 21.5□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BDJCR/L 08-3C-SH | .500 | | .500 | .079 | 5.00 | .500 | .669 | DC□T 32.5□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |
| BDJCR/L 10-3C-SH | .625 | | .625 | | 5.00 | .625 | | DC□T 32.5□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |

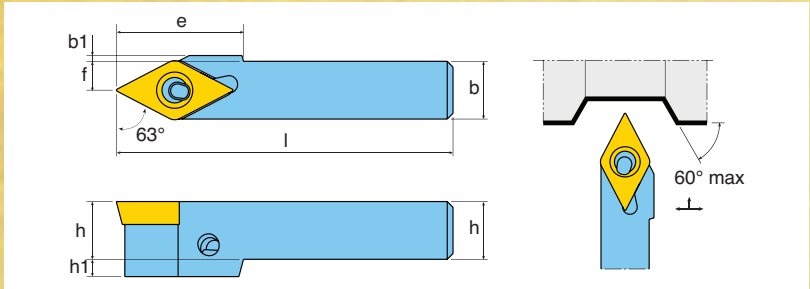
| DESIGNATION | Dimensions (mm) h | h1 | b | b1 | l | f | e | 55° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BDJCR/L 1212 K07-SH | 12 | - | 12 | - | 125 | 12 | - | DC□T 0702□□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BDJCR/L 1212 K11-SH | 12 | 1 | 12 | 2 | 125 | 12 | 20 | DC□T 11T3□□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |



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# BDNCN-SH



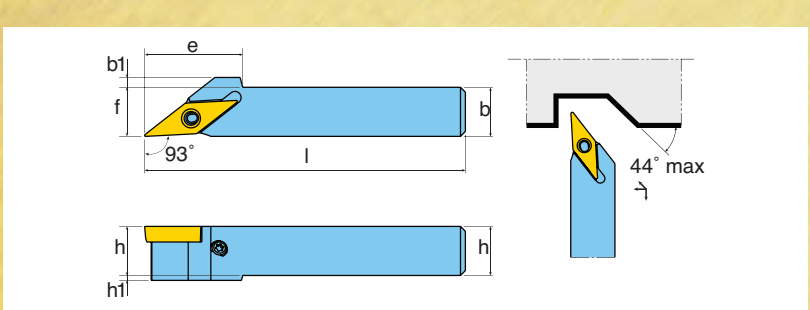



| INCH DESIGNATION | Dimensions (inch) h | h1 | b | b1 | l | f | e | 55° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BDNCN 06-2C-SH | .375 | | .375 | | 5.00 | .186 | | CC□T 21.5□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BDNCN 08-3C-SH | .500 | .039 | .500 | | 5.00 | .250 | | CC□T 32.5□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |
| BDNCN 10-3C-SH | .625 | | .625 | | 5.00 | .313 | | CC□T 32.5□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |

| METRIC DESIGNATION | Dimensions (mm) h | h1 | b | b1 | l | f | e | 55° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BDNCN 1212 K07-SH | 12 | - | 12 | - | 125 | 6 | | DC□T 0702□□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BDNCN 1212 K11-SH | 12 | 1 | 12 | - | 125 | 6 | 22 | DC□T 11T3□□ | BLCL 3 | BLCS 3 | BLSR 3 | L-W 2F |

# BVJBR/L-SH






| INCH DESIGNATION | Dimensions (inch) h | h1 | b | b1 | l | f | e | 35° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BVJBR/L 06-2C-SH | .375 | .039 | .375 | .079 | 5.00 | .375 | .787 | VB□T 22□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BVJBR/L 08-3C-SH | .500 | | .500 | | 5.00 | .500 | | VB□T 22□ | BLCL 2 | BLCS 3 | BLSR 3 | T 6 |
| BVJBR/L 10-3C-SH | .625 | | .625 | | 5.00 | .625 | | VB□T 22□ | BLCL 2 | BLCS 3 | BLSR 3 | T 6 |

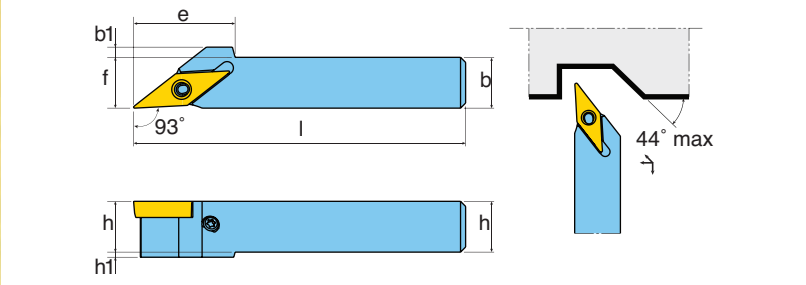
| METRIC DESIGNATION | Dimensions (mm) h | h1 | b | b1 | l | f | e | 35° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BVJBR/L1212 K11-SH | 12 | | 12 | | 125 | 12 | - | VB□T 1103□□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |



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# BVJCR/L-SH






| INCH DESIGNATION | Dimensions (inch) h | h1 | b | b1 | l | f | e | 35° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BVJCR/L 06-2C-SH | .375 | .039 | .375 | .079 | 5.00 | .375 | .787 | VC□T 22□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |
| BVJCR/L 08-3C-SH | .500 | | .500 | | 5.00 | .500 | | VC□T 22□ | BLCL 2 | BLCS 3 | BLSR 3 | T 6 |
| BVJCR/L 10-3C-SH | .625 | | .625 | | 5.00 | .625 | | VC□T 22□ | BLCL 2 | BLCS 3 | BLSR 3 | T 6 |

| METRIC DESIGNATION | Dimensions (mm) h | h1 | b | b1 | l | f | e | 35° Insert | Lever | Lever Screw | Snap Ring | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BVJCR/L1212 K11-SH | 12 | | 12 | | 125 | 12 | - | VC□T 1103□□ | BLCL 2 | BLCS 2 | BLSR 2 | T 6 |



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# CoAdapter™

## QUICK CHANGE HOLDERS FOR ISO TURNING

- Wide range of quick change heads for ISO turning inserts.
- Ideal for high precision machining due to stable clamping force.



C4, C5, C6-TCLNR



C4, C5, C6-SCLCR



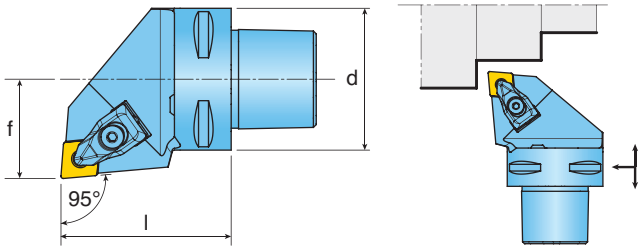
C4, C5, C6-TDJNR





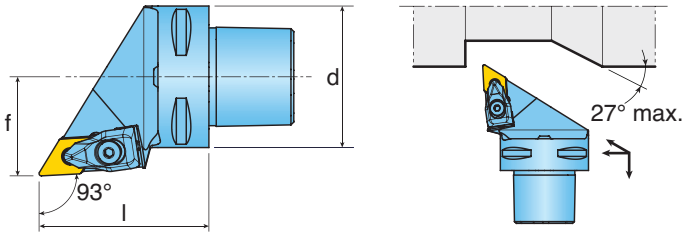
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# TCLNR/L




| DESIGNATION | Dimensions (mm) d | f | l | 80° Insert | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C4-TCLNR/L 27050-09 | 40 | 27 | 50 | CN□□33□ | DLM 3 | DLS 3 | LSC 32 | SO 40085I | DSP 3 | NZ 83 | L-W 2.5 |
| C4-TCLNR/L 27050-12 | 40 | 27 | 50 | CN□□43□ | DLM 4 | DLS 4 | TSC 44 | SO 40050I | DSP 4 | NZ 83 | L-W 3 |
| C5-TCLNR/L 35060-12 | 50 | 35 | 60 | CN□□43□ | DLM 4 | DLS 4 | TSC 44 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |
| C6-TCLNR/L 45065-12 | 63 | 45 | 65 | CN□□43□ | DLM 4 | DLS 4 | TSC 44 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |
| C4-TCLNR/L 27055-16 | 40 | 27 | 55 | CN□□54□ | DLM 5 | DLS 5 | TSC 54 | SO 50090I | DSP 5 | NZ 83 | L-W 4 |
| C5-TCLNR/L 35060-19 | 50 | 35 | 60 | CN□□64□ | DLM 6 | DLS 5 | LSC 63 | SO 80180I | DSP 5 | NZ 104 | L-W 4 |
| C6-TCLNR/L 45065-19 | 63 | 45 | 65 | CN□□64□ | DLM 6 | DLS 5 | LSC 63 | SO 80180I | DSP 5 | NZ 104 | L-W 4 |

# TDJNR/L

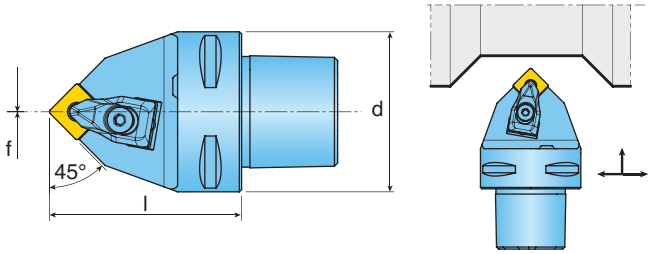



| DESIGNATION | Dimensions (mm) d | f | l | 55° Insert | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C4-TDJNR/L 27055-1504 | 40 | 27 | 55 | DN□□43□ | DLM 4 | DLS 4 | TSD 44 | SO 40050I | DSP 4 | NZ 83 | L-W 3 |
| C4-TDJNR/L 27055-1506 | 40 | 27 | 55 | DN□□44□ | DLM 4 | DLS 4 | TSD 43 | SO 40050I | DSP 4 | NZ 83 | L-W 3 |
| C5-TDJNR/L 35060-1504 | 50 | 35 | 60 | DN□□43□ | DLM 4 | DLS 4 | TSD 44 | SO 40050I | DSP 4 | NZ 83 | L-W 3 |
| C5-TDJNR/L 35060-1506 | 50 | 35 | 60 | DN□□44□ | DLM 4 | DLS 4 | TSD 43 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |
| C6-TDJNR/L 45065-1504 | 63 | 45 | 65 | DN□□43□ | DLM 4 | DLS 4 | TSD 44 | SO 40050I | DSP 4 | NZ 83 | L-W 3 |
| C6-TDJNR/L 45065-1506 | 63 | 45 | 65 | DN□□44□ | DLM 4 | DLS 4 | TSD 43 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |



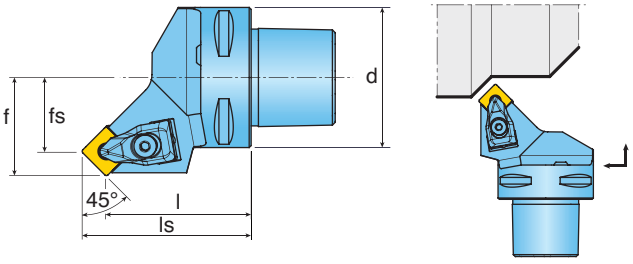
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## TSDNN




| DESIGNATION | Dimensions (mm) d | f | l | Insert | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C4-TSDNN 00050-12 | 40 | 0 | 50 | SN□□43□ | DLM 4 | DLS 4 | TSS 44 | SO 40050I | DSP 4 | NZ 83 | L-W 3 |
| C5-TSDNN 00060-12 | 50 | 0 | 60 | SN□□43□ | DLM 4 | DLS 4 | TSS 44 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |
| C6-TSDNN 00065-12 | 63 | 0 | 65 | SN□□43□ | DLM 4 | DLS 4 | TSS 44 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |

## TSSNR/L

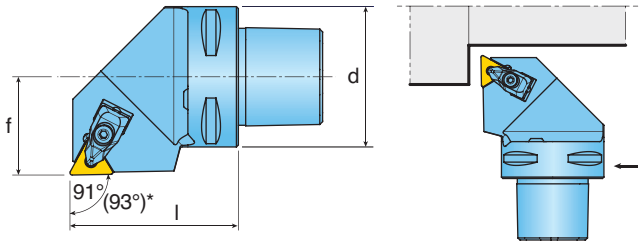



| DESIGNATION | Dimensions (mm) d | f | fs | l | ls | Insert | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C4-TSSNR/L 27042-12 | 40 | 27 | 18.7 | 42 | 50.3 | SN□□43□ | DLM 4 | DLS 4 | TSS 44 | SO 40050I | DSP 4 | NZ 83 | L-W 3 |
| C5-TSSNR/L 35052-12 | 50 | 35 | 26.7 | 52 | 60.3 | SN□□43□ | DLM 4 | DLS 4 | TSS 44 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |
| C6-TSSNR/L 45056-12 | 63 | 45 | 36.7 | 56 | 64.3 | SN□□43□ | DLM 4 | DLS 4 | TSS 44 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |



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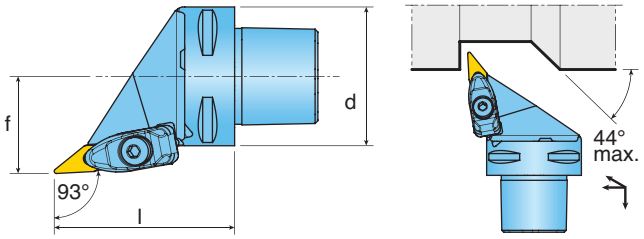
## TTGNR/L TTJNR/L




| DESIGNATION | Dimensions (mm) d | f | l | Insert | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C4-TTGNR/L 27050-16 | 40 | 27 | 50 | TN□□33□ | DLM 3 | DLS 3 | TST 33 | SO 35080I | DSP 3 | NZ 83 | L-W 2.5 |
| C5-TTGNR/L 35060-16 | 50 | 35 | 60 | TN□□33□ | DLM 3 | DLS 3 | TST 33 | SO 35080I | DSP 3 | NZ 104 | L-W 2.5 |
| C6-TTGNR/L 45065-16 | 63 | 45 | 65 | TN□□33□ | DLM 3 | DLS 3 | TST 33 | SO 35080I | DSP 3 | NZ 104 | L-W 2.5 |
| C4-TTJNR/L 27050-16 | 40 | 27 | 50 | TN□□33□ | DLM 3 | DLS 3 | TST 33 | SO 35080I | DSP 3 | NZ 83 | L-W 2.5 |
| C5-TTJNR/L 35060-16 | 50 | 35 | 60 | TN□□33□ | DLM 3 | DLS 3 | TST 33 | SO 35080I | DSP 3 | NZ 104 | L-W 2.5 |
| C6-TTJNR/L 45065-16 | 63 | 45 | 65 | TN□□33□ | DLM 3 | DLS 3 | TST 33 | SO 35080I | DSP 3 | NZ 104 | L-W 2.5 |

NOTE: TTGNR/L has 91° lead angle. TTJNR/L has 93° lead angle.

## TVJNR/L

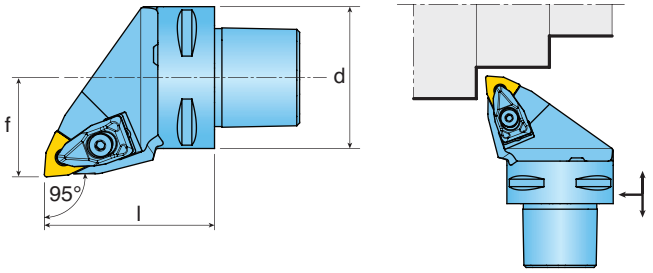



| DESIGNATION | Dimensions (mm) d | f | l | Insert | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C4-TVJNR/L 27062-16 | 40 | 27 | 62 | VN□□33□ | DLM 3V | DLS 5 | TSV 33 | SO 35080I | DSP 5 | NZ 83 | L-W 4 |
| C5-TVJNR/L 35065-16 | 50 | 35 | 65 | VN□□33□ | DLM 3V | DLS 5 | TSV 33 | SO 35080I | DSP 5 | NZ 104 | L-W 4 |
| C6-TVJNR/L 45068-16 | 63 | 45 | 68 | VN□□33□ | DLM 3V | DLS 5 | TSV 33 | SO 35080I | DSP 5 | NZ 104 | L-W 4 |



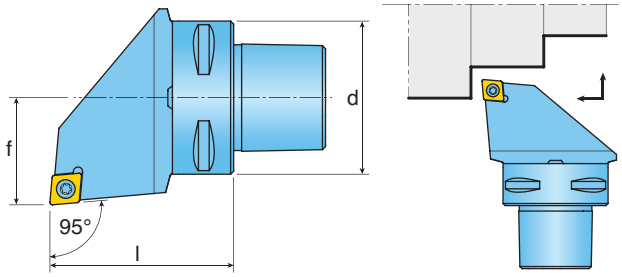
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## TWLNR/L




| DESIGNATION | Dimensions (mm) d | f | l | Insert | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C4-TWLNR/L 27050-06 | 40 | 27 | 50 | WN□□ 33□ | DLM 3 | DLS 3 | PSW 32 | SO 40090I | DSP 3 | NZ 83 | L-W 2.5 |
| C4-TWLNR/L 27050-08 | 40 | 27 | 50 | WN□□ 43□ | DLM 4 | DLS 4 | TSW 44 | SO 40050I | DSP 4 | NZ 83 | L-W 3 |
| C5-TWLNR/L 35060-08 | 50 | 35 | 60 | WN□□ 43□ | DLM 4 | DLS 4 | TSW 44 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |
| C6-TWLNR/L 45065-08 | 63 | 45 | 65 | WN□□ 43□ | DLM 4 | DLS 4 | TSW 44 | SO 40050I | DSP 4 | NZ 104 | L-W 3 |

## SCLCR/L

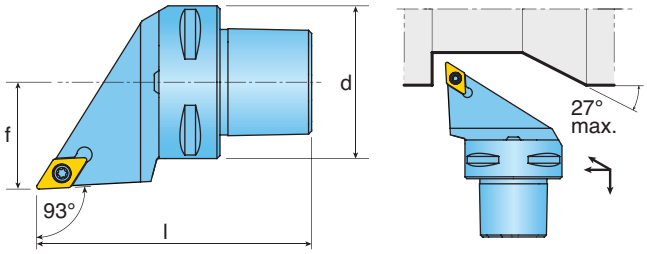



| DESIGNATION | Dimensions (mm) d | f | l | Insert | Screw | Shim | Shim Screw | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|
| C4-SCLCR/L 27050-09 | 40 | 27 | 50 | CC□T 32.5□ | SO 35124I | SSC 32 | SO 50090S | NZ 83 | T 15 |
| C5-SCLCR/L 35060-09 | 50 | 35 | 60 | CC□T 32.5□ | SO 35124I | SSC 32 | SO 50090S | NZ 104 | T 15 |
| C6-SCLCR/L 45065-09 | 63 | 45 | 65 | CC□T 32.5□ | SO 35124I | SSC 32 | SO 50090S | NZ 104 | T 15 |
| C4-SCLCR/L 27050-12 | 40 | 27 | 50 | CC□T 43□ | SO 45130I | SSC 43N | SO 60105S | NZ 83 | T 20 |
| C5-SCLCR/L 35060-12 | 50 | 35 | 60 | CC□T 43□ | SO 45130I | SSC 43N | SO 60105S | NZ 104 | T 20 |
| C6-SCLCR/L 45065-12 | 63 | 45 | 65 | CC□T 43□ | SO 45130I | SSC 43N | SO 60105S | NZ 104 | T 20 |



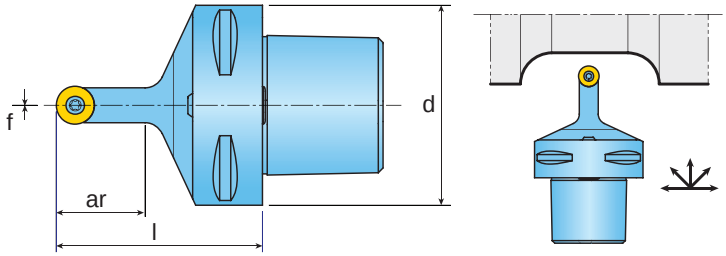
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## SDJCR/L




| DESIGNATION | Dimensions (mm) d | f | l | Insert | Shim | Shim Screw | Spring | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 55° | | | | | |
| C4-SDJCR/L 27050-11 | 40 | 27 | 50 | DC□T 32.5□ | SO 35124I | SSD 32 | SO 50090S | NZ 83 | T 15 |
| C5-SDJCR/L 35060-11 | 50 | 35 | 60 | DC□T 32.5□ | SO 35124I | SSD 32 | SO 50090S | NZ 104 | T 15 |
| C6-SDJCR/L 45065-11 | 63 | 45 | 65 | DC□T 32.5□ | SO 35124I | SSD 32 | SO 50090S | NZ 104 | T 15 |

## SRDCN

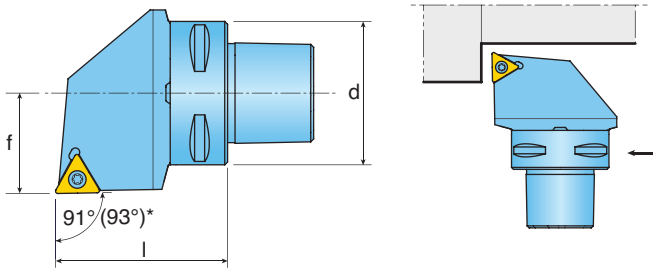



| DESIGNATION | Dimensions (mm) d | f | l | ar | Insert | Screw | Shim | Shim Screw | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|
| C4-SRDCN 00050-10A | 40 | 0 | 50 | 25 | RC□T 10T300 | TS 40097I | TRC 3-0 | SR TC-3 | NZ 83 | T 15 |
| C5-SRDCN 00060-10A | 50 | 0 | 60 | 25 | RC□T 10T300 | TS 40097I | TRC 3-0 | SR TC-3 | NZ 104 | T 15 |
| C6-SRDCN 00065-10A | 63 | 0 | 65 | 25 | RC□T 10T300 | TS 40097I | TRC 3-0 | SR TC-3 | NZ 104 | T 15 |
| C4-SRDCN 00050-12A | 40 | 0 | 50 | 28 | RC□T 120400 | SO 40050I | TRC 4-0 | SR TC-4S | NZ 83 | T 15 |
| C5-SRDCN 00060-12A | 50 | 0 | 60 | 28 | RC□T 120400 | SO 40050I | TRC 4-0 | SR TC-4S | NZ 104 | T 15 |
| C6-SRDCN 00065-12A | 63 | 0 | 65 | 28 | RC□T 120400 | SO 40050I | TRC 4-0 | SR TC-4S | NZ 104 | T 15 |



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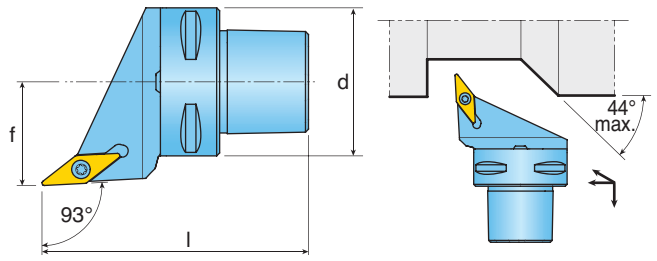
## STGCR/L STJCR/L




| DESIGNATION | Dimensions (mm) d | f | l | Insert | Screw | Shim | Shim Screw | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|
| C4-STGCR/L 27050-16 | 40 | 27 | 50 | SC□T 32.5□ | SO 35142 | SST 32 | SO 50090S | NZ 83 | T 15 |
| C5-STGCR/L 35060-16 | 50 | 35 | 60 | SC□T 32.5□ | SO 35142 | SST 32 | SO 50090S | NZ 104 | T 15 |
| C4-STJCR/L 27050-16 | 40 | 27 | 50 | SC□T 32.5□ | SO 35142 | SST 32 | SO 50090S | NZ 83 | T 15 |
| C5STJCR/L 35060-16 | 50 | 35 | 60 | SC□T 32.5□ | SO 35142 | SST 32 | SO 50090S | NZ 104 | T 15 |

NOTE: STGCR/L has 91° lead angle. STJCR/L has 93° lead angle.

## SVJBR/L

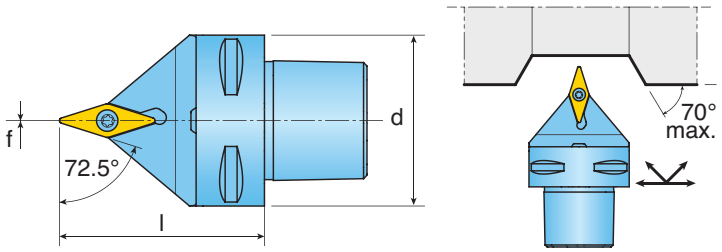



| DESIGNATION | Dimensions (mm) d | f | l | Insert | Screw | Shim | Shim Screw | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|
| C4-SVJBR/L 27050-16 | 40 | 27 | 50 | VB□T 33□ | SO 35124I | SSV 32 | TS 5035062S | NZ 83 | T 15 |
| C5-SVJBR/L 35060-16 | 50 | 35 | 60 | VB□T 33□ | SO 35124I | SSV 32 | TS 5035062S | NZ 104 | T 15 |
| C6-SVJBR/L 45065-16 | 63 | 35 | 65 | VB□T 33□ | SO 35124I | SSV 32 | TS 5035062S | NZ 104 | T 15 |



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# SVVBN




| DESIGNATION | Dimensions (mm) d | f | l | Insert | Screw | Shim | Shim Screw | Nozzle | Wrench |
|---|---|---|---|---|---|---|---|---|---|
| C4-SVVBN 00050-16 | 40 | 0 | 50 | VB□T 33□ | SO 35124I | SSV 32 | TS 5035062S | NZ 83 | T 15 |
| C5-SVVBN 00060-16 | 50 | 0 | 60 | VB□T 33□ | SO 35124I | SSV 32 | TS 5035062S | NZ 104 | T 15 |
| C6-SVVBN 00065-16 | 63 | 0 | 65 | VB□T 33□ | SO 35124I | SSV 32 | TS 5035062S | NZ 104 | T 15 |



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# COMBI-CLAMP™

## MULTI-FUNCTION CLAMP
### FOR USE WITH INGERSOLL'S EXISTING T-TYPE HOLDERS

- Compatibility: 100% compatible with Ingersoll's T-Type holders.
- Versatility: 3 different types of inserts can be used in same toolholder.
- Durability: New carbide clamp shows better wear resistance, expecially in cast iron machining applications
- Stability: Due to the floating plate system in the insert's contact area, it provides much stronger and stable clamping



DCL S-4H



DCL S-4D



DCL S-4F

ex)



CN□A 43□
Insert with hole



CN□N 43□
Insert with no hole



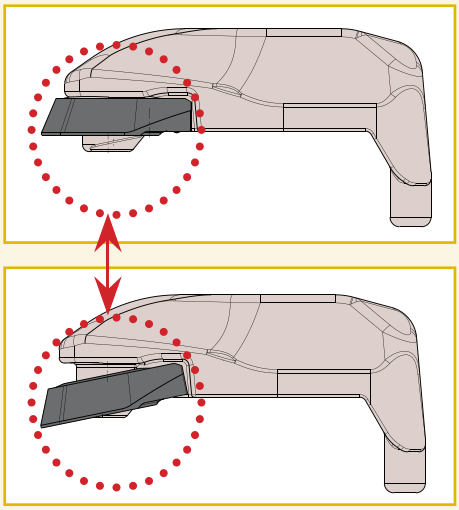
CN□X 45□
Insert with Ingersoll dimple





Floating carbide plate

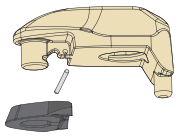
Floating carbide plate provides greater stability than conventional clamp.



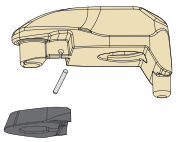


NEW GOLD GOLD·RUSH

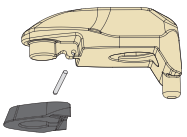
## NEW CLAMP FOR MULTI-FUNCTION



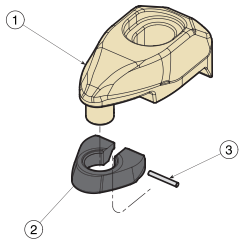
DCL S-4H

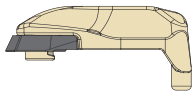
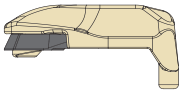
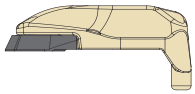


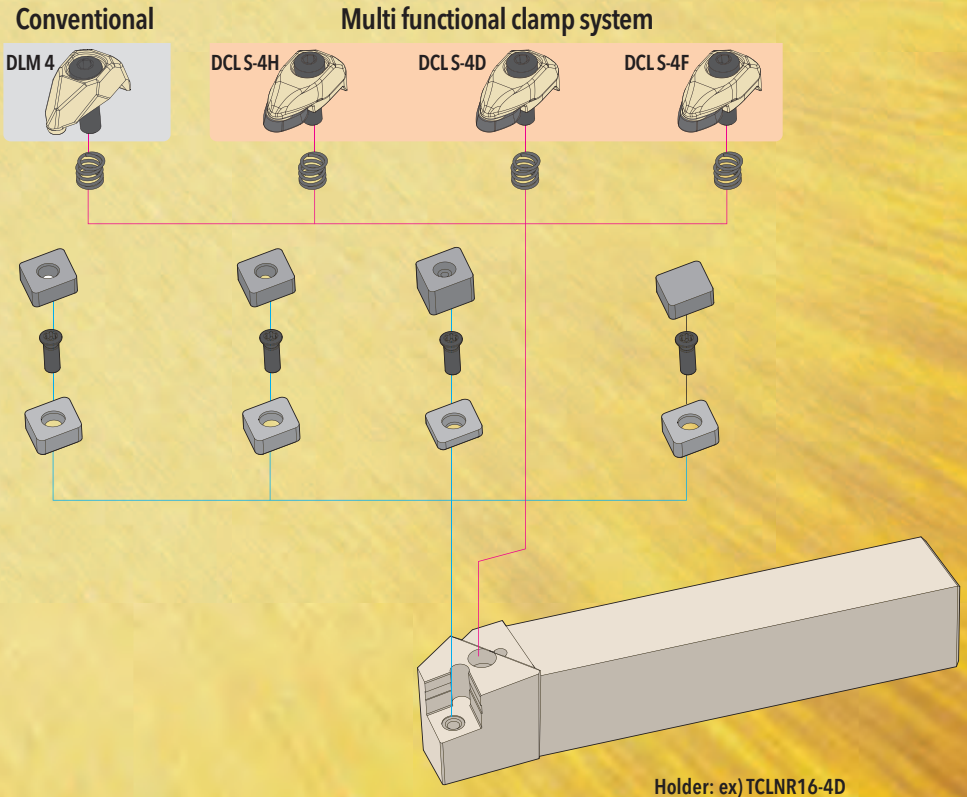
DCL S-4D



DCL S-4F




| Clamp | Designation | Components | | | Insert | Shim |
|---|---|---|---|---|---|---|
| | | [1] Clamp | [2] CTC Plate | [3] PIN | | |
|  | DCL S-4H | DCL 4H | DCL 4-PL | PIN 0683 | CN□A 43□ | TSC 44 |
| | | | | | DN□A 43□ | TSD 44 |
| | | | | | DN□A 44□ | TSD 43 |
| | | | | | SN□A 43□ | TSS 44 |
|  | DCL S-4D | DCL 4D | DCL 4-PL | PIN 0683 | CN□X 45□CH | TSC 42 |
| | | | | | DN□X 45□CH | TSD 42 |
| | | | | | SN□X 45□CHX | TSS 42 |
|  | DCL S-4F | DCL 4F | DCL 4-PL | PIN 0683 | CN□N 43□ | TSC 44 |
| | | | | | CN□N 45□ | TSC 42 |
| | | | | | DN□N 43□ | TSD 44 |
| | | | | | DN□N 45□ | TSD 42 |
| | | | | | SN□N 43□ | TSS 44 |
| | | | | | SN□N 45□ | TSS 42 |




Holder: ex) TCLNR16-4D



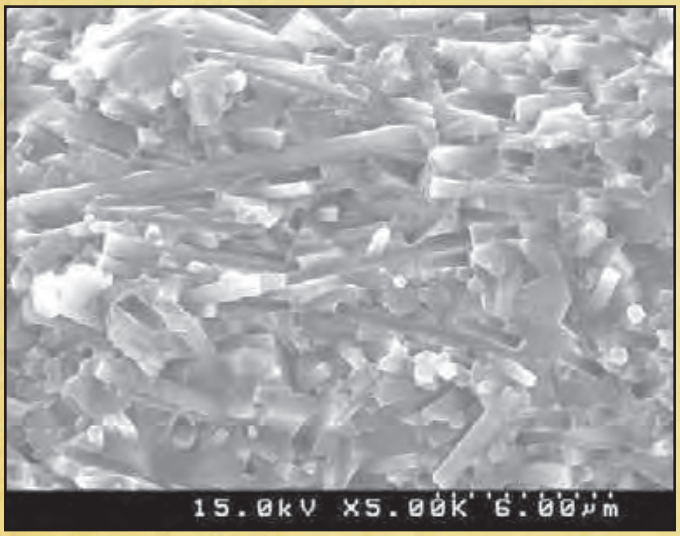
# TOTURN™

## CERAMIC GRADE

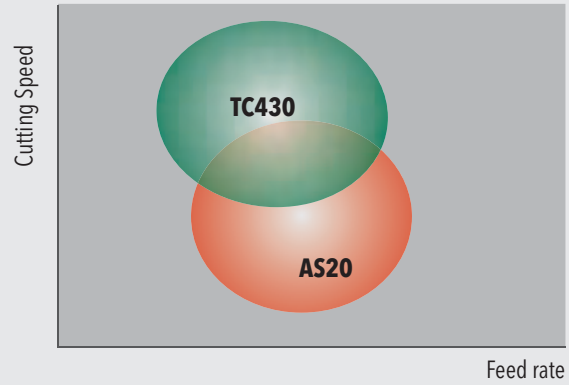
## TC430 WHISKER REINFORCED CERAMIC GRADE FOR MACHINING HIGH STRENGTH AND HIGH TEMPERATURE ALLOY MATERIAL

- SiC whisker reinforced ceramics grade.
- High hardness and high fracture toughness.
- Suitable for general turning and milling applications.
- Excellent for high speed cutting of Ni-based superalloys (Inconel, Waspaloy, Rene, etc.), hardened steels and hard castings

### MICROSTRUCTURE




### APPLICATION RANGE




### PHYSICAL PROPERTIES

| Density | Hardness (Hv) | Fracture Toughness, KIC |
|---|---|---|
| 3.7 | 2,050 ~ 2,100 | 4.5 ~ 5.5 |

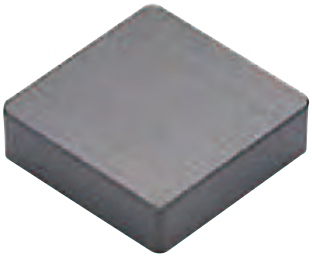
### RECOMMENDED CUTTING CONDITIONS FOR HIGH TEMPERATURE ALLOYS

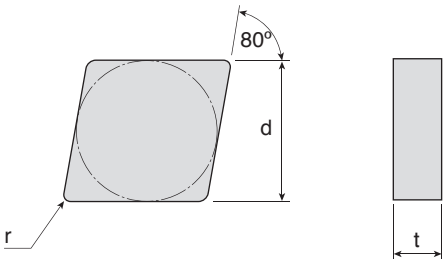
| Density | V(sfm) | F(ipr) |
|---|---|---|
| Turning | 500-1300 | .004-.012 |
| Milling | 1300-3280 | .004-.008 |



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## CNG T6

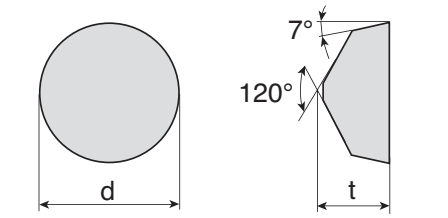





| ANSI Number | ISO Number | Dimensions (inch) d | t | r | Grade TC430 |
|---|---|---|---|---|---|
| CNG 432 T6 | CNGN 120408 T6 | .500 | .187 | .031 | • |
| CNG 433 T6 | CNGN 120412 T6 | .500 | .187 | .047 | • |
| CNG 452 T6 | CNGN 120708 T6 | .500 | .312 | .031 | • |
| CNG 453 T6 | CNGN 120712 T6 | .500 | .312 | .047 | • |

## RCGX T6





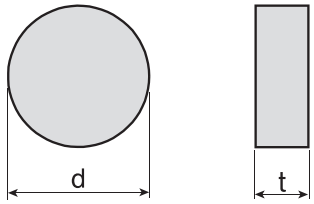

| ANSI Number | ISO Number | Dimensions (inch) d | t | r | Grade TC430 |
|---|---|---|---|---|---|
| RCGX 35 T6 | RCGX 090700 T6 | .375 | .315 | - | • |
| RCGX 45 T6 | RCGX 120700 T6 | .500 | .315 | - | • |



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## RNG T6

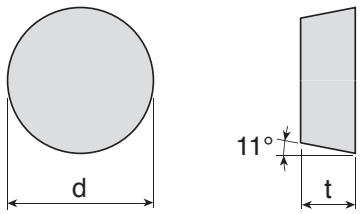





| ANSI Number | ISO Number | d | t | r | Grade | TC430 |
|---|---|---|---|---|---|---|
| RNG 32 T6 | RNGN 090300 T6 | .375 | .125 | - | | • |
| RNG 43 T6 | RNGN 120400 T6 | .500 | .187 | - | | • |
| RNG 45 T6 | RNGN 120700 T6 | .500 | .312 | - | | • |
| RNG 65 T6 | RNGN 190700 T6 | .750 | .312 | - | | • |

## RPG T6



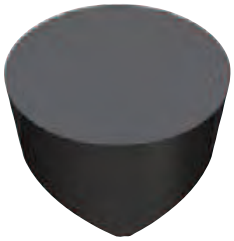


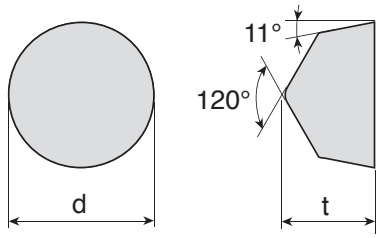

| ANSI Number | ISO Number | d | t | r | Grade | TC430 |
|---|---|---|---|---|---|---|
| RPG 43 T6 | RPGN 120400 T6 | .500 | .187 | - | | • |



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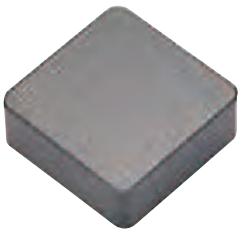
## RPGX T6

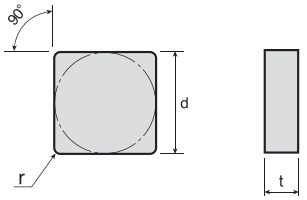





| ANSI Number | ISO Number | d | t | r | Grade | TC430 |
|---|---|---|---|---|---|---|
| RPGX 35 T6 | RPGX 090700 T6 | .375 | .312 | - | | • |
| RPGX 45 T6 | RPGX 120700 T6 | .500 | .312 | - | | • |

## SNG T6






| ANSI Number | ISO Number | Dimensions (inch) d | t | r | Grade | TC430 |
|---|---|---|---|---|---|---|
| SNG 432 T6 | SNGN 120408 T6 | .500 | .187 | .031 | | • |
| SNG 433 T6 | SNGN 120412 T6 | .500 | .187 | .047 | | • |
| SNG 452 T6 | SNGN 120708 T6 | .500 | .312 | .031 | | • |
| SNG 453 T6 | SNGN 120712 T6 | .500 | .312 | .047 | | • |



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# TOTURN™

## CBN GRADES

## TB610, TB670, TB730

### EXCELLENT CUTTING PERFORMANCE IN HARDENED STEEL AND CAST IRON

**TB610**

- Excellent oxidation resistance and chemical stability.
- For continuous to light interrupted turning.
- For machining hard steel, alloy steel, tool steel and case hardened steel.

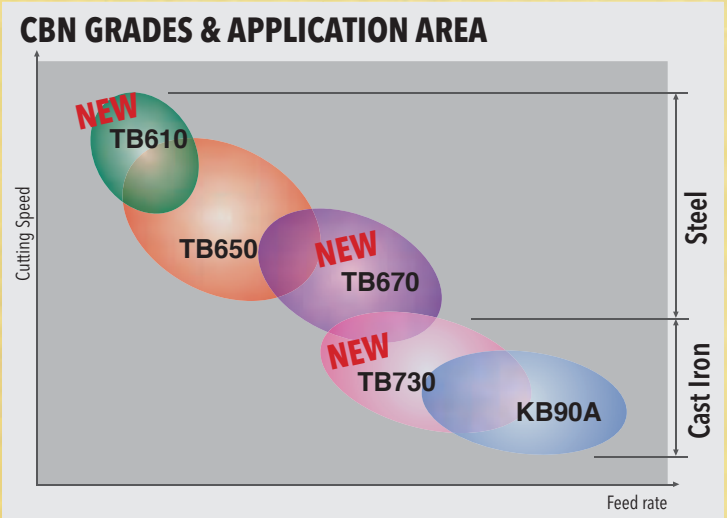
**TB670**

- High hardness and impact resistance.
- For continuous to severe interrupted turning.
- For alloy steel, tool steel, case hardened steel and chilled cast iron.

**TB730**

- High hardness and high fracture toughness.
- General turning and milling.
- For gray cast iron, nodular cast iron and carbide rolls.

### CBN GRADES & APPLICATION AREA



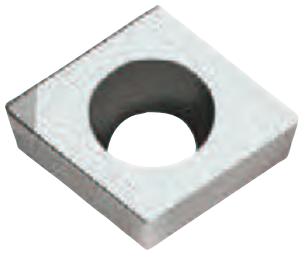

### RECOMMEDED CUTTING CONDITIONS

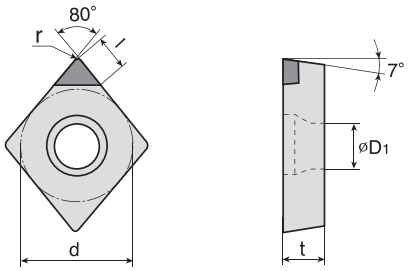
| Materials | | TB610 | TB670 | TB730 |
|---|---|---|---|---|
| Gray Cast Iron (HB 180-230) | V (sfm) | | | 1640 - 3280 |
| | f (ipr) | | | .004 - .012 |
| Chilled Cast Iron (> HB 400) | V (sfm) | | 260 - 490 | 260 490 |
| | f (ipr) | | .004 - .008 | .004 - .012 |
| Hardened Steel (HRc 40-65) | V (sfm) | 490 - 1150 | 330 - 980 | |
| | f (ipr) | .002 - .008 | .004 - .012 | |
| Sintered Metal (Hv 200-600) | V (sfm) | | 330 - 980 | 330 - 820 |
| | f (ipr) | | .002 - .008 | .004 - .010 |
| DCI or HSS Roll | V (sfm) | | 650 - 1640 | |
| | f (ipr) | | .002 - .008 | |
| Super Alloy (Ni-base) | V (sfm) | | | 330 - 980 |
| | f (ipr) | | | .002 - .008 |



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## CCGW CBN

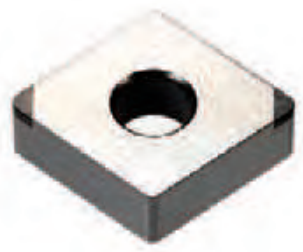


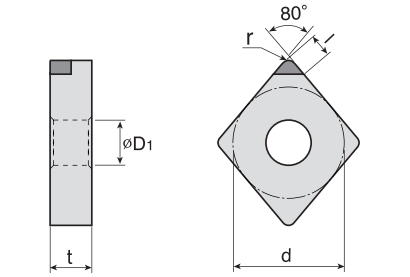



| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) l | d | t | r | D1 | Grade TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|
| CCGW 21.50.5LS2 | CCGW 060202 LS2 | .087 | .250 | .094 | .008 | .110 | | ◐ | ● |
| CCGW 21.51LS2 | CCGW 060204 LS2 | .083 | .250 | .094 | .016 | .110 | ○ | ◐ | ● |
| CCGW 21.52LS2 | CCGW 060208 LS2 | .083 | .250 | .094 | .031 | .110 | ○ | ◐ | ● |
| CCGW 32.51LS2 | CCGW 09T304 LS2 | .094 | .375 | .157 | .016 | .173 | ○ | ◐ | ● |
| CCGW 32.51WZ-LS2 | CCGW 09T304 WZ-LS2 | .094 | .375 | .157 | .016 | .173 | ○ | ◐ | ● |
| CCGW 32.52LS2 | CCGW 09T308 LS2 | .091 | .375 | .157 | .031 | .173 | ○ | ◐ | ● |
| CCGW 32.52WZ-LS2 | CCGW 09T308 WZ-LS2 | .091 | .375 | .157 | .031 | .173 | | ◐ | ● |
| CCGW 431LS2 | CCGW 120404 LS2 | .083 | .500 | .187 | .016 | .216 | | | ● |
| CCGW 432LS2 | CCGW 120408 LS2 | .083 | .500 | .187 | .031 | .216 | | | ● |

LS2 - Insert with 2 tips  WZ - Insert with wiper geometry

## CNGA CBN





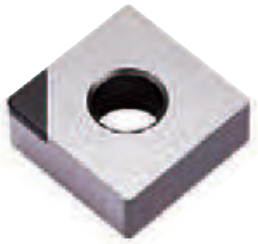

| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) l | d | t | r | D1 | Grade TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|
| CNGA 431WZ-LS2 | CNGA 120404 WZ-LS2 | .083 | .500 | .187 | .016 | .203 | ○ | ◐ | |
| CNGA 431WZ-LS4 | CNGA 120404 WZ-LS4 | .083 | .500 | .187 | .016 | .203 | | ◐ | |
| CNGA 432WZ-LS2 | CNGA 120408 WZ-LS2 | .083 | .500 | .187 | .031 | .203 | ○ | ◐ | ● |
| CNGA 432WZ-LS4 | CNGA 120408 WZ-LS4 | .083 | .500 | .187 | .031 | .203 | ○ | ◐ | |
| CNGA 433WZ-LS2 | CNGA 120412 WZ-LS2 | .098 | .500 | .187 | .047 | .203 | | ◐ | ● |
| CNGA 433WZ-LS4 | CNGA 120412 WZ-LS4 | .098 | .500 | .187 | .047 | .203 | | ◐ | |

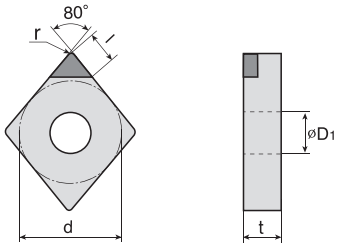
LS2 - Insert with 2 tips  LS4 - Insert with 4 tips  WZ - Insert with wiper geometry



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## CNMA CBN

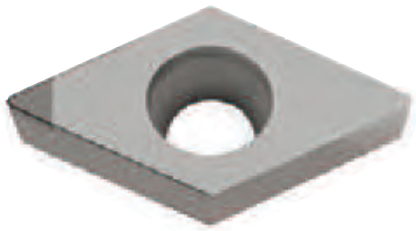


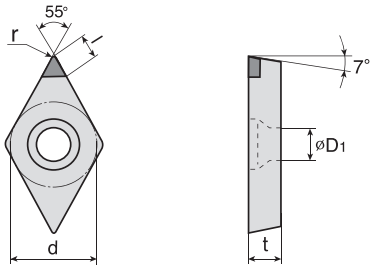



| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) | | | | | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | | | |
| CNMA 431LN | CNMA 120404 LN | .165 | .500 | .188 | .016 | .203 | | ○ | ◑ | |
| CNMA 431LN2 | CNMA 120404 LN2 | .165 | .500 | .188 | .016 | .203 | | | | ● |
| CNMA 431LS2 | CNMA 120404 LS2 | .087 | .500 | .188 | .016 | .203 | | ○ | ◑ | ● |
| CNMA431LS4 | CNMA 120404 LS4 | .087 | .500 | .188 | .016 | .203 | | | ◑ | |
| CNMA 432LN | CNMA 120408 LN | .157 | .500 | .188 | .031 | .203 | | ○ | ◑ | ● |
| CNMA 432LS2 | CNMA 120408 LS2 | .083 | .500 | .188 | .031 | .203 | | ○ | ◑ | ● |
| CNMA 432LS4 | CNMA 120408 LS4 | .083 | .500 | .188 | .031 | .203 | | ○ | ◑ | ● |
| CNMA433LN | CNMA 120412 LN | .154 | .500 | .188 | .047 | .203 | | ○ | ◑ | |
| CNMA433LS2 | CNMA 120412 LS2 | .098 | .500 | .188 | .047 | .203 | | | ◑ | ● |
| CNMA 433LS4 | CNMA 120412 LS4 | .098 | .500 | .188 | .047 | .203 | | | ◑ | ● |

LN - Insert with longer tip  LS2 - Insert with 2 tips  LS4 - Insert with 4 tips

## DCGW CBN





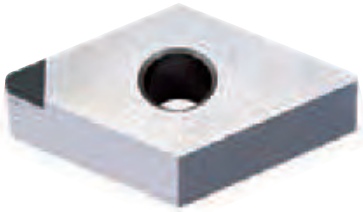

| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) | | | | | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | | | |
| DCGW21.50.5LS2 | DCGW 070202 LS2 | .102 | .250 | .094 | .008 | .110 | | | | |
| DCGW21.51LS2 | DCGW 070204LS2 | .094 | .250 | .094 | .016 | .110 | | ○ | ◑ | ● |
| DCGW21.52LS2 | DCGW 070208 LS2 | .083. | .250 | .094 | .031 | .110 | | ○ | ◑ | ● |
| DCGW32.51LS2 | DCGW 070304 LS2 | .102 | .375 | .157 | .016 | .173 | | | | ● |
| DCGW32.52LS2 | DCGW 11T308 LS2 | .087 | .375 | .157 | .031 | .173 | | ○ | ◑ | ● |

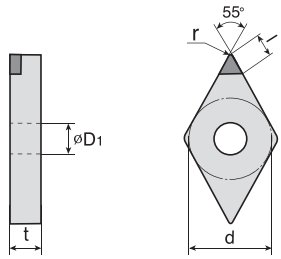
LS2 - Insert with 2 tips



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# DNMA CBN






| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) | | | | | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | | | |
| DNMA 431LN | DNMA 150404 LN | .165 | .500 | .187 | .016 | .203 | | ○ | ◑ | |
| DNMA 431LS2 | DNMA 150404 LS2 | .102 | .500 | .187 | .016 | .203 | | | | |
| DNMA 431LS4 | DNMA 150404 LS4 | .102 | .500 | .187 | .016 | .203 | | ○ | ◑ | ● |
| DNMA 432LN | DNMA 150408 LN | .154 | .500 | .187 | .031 | .203 | | ○ | ◑ | |
| DNMA 432LS2 | DNMA 150408 LS2 | .102 | .500 | .187 | .031 | .203 | | ○ | ◑ | |
| DNMA 432LS4 | DNMA 150408 LS4 | .091 | .500 | .187 | .031 | .203 | | | | |
| DNMA 433LN | DNMA 150412 LN | .138 | .500 | .187 | .047 | .203 | | ○ | ◑ | ● |
| DNMA 433LS2 | DNMA 150412 LS2 | .087 | .500 | .187 | .047 | .203 | | | ◑ | |
| DNMA 433LS4 | DNMA 150412 LS4 | .087 | .500 | .187 | .047 | .203 | | | ◑ | |
| DNMA 441LN | DNMA 150604 LN | .165 | .500 | .250 | .016 | .203 | | | ◑ | |
| DNMA 441LS2 | DNMA 150604 LS2 | .102 | .500 | .250 | .016 | .203 | | | ◑ | |
| DNMA 442LN | DNMA 150608 LN | .154 | .500 | .250 | .031 | .203 | | ○ | ◑ | ● |
| DNMA 442LS2 | DNMA 150608 LS2 | .091 | .500 | .250 | .031 | .203 | | | | |
| DNMA 442LS4 | DNMA 150608 LS4 | .091 | .500 | .250 | .031 | .203 | | ○ | ◑ | ● |
| DNMA 443LS2 | DNMA 150612 LS2 | .087 | .500 | .250 | .047 | .203 | | ○ | ◑ | ● |

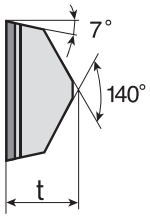
LN - Insert with longer tip  LS2 - Insert with 2 tips  LS4 - Insert with 4 tips

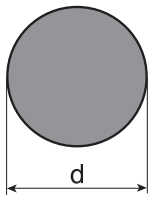


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## RCGX CBN





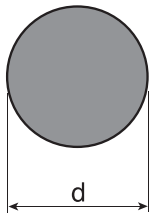




| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inches) l | d | t | r | D1 | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| RCGX 22FT | RCGX 060300 FT | - | .250 | .125 | - | - | | | | ● |
| RCGX 32FT | RCGX 090300 FT | - | .375 | .125 | - | - | | | | ● |
| RCGX 43FT | RCGX 120400 FT | - | .500 | .187 | - | - | | | | ● |

FT - Full top CBN

## RNMN CBN









| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) l | d | t | r | D1 | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| RNMN32FT | RNMN 090300 FT | - | .375 | .125 | - | - | | | ◐ | ● |
| RNMN42FT | RNMN 120400 FT | - | .500 | .125 | - | - | | | | ● |

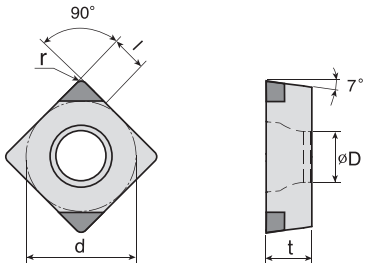
FT - Full top CBN



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## SCGW CBN



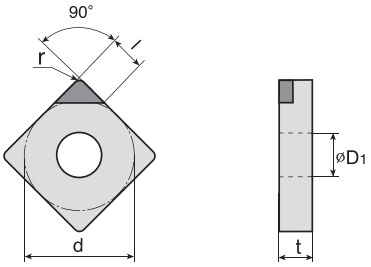



| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) | | | | | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | | | |
| SCGW 32.51LS2 | SCGW 09T304 LS2 | .106 | .375 | .157 | .016 | .173 | | | | ● |
| SCGW 32.52LS2 | SCGW 09T308 LS2 | .106 | .375 | .157 | .031 | .173 | | | | ● |

LS2 - Insert with 2 tips

## SNMA CBN






| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) | | | | | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | | | |
| SNMA 431LN | SNMA 120404 LN | .165 | .500 | .187 | .016 | .203 | | | ◐ | |
| SNMA 431LS2 | SNMA 120404 LS2 | .098 | .500 | .187 | .016 | .203 | | | ◐ | ● |
| SNMA 431LS4 | SNMA 120404 LS4 | .098 | .500 | .187 | .016 | .203 | | | ◐ | |
| SNMA 432LN | SNMA 120408 LN | .165 | .500 | .187 | .031 | .203 | | ○ | ◐ | ● |
| SNMA 432LS2 | SNMA 120408 LS2 | .098 | .500 | .187 | .031 | .203 | | ○ | ◐ | ● |
| SNMA 432LS4 | SNMA 120408 LS4 | .098 | .500 | .187 | .031 | .203 | | | ◐ | |
| SNMA 432LS8 | SNMA 120408 LS8 | .098 | .500 | .187 | .031 | .203 | | | ◐ | |

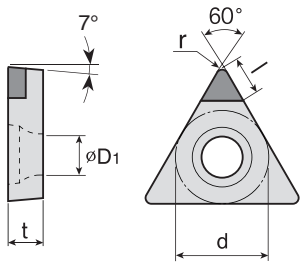
LN - Insert with longer tip  LS2 - Insert with 2 tips  LS4 - Insert with 4 tips  LS8 - Insert with 8 tips



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## TCGW CBN

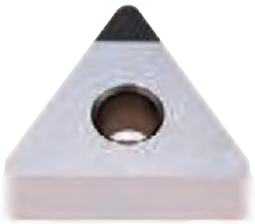


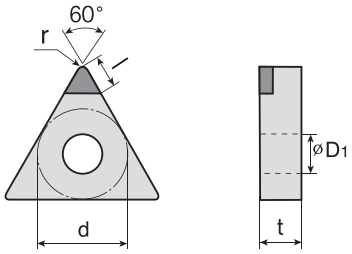



| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inches) | | | | | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | | | |
| TCGW 731LS3 | TCGW 090204 LS3 | .090 | .219 | .094 | .016 | .098 | | ○ | | ● |
| TCGW 732LS3 | TCGW 090208 LS2 | .082 | .219 | .094 | .031 | .098 | | | ◑ | |
| TCGW 21.51LS3 | TCGW 110204 LS3 | .090 | .250 | .094 | .016 | .110 | | ○ | ◑ | ● |
| TCGW 21.52LS3 | TCGW 110208 LS3 | .090 | .250 | .094 | .031 | .110 | | | ◑ | ● |
| TCGW 32.51LS3 | TCGW 16T304 LS3 | .082 | .375 | .157 | .016 | .173 | | ○ | ◑ | ● |
| TCGW 32.52LS3 | TCGW 16T308 LS3 | .082 | .375 | .157 | .031 | .173 | | ○ | ◑ | ● |

LS3 - Insert with 3 tips

## TNMA CBN





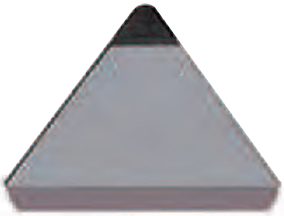

| ANSI DESIGNATION | ISO DESIGNATION | Dimension (inches) | | | | | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | | | |
| TNMA 331LN | TNMA 160404 LN | .169 | .375 | .187 | .016 | .150 | | | ◑ | |
| TNMA 331LS3 | TNMA 160404 LS3 | .086 | .375 | .187 | .016 | .150 | | ○ | ◑ | ● |
| TNMA 331L6 | TNMA 160404 LS6 | .086 | .375 | .187 | .016 | .150 | | | ◑ | |
| TNMA 332LN | TNMA 160408 LN | .157 | .375 | .187 | .031 | .150 | | | ◑ | |
| TNMA 332LS3 | TNMA 160408 LS3 | .082 | .375 | .187 | .031 | .150 | | ○ | ◑ | ● |
| TNMA 332LS6 | TNMA 160408 LS6 | .082 | .375 | .187 | .031 | .150 | | | ◑ | |
| TNMA 333LS3 | TNMA 160412 LS3 | .100 | .375 | .187 | .047 | .150 | | | ◑ | ● |

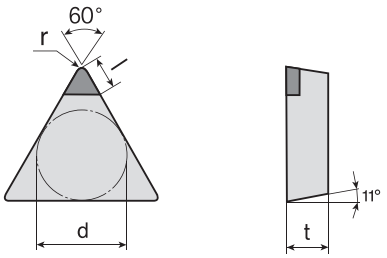
LN - Insert with longer tip LS3 - Insert with 3 tips LS6 - Insert with 6 tips



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# TPGN CBN



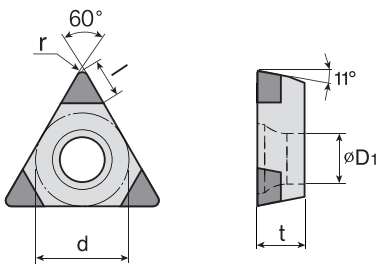



| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inches) l | d | t | r | D1 | Grade TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|
| TPGN 731LS3 | TPGN 090204 LS3 | .090 | 0.219 | 0.094 | 0.016 | - | ○ | | |
| TPGN 21.50.5LS3 | TPGN 110302 LS3 | .110 | 0.250 | 0.125 | 0.008 | - | | | ● |
| TPGN 21.51LS3 | TPGN 110304 LS3 | .102 | 0.250 | 0.125 | 0.016 | - | ○ | ◑ | ● |
| TPGN 21.52LS3 | TPGN 110308 LS3 | .090 | 0.250 | 0.125 | 0.031 | - | ○ | ◑ | ● |
| TPGN 32.51LS3 | TPGN 160304 LS3 | .110 | 0.375 | 0.125 | 0.016 | - | ○ | ◑ | ● |
| TPGN 32.52LS3 | TPGN 160308 LS3 | .100 | 0.375 | 0.125 | 0.031 | - | ○ | ◑ | ● |

LS3 - Insert with 3 tips

# TPGW CBN





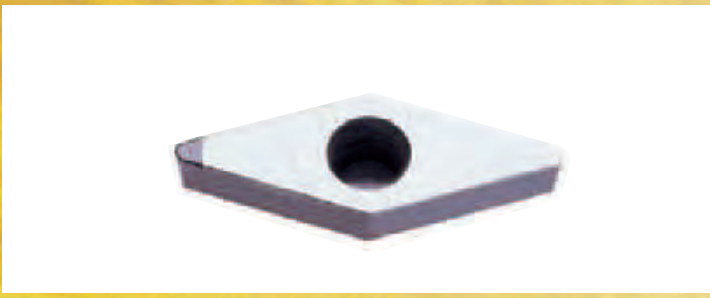

| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inches) l | d | t | r | D1 | Grade TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|
| TPGW 631LS3 | TPGW 080204 LS3 | .082 | .187 | .094 | .016 | .098 | | ◑ | |
| TPGW 731LS3 | TPGW 090204 LS3 | .090 | .219 | .094 | .016 | .098 | | ◑ | ● |
| TPGW 732LS3 | TPGW 090208 LS3 | .078 | .219 | .094 | .031 | .098 | | ◑ | |
| TPGW 220.5LS3 | TPGW 110302 LS3 | .110 | .250 | .125 | .008 | .134 | ○ | | ● |
| TPGW 221LS | TPGW 110304 LS | .102 | .250 | .125 | .016 | .134 | | ◑ | |
| TPGW 221LS3 | TPGW 110304 LS3 | .102 | .250 | .125 | .016 | .134 | ○ | | ● |
| TPGW 222LS3 | TPGW 110308 LS3 | .090 | .250 | .125 | .031 | .134 | ○ | ◑ | ● |
| TPGW 331LS3 | TPGW 160404 LS3 | .110 | .375 | .187 | .016 | .173 | | ◑ | |
| TPGW 332LS3 | TPGW 160408 LS3 | .100 | .375 | .187 | .031 | .173 | | ◑ | |

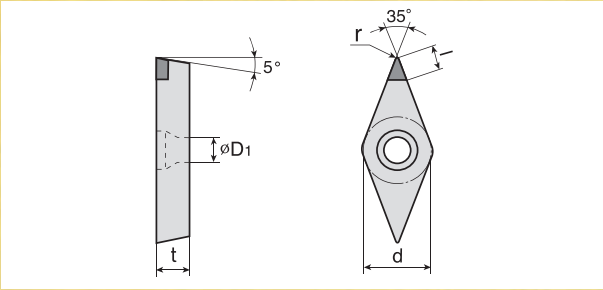
LS3 - Insert with 3 tips



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## VBGW CBN

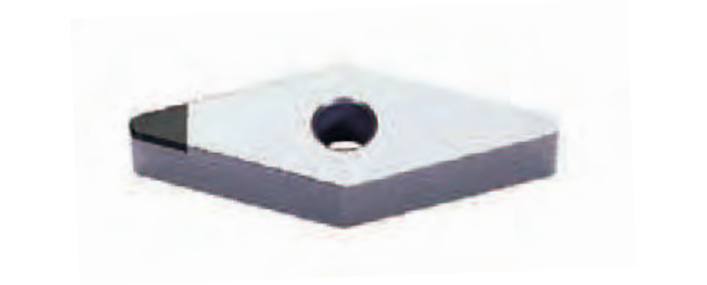


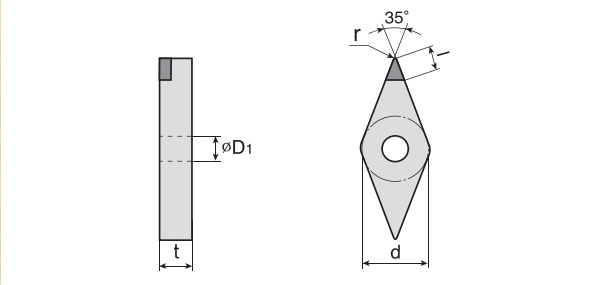



| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inches) l | d | t | r | D1 | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| VBGW 222LS2 | VBGW 110308 LS2 | .094 | .250 | .125 | .031 | .110 | | ○ | | ● |
| VBGW 332LS2 | VBGW 160408 LS2 | .090 | .375 | .187 | .031 | .173 | | ○ | | ● |

LS2 - Insert with 2 tips

## VNGA CBN





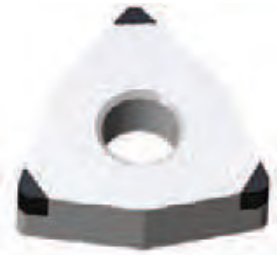

| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inches) l | d | t | r | D1 | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| VNGA 331LN | VNGA 160404 LN | .197 | .375 | .187 | .016 | .150 | | | ◐ | |
| VNGA 331LS2 | VNGA 160404 LS2 | .126 | .375 | .187 | .016 | .150 | | ○ | ◐ | ● |
| VNGA 332LN | VNGA 160408 LN | .161 | .375 | .187 | .031 | .150 | | | ◐ | |
| VNGA 332LS2 | VNGA 160408 LS2 | .094 | .375 | .187 | .031 | .150 | | ○ | ◐ | ● |
| VNGA 332LS4 | VNGA 160408 LS4 | .094 | .375 | .187 | .031 | .150 | | | ◐ | |

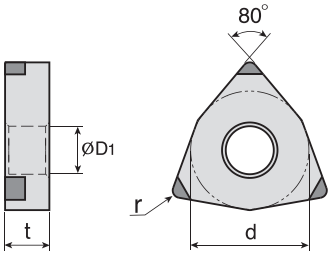
LN - Insert with longer tip LS2 - Insert with 2 tips LS4 - Insert with 4 tips



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## WNGA CBN

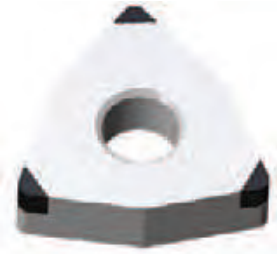


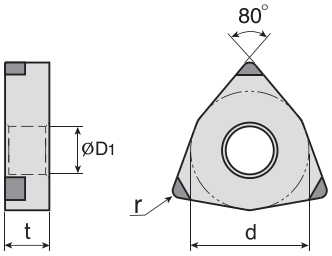



| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inches) l | d | t | r | D1 | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| WNGA 332WZ-LS6 | WNGA 060408 WZ-LS6 | .083 | .375 | .187 | .031 | .150 | | | ◐ | |
| WNGA 432WZ-LS3 | WNGA 080408 WZ-LS3 | .083 | .500 | .187 | .031 | .203 | | ○ | ◐ | |
| WNGA 432WZ-LS6 | WNGA 080408 WZ-LS6 | .083 | .500 | .187 | .031 | .203 | | | ◐ | |
| WNGA 433WZ-LS3 | WNGA 080412 WZ-LS3 | .083 | .500 | .187 | .047 | .203 | | | ◐ | |

LS3 - Insert with 3 tips LS6 - Insert with 6 tips

## WNMA CBN



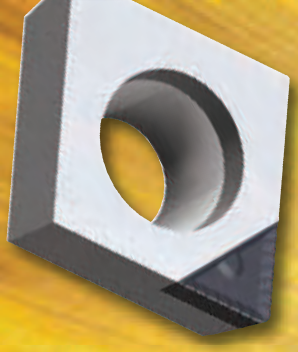


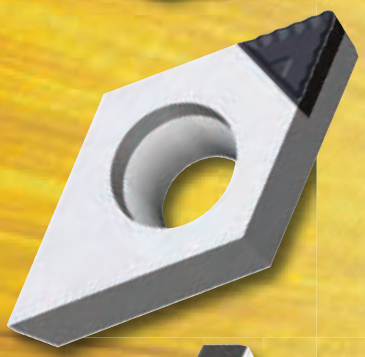

| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inches) l | d | t | r | D1 | Grade | TB610 | TB670 | TB730 |
|---|---|---|---|---|---|---|---|---|---|---|
| WNMA 432LS3 | WNMA 080408 LS3 | .083 | .500 | .187 | .031 | .203 | | | ◐ | |
| WNMA 432LS6 | WNMA 080408 LS6 | .083 | .500 | .187 | .031 | .203 | | | ◐ | |

LS3 - Insert with 3 tips LS6 - Insert with 6 tips



GOLD-RUSH
Member MC Group Ingersoll Cutting Tools





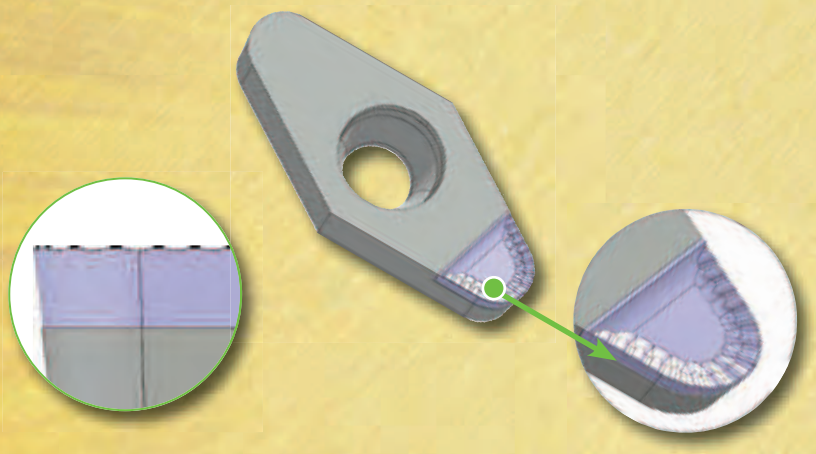


# TOTURN™

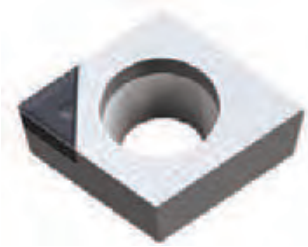
# PCD CHIPBREAKER INSERT

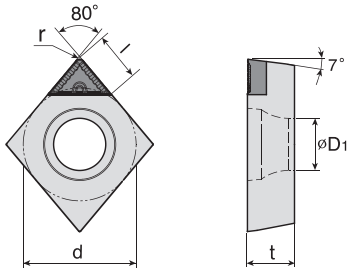
## CB - PCD INSERT WITH SPECIAL TOP FACE GEOMETRY

- Serrated cutting edge ensures maximum chip control and low cutting resistance
- Performs remarkably well even in low depth of cut and low feed
- Unique cutting edge geometry guarantees excellent chipping resistance



## CCGT CB





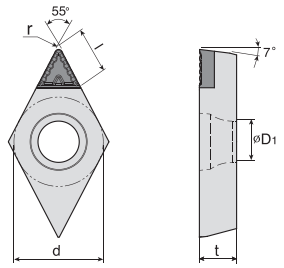

| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inch) | | | | | Grade | |
|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | KP300 |
| CCGT21.51CB | CCGT 060204 CB | 0.122 | 0.250 | 0.094 | 0.016 | 0.110 | | ● |
| CCGT32.50.5CB | CCGT 09T302 CB | 0.163 | 0.375 | 0.156 | 0.008 | 0.173 | | ● |
| CCGT32.51CB | CCGT 09T304 CB | 0.161 | 0.375 | 0.156 | 0.016 | 0.173 | | ● |
| CCGT32.52CB | CCGT 09T308 CB | 0.157 | 0.375 | 0.156 | 0.031 | 0.173 | | ● |
| CCGT431CB | CCGT 120404 CB | 0.161 | 0.500 | 0.187 | 0.016 | 0.217 | | ● |
| CCGT432CB | CCGT 120408 CB | 0.157 | 0.500 | 0.187 | 0.031 | 0.217 | | ● |



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## DCGT CB

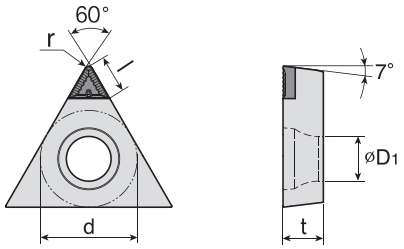





| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inch) | | | | | Grade | KP300 |
|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | |
| DCGT21.50.5CB | DCGT 070202 CB | 0.134 | 0.250 | 0.094 | 0.008 | 0.110 | | ● |
| DCGT21.51CB | DCGT 070204 CB | 0.130 | 0.250 | 0.094 | 0.016 | 0.110 | | ● |
| DCGT32.50.5CB | DCGT 11T302 CB | 0.193 | 0.375 | 0.156 | 0.008 | 0.173 | | ● |
| DCGT32.51CB | DCGT 11T304 CB | 0.185 | 0.375 | 0.156 | 0.016 | 0.173 | | ● |
| DCGT32.52CB | DCGT 11T308 CB | 0.173 | 0.375 | 0.156 | 0.031 | 0.173 | | ● |

## TCGT CB






| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inch) | | | | | Grade | KP300 |
|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | |
| TCGT731CB | TCGT 090204 CB | 0.110 | 0.219 | 0.094 | 0.016 | 0.098 | | ● |
| TCGT21.51CB | TCGT 110204 CB | 0.150 | 0.250 | 0.094 | 0.016 | 0.173 | | ● |
| TCGT32.51CB | TCGT 16T304 CB | 0.154 | 0.375 | 0.156 | 0.016 | 0.173 | | ● |
| TCGT32.52CB | TCGT 16T308 CB | 0.142 | 0.375 | 0.156 | 0.031 | 0.173 | | ● |



GOLD-RUSH
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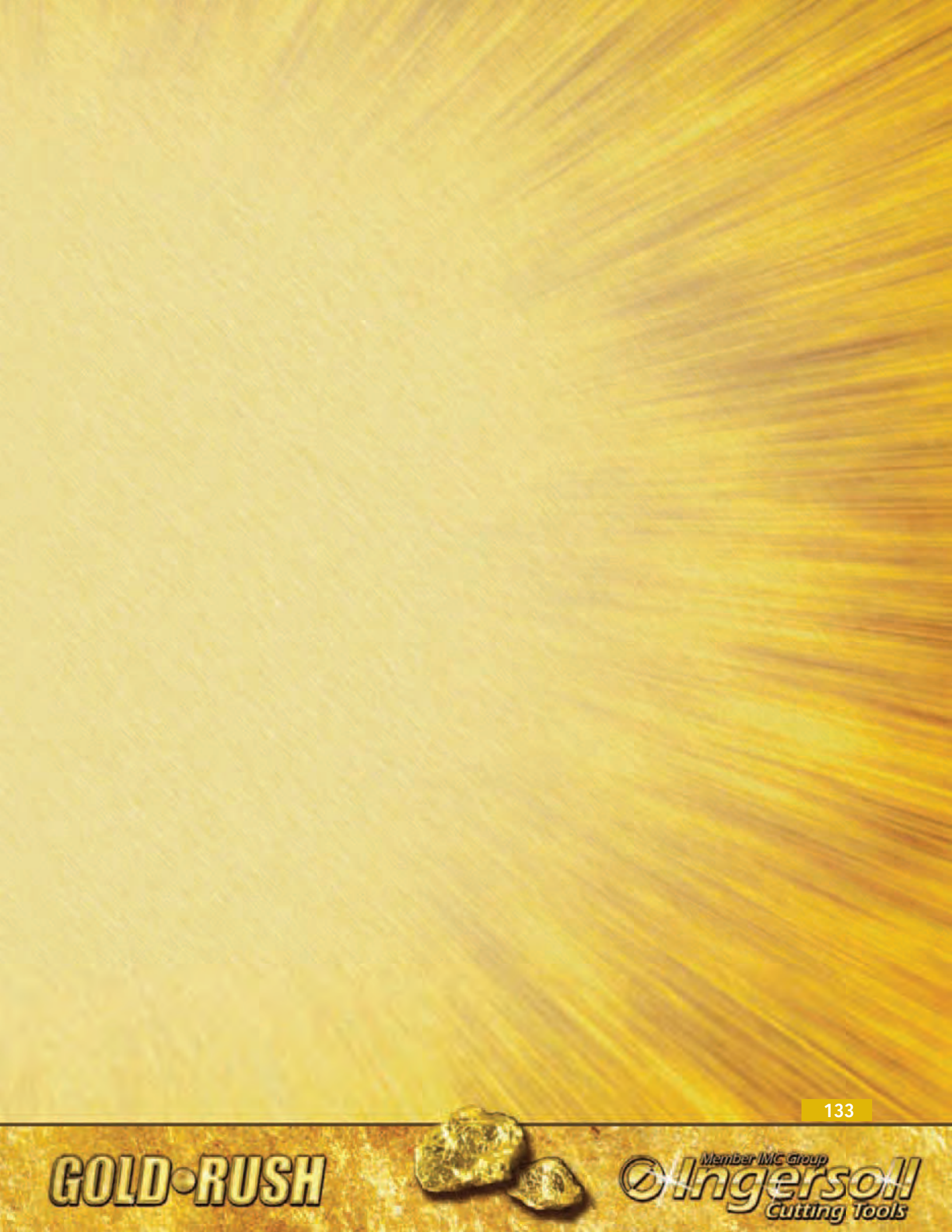
# VCGT CB




| ANSI DESIGNATION | ISO DESIGNATION | Dimensions (inch) | | | | | Grade | |
|---|---|---|---|---|---|---|---|---|
| | | l | d | t | r | D1 | | KP300 |
| VCGT220.5CB | VCGT 110302 CB | 0.185 | 0.250 | 0.125 | 0.008 | 0.110 | | ● |
| VCGT221CB | VCGT 110304 CB | 0.197 | 0.250 | 0.125 | 0.016 | 0.110 | | ● |
| VCGT331CB | VCGT 160404 CB | 0.287 | 0.375 | 0.187 | 0.016 | 0.150 | | ● |
| VCGT332CB | VCGT 160408 CB | 0.252 | 0.375 | 0.187 | 0.031 | 0.150 | | ● |
| VCGT333CB | VCGT 160412 CB | 0.244 | 0.375 | 0.187 | 0.047 | 0.150 | | ● |
| VCGT43.57.5CB | VCGT 220530 CB | 0.252 | 0.500 | 0.219 | 0.118 | 0.217 | | ● |



NEW GOLD GOLD·RUSH


GOLD·RUSH
Member IMC Group
Ingersoll
Cutting Tools




# GOLD·RUSH GRADES FOR T-CLAMP APPLICATIONS

## The ingenious solution that takes cutting tool materials to another level

### FEATURES

- Improved adhesion and insert chipping resistance
- Stable and extended tool life in continuous and interrupted cutting operations
- Reduced cutting friction and minimized built-up edge
- High quality surface finish on the work piece



## GOLD RUSH GRADES IN T-CLAMP APPLICATIONS

### TT9100 (CVD) Steel

This new grade features a 20 micron thick, multi-layer CVD coating for maximum wear resistance. It's ideal for high speed turning and grooving in steel applications.

### TT9080 (PVD) Steel

In order to improve machining performance over our already successful TT9030 grade, Ingersoll has applied the latest coating technology to the same substrate to form grade TT9080. This grade will improve performance in general turning, grooving, profiling and parting applications on carbon steel, alloy steel and stainless steel. Users can expect wear resistance to improve while still maintaining the same toughness.

### TT6300 (CVD) Cast Iron

This new grade features an extra 10 micron thick CVD coating that guarantees excellent tool life, particularly in gray cast iron. It also features a post-coat surface treatment to create a smooth cutting edge that's more resistant to chipping.

### TT6080 (PVD) Cast Iron

The latest PVD coating technology has been applied to the K10 substrate that has multi-nano layers of AlTiN, TiAlCrN and TiN. This ensures outstanding performance when machining ductile cast iron. It also is ideal for interrupted cutting of gray cast iron. It also features a post-coat surface treatment to create a smooth cutting edge that's more resistant to chipping.

### APPLICATION RANGE IN STEEL MACHINING



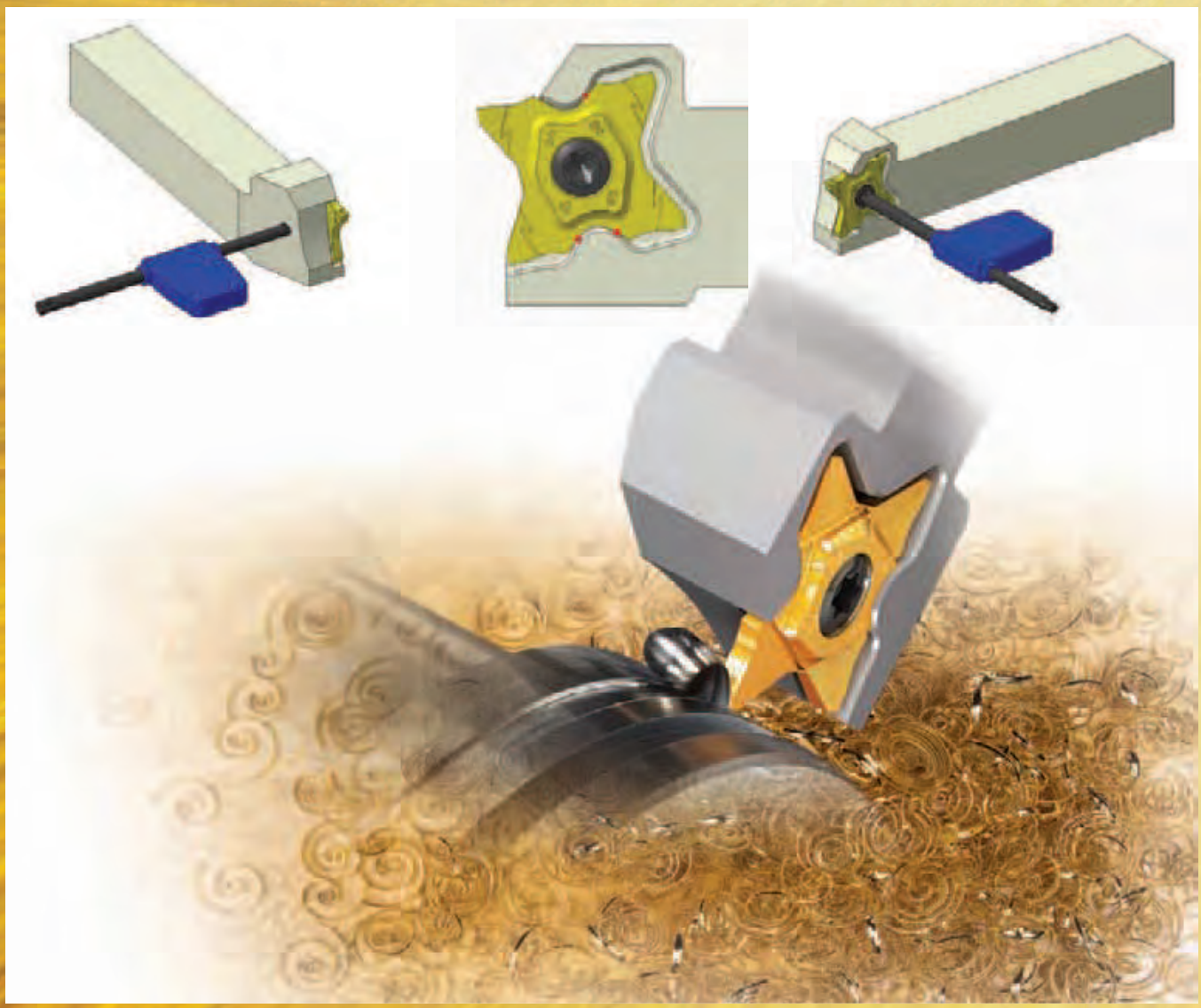

### APPLICATION RANGE IN CAST IRON MACHINING



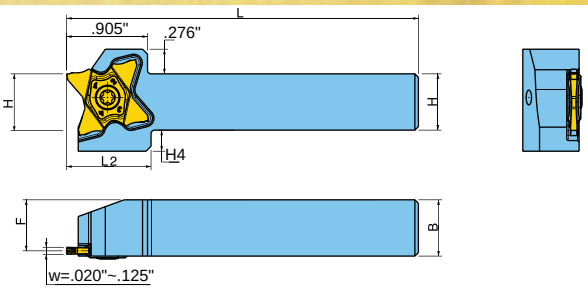
# GOLD-FLEX
QUAD GROOVE LINE

## 4 CUTTING EDGES WITH CHIP FORMER FOR GROOVING, PARTING AND RECESSING

- 4 cutting-edges designed along with chip-former that provides excellent chip control in most applications
- 3 contact points with a side torx screw offers highly accurate positioning of the insert
- Users can release the screw from both side of the holder to index insert. This is another advantage to small machines where there is a small work envelope that restricts insert indexing
- Gold Rush grade TT9080 is the latest coating technology with multi-nano coating layers. It provides improved surface quality and tool life in a wide variety of materials.



# TQHR/L INTEGRAL SHANK TOOLHOLDERS



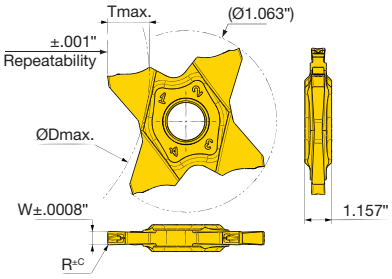

Right hand shown

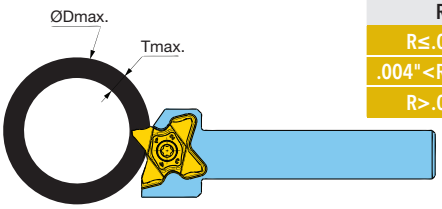
| INCH SHANKS ITEM DESCRIPTION | Dimensions (inch) H | B | F | L | L2 | H4 | Screw | Torx Key | Insert |
|---|---|---|---|---|---|---|---|---|---|
| TQHL9.5-27 | .375 | .375 | .315 | 5.0 | .945 | .374 | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHL12.7-27 | .500 | .500 | .440 | 5.0 | .945 | .287 | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHL19-27 | .750 | .750 | .690 | 5.0 | .945 | .236 | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHL25.4-27 | 1.000 | 1.000 | .940 | 5.5 | - | - | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHR9.5-27 | .375 | .375 | .315 | 5.0 | .945 | .374 | SR16-212-01397L | T-2010/5 | TQJ27... |
| TQHR12.7-27 | .500 | .500 | .440 | 5.0 | .945 | .287 | SR16-212-01397L | T-2010/5 | TQJ27... |
| TQHR19-27 | .750 | .750 | .690 | 5.0 | .945 | .236 | SR16-212-01397L | T-2010/5 | TQJ27... |
| TQHR25.4-27 | 1.000 | 1.000 | .940 | 5.5 | - | - | SR16-212-01397L | T-2010/5 | TQJ27... |

| METRIC SHANKS ITEM DESCRIPTION | Dimensions (mm) H | B | F | L | L2 | H4 | Screw | Torx Key | Insert |
|---|---|---|---|---|---|---|---|---|---|
| TQHL10-27 | 10 | 10 | 8.5 | 120 | 24 | 9 | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHL12-27 | 12 | 12 | 10.5 | 120 | 24 | 8 | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHL16-27 | 16 | 16 | 14.5 | 120 | 24 | 6 | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHL20-27 | 20 | 20 | 18.5 | 120 | 24 | 2 | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHL25-27 | 25 | 25 | 23.5 | 135 | - | - | SR16-212-01397 | T-2010/5 | TQJ27... |
| TQHR10-27 | 10 | 10 | 8.5 | 120 | 24 | 9 | SR16-212-01397L | T-2010/5 | TQJ27... |
| TQHR12-27 | 12 | 12 | 10.5 | 120 | 24 | 8 | SR16-212-01397L | T-2010/5 | TQJ27... |
| TQHR16-27 | 16 | 16 | 14.5 | 120 | 24 | 6 | SR16-212-01397L | T-2010/5 | TQJ27... |
| TQHR20-27 | 20 | 20 | 18.5 | 120 | 24 | 2 | SR16-212-01397L | T-2010/5 | TQJ27... |
| TQHR25-27 | 25 | 25 | 23.5 | 135 | - | - | SR16-212-01397L | T-2010/5 | TQJ27... |

TQHL - Left hand holders  TQHR - Right hand holders

# TQJ27 FOR PRECISION GROOVING, PARTING AND RECESSING




**Tolerance**

| R | C |
|---|---|
| R≤.004" | .0008" |
| .004"<R≤.016" | .0012" |
| R>.016" | .0020" |

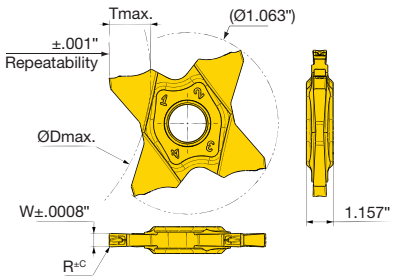
| ITEM DESCRIPTION | W (+/-.0008") | R (inch) | Tmax (inch) | Dmax (inch) T = Groove Depth | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | T<= .118 | T<= .138 | T<= .157 | T<= .177 | T<= .197 | T<= .217 | T<= .236 | T<= .244 | T<= .252 |
| TQJ27-0.50-0.00 | .020 | - | .039 | - | - | - | - | - | - | - | - | - |
| TQJ27-0.50-0.04 | .020 | .002 | .098 | - | - | - | - | - | - | - | - | - |
| TQJ27-0.75-0.10 | .030 | .004 | .098 | - | - | - | - | - | - | - | - | - |
| TQJ27-0.80-0.00 | .031 | - | .063 | - | - | - | - | - | - | - | - | - |
| TQJ27-1.00-0.06 | .039 | .002 | .138 | N.L. | 23.62 | - | - | - | - | - | - | - |
| TQJ27-1.00-0.10 | .039 | .004 | .138 | N.L. | 23.62 | - | - | - | - | - | - | - |
| TQJ27-1.04-0.00 | .041 | - | .079 | - | - | - | - | - | - | - | - | - |
| TQJ27-1.20-0.00 | .047 | - | .079 | - | - | - | - | - | - | - | - | - |
| TQJ27-1.25-0.10 | .049 | .004 | .138 | N.L. | 23.62 | - | - | - | - | - | - | - |
| TQJ27-1.25-0.20 | .049 | .008 | .138 | N.L. | 23.62 | - | - | - | - | - | - | - |
| TQJ27-1.40-0.00 | .055 | - | .079 | - | - | - | - | - | - | - | - | - |
| TQJ27-1.47-0.00 | .058 | - | .098 | - | - | - | - | - | - | - | - | - |
| TQJ27-1.50-0.10 | .059 | .004 | .197 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | - | - | - | - |
| TQJ27-1.50-0.20 | .059 | .008 | .197 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | - | - | - | - |
| TQJ27-1.57-0.15 | .062 | .006 | .118 | N.L. | - | - | - | - | - | - | - | - |
| TQJ27-1.57-0.79 | .062 | .031 | .118 | N.L. | - | - | - | - | - | - | - | - |
| TQJ27-1.70-0.10 | .067 | .004 | .118 | N.L. | - | - | - | - | - | - | - | - |
| TQJ27-1.75-0.10 | .069 | .004 | .118 | N.L. | - | - | - | - | - | - | - | - |
| TQJ27-1.75-0.20 | .069 | .008 | .118 | N.L. | - | - | - | - | - | - | - | - |
| TQJ27-1.78-0.18 | .070 | .007 | .118 | N.L. | - | - | - | - | - | - | - | - |
| TQJ27-1.85-0.20 | .073 | .008 | .118 | N.L. | - | - | - | - | - | - | - | - |

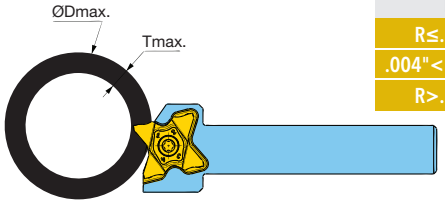
1. N.L. = No Limit
2. Recessing is possible only with 2.39mm (.094") and wider inserts



NEW GOLD
GOLD-RUSH

# TQJ27 FOR PRECISION GROOVING, PARTING AND RECESSING



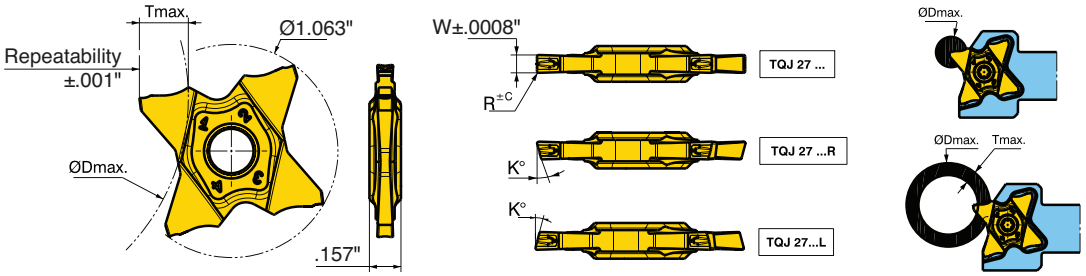




| Tolerance | |
|---|---|
| R | C |
| R≤.004" | .0008" |
| .004"<R≤.016" | .0012" |
| R>.016" | .0020" |

| ITEM DESCRIPTION | W (+/-.0008") | R (inch) | Tmax (inch) | Dmax (inch) T = Groove Depth | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | T<= .118 | T<= .138 | T<= .157 | T<= .177 | T<= .197 | T<= .217 | T<= .236 | T<= .244 | T<= .252 |
| TQJ27-1.96-0.15 | .077 | .006 | .118 | N.L. | - | - | - | - | - | - | - | - |
| TQJ27-2.00-0.10 | .079 | .004 | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | 4.13 | 2.36 | 1.97 | 1.18 |
| TQJ27-2.00-0.20 | .079 | .008 | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | 4.13 | 2.36 | 1.97 | 1.18 |
| TQJ27-2.00-1.00 | .079 | .039 | .118 | N.L. | - | - | - | - | - | - | - | - |
| TQJ27-2.22-0.15 | .087 | .006 | .138 | N.L. | 23.62 | - | - | - | - | - | - | - |
| TQJ27-2.30-0.20 | .091 | .008 | .138 | N.L. | 23.62 | - | - | - | - | - | - | - |
| TQJ27-2.39-0.15 | .094 | .006 | .197 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | - | - | - | - |
| TQJ27-2.39-1.20 | .094 | .047 | .197 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | - | - | - | - |
| TQJ27-2.47-0.20 | .097 | .008 | .197 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | - | - | - | - |
| TQJ27-2.50-0.10 | .098 | .004 | .197 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | - | - | - | - |
| TQJ27-2.50-0.30 | .098 | .012 | .197 | N.L. | 23.62 | 11.02 | 7.09 | 5.12 | - | - | - | - |
| TQJ27-2.70-0.10 | .106 | .004 | .244 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | - |
| TQJ27-2.87-0.20 | .113 | .008 | .244 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | - |
| TQJ27-3.00-0.00 | .118 | - | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | 2.17 |
| TQJ27-3.00-0.20 | .118 | .008 | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | 2.17 |
| TQJ27-3.00-0.30 | .118 | .012 | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | 2.17 |
| TQJ27-3.00-0.40 | .118 | .016 | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | 2.17 |
| TQJ27-3.00-1.50 | .118 | .059 | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | 2.17 |
| TQJ27-3.15-0.15 | .124 | .006 | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | 2.68 |
| TQJ27-3.18-0.20 | .125 | .008 | .252 | N.L. | 23.62 | 11.02 | 7.09 | 5.31 | 4.13 | 3.35 | 3.07 | 2.68 |

1. N.L. = No Limit
2. Recessing is possible only with 2.39mm (.094") and wider inserts

# TQJ27 FOR PARTING AND GROOVING




| | | (inch) | | Parting to Center (inch) | Parting Hollow Bars (inch) | (inch) |
|---|---|---|---|---|---|---|
| TQJ27-0.50-0.04 | .020 | .002 | 0 | .197 | .098 | No Limit |
| TQJ27-1.00-0.06 | .039 | .002 | 0 | .276 | .138 | 23.62 |
| TQJ27-1.50-0.10 | .059 | .004 | 0 | .472 | .197 | 5.12 |
| TQJ27-2.00-0.20 | .079 | .008 | 0 | .512 | .252 | 1.18 |
| TQU27-1.00-15R/L | .039 | .002 | 15 | .276 | .138 | 23.62 |
| TQJ27-1.50-6R/L | .059 | .002 | 6 | .472 | .197 | 5.12 |
| TQJ27-1.50-15R/L | .059 | .002 | 15 | .472 | .197 | 5.12 |
| TQJ27-2.00-6R/L | .079 | .004 | 6 | .512 | .252 | 1.18 |
| TQJ27-2.00-15R/L | .079 | .004 | 15 | .512 | .252 | 1.18 |



NEW GOLD GOLD·RUSH

## MACHINING CONDITION

| ISO | Material | | Condition | Tensile Strength Rm(N/mm2) | Hardness HB | Coated | | Uncoated |
|---|---|---|---|---|---|---|---|---|
| | | | | | | TT9080 / TT9030 / TT7220 | TT8020 | K10 |
| P | Non-alloy steel, cast steel, free cutting steel | <0.25 %C | Annealed | 420 | 125 | 460~820 | 260~390 | |
| | | >=0.25 %C | Annealed | 650 | 190 | 430~720 | 260~360 | |
| | | <0.55 %C | Quenched and tempered | 850 | 250 | 300~660 | 230~300 | |
| | | >=0.55%C | Annealed | 750 | 220 | 330~720 | 230~330 | |
| | | | Quenched and tempered | 1000 | 300 | 230~560 | 130~230 | |
| | Low alloy steel and cast steel (less than 5% alloying elements) | | Annealed | 600 | 200 | 300~390 | 230~330 | |
| | | | Quenched and tempered | 930 | 275 | 260~560 | 160~230 | |
| | | | | 1000 | 300 | 230~430 | 130~200 | |
| | | | | 1200 | 350 | 160~390 | 100~160 | |
| | High alloy steel, cast steel and tool steel. | | Annealed | 680 | 200 | 200~460 | 160~260 | |
| | | | Quenched and tempered | 1100 | 325 | 160~230 | 100~200 | |
| M | Stainless steel and cast steel | | Ferritic/martensitic | 680 | 200 | 230~560 | 260~390 | |
| | | | Martensitic | 820 | 240 | 200~490 | 200~300 | |
| | | | Austenitic | 600 | 180 | 300~590 | 200~300 | |
| K | Malleable cast iron | | Ferritic/pearlitic | | 180 | 390~820 | | 200~280 |
| | | | Pearlitic | | 260 | 330~690 | | 150~250 |
| | Gray cast iron (GG) | | Ferritic | | 160 | 330~750 | | 200~260 |
| | | | Pearlitic | | 250 | 300~590 | | 160~230 |
| | Cast iron nodular (GGG) | | Ferritic | | 130 | 620~980 | | 230~330 |
| | | | Pearlitic | | 230 | 390~720 | | 230~300 |
| S | High temp. alloys | Fe based | Annealed | | 200 | 130~230 | | 110~160 |
| | | | Cured | | 280 | 100~160 | | 80~130 |
| | | Ni or Co based | Annealed | | 250 | 100~130 | | 70~100 |
| | | | Cured | | 350 | 50~80 | | 50~70 |
| | | | Cast | | 320 | 50~100 | | 50~70 |
| | Titanium, Ti alloys | | | Rm 400 | | 300~620 | | 490~660 |
| | | Alpha+beta alloys cured | | Rm 1050 | | 100~200 | | 160~260 |

### Feed Rate

Neutral: 0.05 - 0.18 mm/rev
Handed: Reduce 20% feed rate



GOLD-RUSH
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# T-MICRO™

## Internal turning, profiling, grooving and face machining of small diameters

- Internal coolant through the body.
- Internal machining from Dmin 0.6mm (.023").
- Ideal solution for internal turning, profiling, grooving and face machining especially on small diameters.





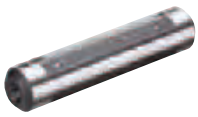
### Machining Condition

| Speed (sfm) | | Feed (ipr) | | |
|---|---|---|---|---|
| | | Turning | Grooving | Face Grooving |
| P | 35 - 560 | .0008" - .0002" | .0004" - .0008" | .0004" - .003" |
| K | 35 - 500 | | | |
| S | 35 - 395 | | | |

## SLEEVES FOR THE TOP-MICRO

Our new sleeves have been designed to accommodate the T-Micro and solid carbide drills. They have a stopper inside the hole that allows operators to restart without resetting after indexing. They also allow users to replace tools without removing the sleeve from the tool post.

Sleeve





for T-MICRO™ (Ø.457" & Ø.276")



for T-TURN™ boring bars (coming soon)



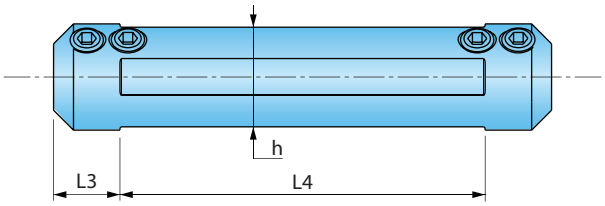
for solid drills

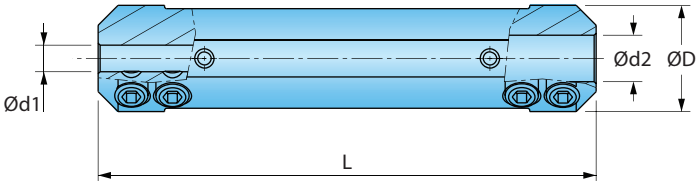


NEW GOLD GOLD-RUSH



# SLEEVES



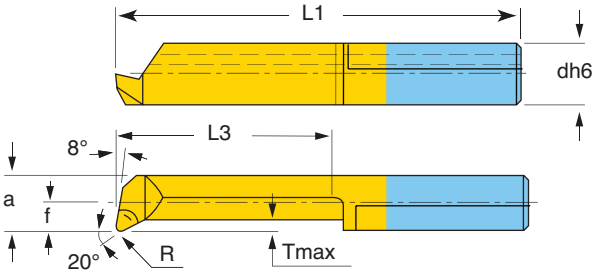



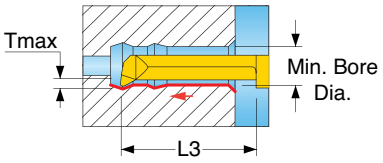

| Designation | Dimensions (inches) | | | | | | | Set Screw | Wrench |
|---|---|---|---|---|---|---|---|---|---|
| | ØD | Ød1 | Ød2 | L | L3 | L4 | h | | |
| MINSL 12-4-4 | .472 | .157 | .197~.157 | 2.95 | .39 | 2.17 | .41 | SSM5X0.8X4-MG | L-W2.5 |
| MINSL 12.7-4-4 | .500 | .157 | .197~.157 | 3.00 | .39 | 2.21 | .46 | SSM5X0.8X4-MG | L-W2.5 |
| MINSL 14-4-4 | .551 | .157 | .197~.157 | 2.95 | .39 | 2.17 | .47 | SSM5X0.8X6-MG | L-W2.5 |
| MINSL 15.9-4-7 | .625 | .157 | .197~276 | 3.00 | .39 | 2.21 | .55 | SSM5X0.8X6-MG | L-W2.5 |
| MINSL 16-4-7 | .630 | .157 | .197~276 | 2.95 | .39 | 2.17 | .59 | SSM5X0.8X6-MG | L-W2.5 |
| MINSL 19-4-7 | .750 | .157 | .197~276 | 3.50 | .39 | 2.72 | .68 | SSM5X0.8X6-MG | L-W2.5 |
| MINSL 20-4-7 | .787 | .157 | .197~276 | 3.54 | .39 | 2.76 | .71 | SSM5X0.8X6-MG | L-W2.5 |
| MINSL 22-4-7 | .866 | .157 | .197~276 | 3.54 | .39 | 2.76 | .79 | SSM5X0.8X6-MG | L-W2.5 |
| MINSL 25-4-7 | .984 | .157 | .197~276 | 3.94 | .39 | 3.15 | .91 | SSM5X0.8X6-MG | L-W2.5 |
| MINSL 25.4-4-7 | 1.000 | .157 | .197~276 | 3.54 | .39 | 2.76 | .92 | SSM5X0.8X6-MG | L-W2.5 |



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# MINT - MINI CARBIDE BARS FOR INTERNAL TURNING AND CHAMFERING



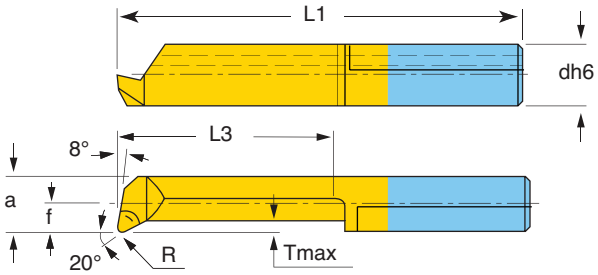

| Designation | Dimensions (inches) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | dh6 | f | a | L1 | L3 | R±0.002 | Tmax | Dmin | R/L | Grade |
| *MINTR04-020004D006 | .157 | - | .020 | .728 | .14 | .002 | .003 | .024 | R | TT9030 |
| *MINTR04-030004D006 | .157 | - | .020 | .768 | .18 | .002 | .003 | .024 | R | TT9030 |
| MINTR04-045005D010 | .157 | - | .035 | .827 | .24 | .002 | .004 | .039 | R | TT9030 |
| MINTR04-065005D010 | .157 | - | .035 | .906 | .31 | .002 | .004 | .039 | R | TT9030 |
| MINTR04-040005D020 | .157 | - | .067 | .807 | .22 | .002 | .004 | .079 | R | TT9030 |
| MINTR04-090005D020 | .157 | - | .067 | 1.004 | .41 | .002 | .004 | .079 | R | TT9030 |
| MINTR04-140005D020 | .157 | - | .067 | 1.201 | .61 | .002 | .004 | .079 | R | TT9030 |
| MINTL04-090010D028 | .157 | .024 | .102 | 1.004 | .41 | .004 | .008 | .110 | L | TT9030 |
| MINTR04-090010D028 | .157 | .024 | .102 | 1.004 | .41 | .004 | .008 | .110 | R | TT9030 |
| MINTL04-150010D028 | .157 | .024 | .102 | 1.240 | .65 | .004 | .008 | .110 | L | TT9030 |
| MINTR04-150010D028 | .157 | .024 | .102 | 1.240 | .65 | .004 | .008 | .110 | R | TT9030 |
| MINTL04-190010D028 | .157 | .024 | .102 | 1.398 | .81 | .004 | .008 | .110 | L | TT9030 |
| MINTR04-190010D028 | .157 | .024 | .102 | 1.339 | .81 | .004 | .008 | .110 | R | TT9030 |
| MINTL04-090010D040 | .157 | .059 | .138 | 1.004 | .41 | .004 | .012 | .157 | L | TT9030 |
| MINTR04-090010D040 | .157 | .059 | .138 | 1.004 | .41 | .004 | .012 | .157 | R | TT9030 |
| MINTL04-150010D040 | .157 | .059 | .138 | 1.240 | .65 | .004 | .012 | .157 | L | TT9030 |
| MINTR04-150010D040 | .157 | .059 | .138 | 1.240 | .65 | .004 | .012 | .157 | R | TT9030 |
| MINTL04-190010D040 | .157 | .059 | .138 | 1.398 | .81 | .004 | .012 | .157 | L | TT9030 |
| MINTR04-190010D040 | .157 | .059 | .138 | 1.398 | .81 | .004 | .012 | .157 | R | TT9030 |
| MINTR04-230010D040 | .157 | .059 | .138 | 1.555 | .96 | .004 | .012 | .157 | R | TT9030 |
| MINTR04-270010D040 | .157 | .059 | .138 | 1.713 | 1.12 | .004 | .012 | .157 | R | TT9030 |

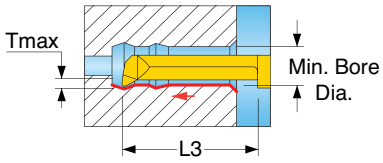
*Max DOC = .0004"~.0012", Max feed = .0004" ipr



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# MINT - MINI CARBIDE BARS FOR INTERNAL TURNING AND CHAMFERING



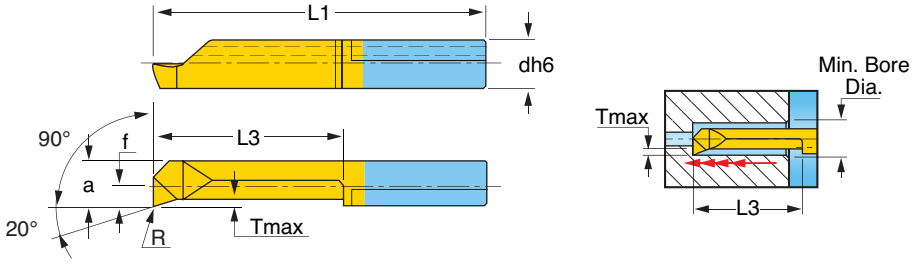




| Designation | Dimensions (inches) dh6 | f | a | L1 | L3 | R±0.002 | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| MINTL07-090015D050 | .276 | .075 | .173 | .984 | .35 | .006 | .020 | .197 | L | TT9030 |
| MINTR07-090015D050 | .276 | .075 | .173 | .984 | .35 | .006 | .020 | .197 | R | TT9030 |
| MINTL07-140015D050 | .276 | .075 | .173 | 1.181 | .55 | .006 | .020 | .197 | L | TT9030 |
| MINTR07-140015D050 | .276 | .075 | .173 | 1.181 | .55 | .006 | .020 | .197 | R | TT9030 |
| MINTL07-190015D050 | .276 | .075 | .173 | 1.378 | .75 | .006 | .020 | .197 | L | TT9030 |
| MINTR07-190015D050 | .276 | .075 | .173 | 1.378 | .75 | .006 | .020 | .197 | R | TT9030 |
| MINTL07-240015D050 | .276 | .075 | .173 | 1.575 | .94 | .006 | .020 | .197 | L | TT9030 |
| MINTR07-240015D050 | .276 | .075 | .173 | 1.575 | .94 | .006 | .020 | .197 | R | TT9030 |
| MINTL07-290015D050 | .276 | .075 | .173 | 1.772 | 1.14 | .006 | .020 | .197 | L | TT9030 |
| MINTR07-290015D050 | .276 | .075 | .173 | 1.772 | 1.14 | .006 | .020 | .197 | R | TT9030 |
| MINTR07-340015D050 | .276 | .075 | .173 | 1.969 | 1.34 | .006 | .020 | .197 | R | TT9030 |
| MINTL07-140015D060 | .276 | .091 | .209 | 1.181 | .55 | .006 | .020 | .236 | L | TT9030 |
| MINTR07-140015D060 | .276 | .091 | .209 | 1.181 | .55 | .006 | .020 | .236 | R | TT9030 |
| MINTL07-210015D060 | .276 | .091 | .209 | 1.457 | .83 | .006 | .020 | .236 | L | TT9030 |
| MINTR07-210015D060 | .276 | .091 | .209 | 1.457 | .83 | .006 | .020 | .236 | R | TT9030 |
| MINTL07-240015D060 | .276 | .091 | .209 | 1.575 | .94 | .006 | .020 | .236 | L | TT9030 |
| MINTR07-240015D060 | .276 | .091 | .209 | 1.575 | .94 | .006 | .020 | .236 | R | TT9030 |
| MINTL07-290015D060 | .276 | .091 | .209 | 1.772 | 1.14 | .006 | .020 | .236 | L | TT9030 |
| MINTR07-290015D060 | .276 | .091 | .209 | 1.772 | 1.14 | .006 | .020 | .236 | R | TT9030 |
| MINTR07-340015D060 | .276 | .091 | .209 | 1.969 | 1.34 | .006 | .020 | .236 | R | TT9030 |
| MINTR07-410015D060 | .276 | .091 | .209 | 2.244 | 1.61 | .006 | .020 | .236 | R | TT9030 |
| MINTL07-190015D068 | .276 | .110 | .248 | 1.378 | .75 | .006 | .024 | .268 | L | TT9030 |
| MINTR07-190015D068 | .276 | .110 | .248 | 1.378 | .75 | .006 | .024 | .268 | R | TT9030 |
| MINTR07-240015D068 | .276 | .110 | .248 | 1.575 | .94 | .006 | .024 | .268 | R | TT9030 |
| MINTL07-290015D068 | .276 | .110 | .248 | 1.772 | 1.14 | .006 | .024 | .268 | L | TT9030 |
| MINTR07-290015D068 | .276 | .110 | .248 | 1.772 | 1.14 | .006 | .024 | .268 | R | TT9030 |
| MINTL07-340015D070 | .276 | .110 | .248 | 1.969 | 1.34 | .006 | .024 | .276 | L | TT9030 |
| MINTR07-340015D070 | .276 | .110 | .248 | 1.969 | 1.34 | .006 | .024 | .276 | R | TT9030 |
| MINTR07-390015D070 | .276 | .110 | .248 | 2.165 | 1.54 | .006 | .024 | .276 | R | TT9030 |
| MINTR07-440015D070 | .276 | .110 | .248 | 2.362 | 1.73 | .006 | .024 | .276 | R | TT9030 |
| MINTR07-490015D070 | .276 | .110 | .248 | 2.559 | 1.93 | .006 | .024 | .276 | R | TT9030 |



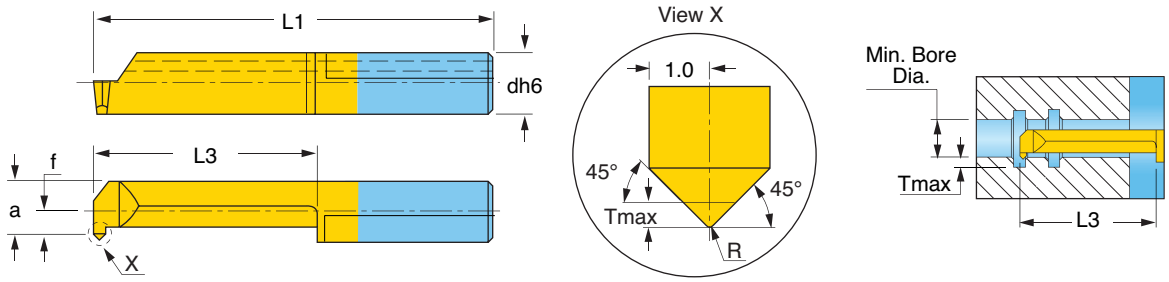
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Member MC Group Ingersoll Cutting Tools

## MINP - MINI CARBIDE BARS FOR INTERNAL TURNING AND PROFILING




| Designation | Dimensions (inches) dh6 | f | a | L1 | L3 | R±0.002 | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| MINPR04-090010D028 | .157 | .024 | .102 | 1.004 | .413 | .004 | .008 | .110 | R | TT9030 |
| MINPR04-150010D028 | .157 | .024 | .102 | 1.240 | .650 | .004 | .008 | .110 | R | TT9030 |
| MINPR04-090010D040 | .157 | .059 | .138 | 1.004 | .413 | .004 | .012 | .157 | R | TT9030 |
| MINPR04-150010D040 | .157 | .059 | .138 | 1.240 | .650 | .004 | .012 | .157 | R | TT9030 |
| MINPR07-140015D050 | .276 | .035 | .173 | 1.181 | .591 | .006 | .020 | .197 | R | TT9030 |
| MINPR07-190015D050 | .276 | .035 | .173 | 1.378 | .787 | .006 | .020 | .197 | R | TT9030 |

## MINC - MINI CARBIDE BARS FOR INTERNAL TURNING AND 45° CHAMFERING

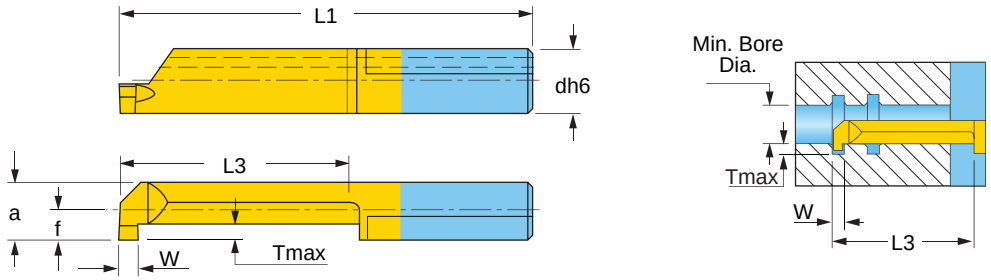



| Designation | Dimensions (inches) dh6 | R±0.0016 | f | a | L1 | L3 | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| MINCR07-140020D050 | .276 | .008 | .035 | .173 | .591 | .551 | .028 | .197 | R | TT9030 |
| MINCR07-190020D050 | .276 | .008 | .035 | .173 | .787 | .748 | .028 | .197 | R | TT9030 |
| MINCR07-190020D068 | .276 | .008 | .110 | .248 | .787 | .748 | .028 | .268 | R | TT9030 |



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# MING - MINI CARBIDE BARS FOR GROOVING AND TURNING

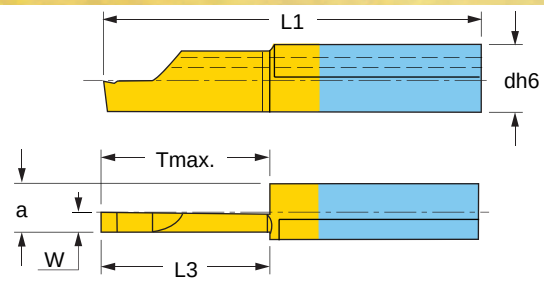



| Designation | Dimensions (inches) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | dh6 | W±0.05 | f | a | L1 | L3 | Tmax | Dmin | R/L | Grade |
| MINGR04-050050-D20 | .157 | .020 | .008 | .071 | .827 | .236 | .016 | .079 | R | TT9030 |
| MINGR04-100050-D20 | .157 | .020 | .008 | .071 | 1.024 | .433 | .016 | .079 | R | TT9030 |
| MINGR04-050070-D30 | .157 | .028 | .028 | .106 | .827 | .236 | .024 | .118 | R | TT9030 |
| MINGR04-100070-D30 | .157 | .028 | .028 | .106 | 1.024 | .433 | .024 | .118 | R | TT9030 |
| MINGR04-090100-D40 | .157 | .039 | .059 | .138 | 1.004 | .413 | .031 | .157 | R | TT9030 |
| MINGR04-150100-D40 | .157 | .039 | .059 | .138 | 1.240 | .650 | .031 | .157 | R | TT9030 |
| MINGR07-090100-D50 | .276 | .039 | .035 | .173 | .984 | .394 | .039 | .197 | R | TT9030 |
| MINGR07-140100-D50 | .276 | .039 | .035 | .173 | 1.181 | .591 | .039 | .197 | R | TT9030 |
| MINGR07-090150-D50 | .276 | .059 | .035 | .173 | .984 | .394 | .039 | .197 | R | TT9030 |
| MINGR07-140150-D50 | .276 | .059 | .035 | .173 | 1.181 | .591 | .039 | .197 | R | TT9030 |
| MINGR07-090200-D50 | .276 | .079 | .035 | .173 | .984 | .394 | .039 | .197 | R | TT9030 |
| MINGR07-190200-D50 | .276 | .079 | .035 | .173 | 1.378 | .787 | .039 | .197 | R | TT9030 |
| MINGR07-090100D060 | .276 | .039 | .071 | .209 | .984 | .394 | .071 | .236 | R | TT9030 |
| MINGL07-090100D060 | .276 | .039 | .071 | .209 | .984 | .394 | .071 | .236 | L | TT9030 |
| MINGR07-140100D060 | .276 | .039 | .071 | .209 | 1.181 | .591 | .071 | .236 | R | TT9030 |
| MINGR07-210100D060 | .276 | .039 | .071 | .209 | 1.457 | .866 | .071 | .236 | R | TT9030 |
| MINGR07-290100D060 | .276 | .039 | .071 | .209 | 1.772 | 1.181 | .071 | .236 | R | TT9030 |
| MINGR07-090150D060 | .276 | .059 | .071 | .209 | .984 | .394 | .071 | .236 | R | TT9030 |
| MINGL07-090150D060 | .276 | .059 | .071 | .209 | .984 | .394 | .071 | .236 | L | TT9030 |
| MINGR07-140150D060 | .276 | .059 | .071 | .209 | 1.181 | .591 | .071 | .236 | R | TT9030 |
| MINGR07-210150D060 | .276 | .059 | .071 | .209 | 1.457 | .866 | .071 | .236 | R | TT9030 |
| MINGR07-240150D060 | .276 | .059 | .071 | .209 | 1.575 | .984 | .071 | .236 | R | TT9030 |
| MINGR07-290150D060 | .276 | .059 | .071 | .209 | 1.772 | 1.181 | .071 | .236 | R | TT9030 |
| MINGR07-090200D060 | .276 | .079 | .071 | .209 | .984 | .394 | .071 | .236 | R | TT9030 |
| MINGR07-140200D060 | .276 | .079 | .071 | .209 | 1.181 | .591 | .071 | .236 | R | TT9030 |
| MINGR07-210200D060 | .276 | .079 | .071 | .209 | 1.457 | .866 | .071 | .236 | R | TT9030 |
| MINGR07-240200D060 | .276 | .079 | .071 | .209 | 1.575 | .984 | .071 | .236 | R | TT9030 |
| MINGR07-290200D060 | .276 | .079 | .071 | .209 | 1.772 | 1.181 | .071 | .236 | R | TT9030 |
| MINGR07-090100D068 | .276 | .039 | .106 | .244 | .984 | .394 | .098 | .268 | R | TT9030 |
| MINGR07-140100D068 | .276 | .039 | .106 | .244 | 1.181 | .591 | .098 | .268 | R | TT9030 |
| MINGR07-210100D068 | .276 | .039 | .106 | .244 | 1.457 | .866 | .098 | .268 | R | TT9030 |
| MINGR07-090150D068 | .276 | .059 | .106 | .244 | .984 | .394 | .098 | .268 | R | TT9030 |
| MINGR07-140150D068 | .276 | .059 | .106 | .244 | 1.181 | .591 | .098 | .268 | R | TT9030 |
| MINGR07-210150D068 | .276 | .059 | .106 | .244 | 1.457 | .866 | .098 | .268 | R | TT9030 |
| MINGR07-290150D068 | .276 | .059 | .106 | .244 | 1.772 | 1.181 | .098 | .268 | R | TT9030 |
| MINGR07-090200D068 | .276 | .079 | .106 | .244 | .984 | .394 | .098 | .268 | R | TT9030 |
| MINGR07-140200D068 | .276 | .079 | .106 | .244 | 1.181 | .591 | .098 | .268 | R | TT9030 |
| MINGL07-140200D068 | .276 | .079 | .106 | .244 | 1.181 | .591 | .098 | .268 | L | TT9030 |
| MINGR07-210200D068 | .276 | .079 | .106 | .244 | 1.457 | .866 | .098 | .268 | R | TT9030 |
| MINGR07-240200D068 | .276 | .079 | .106 | .244 | 1.575 | .945 | .098 | .268 | R | TT9030 |
| MINGR07-290200D068 | .276 | .079 | .106 | .244 | 1.772 | 1.142 | .098 | .268 | R | TT9030 |



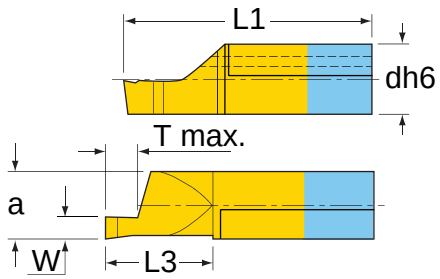
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## MINF - MINI CARBIDE BARS FOR DEEP FACE GROOVING




| Designation | Dimensions (inches) dh6 | W | a | L3 | L1 | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|
| MINFR07-200250D150 | .276 | .098 | .232 | .827 | 1.417 | .787 | .591 | R | TT9030 |
| MINFR07-200300D150 | .276 | .118 | .232 | .827 | 1.417 | .787 | .591 | R | TT9030 |
| MINFR07-300300D150 | .276 | .118 | .232 | 1.220 | 1.811 | 1.181 | .591 | R | TT9030 |

## MINF - MINI CARBIDE BARS FOR FACE GROOVING

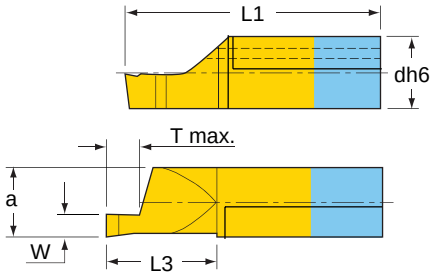



| Designation | Dimensions (inches) dh6 | f | a | L3 | L1 | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|
| MINFR07-110100D060 | .276 | .039 | .205 | .433 | 1.024 | .059 | .236 | R | TT9030 |
| MINFR07-110100D080 | .276 | .039 | .232 | .472 | 1.063 | .059 | .315 | R | TT9030 |
| MINFR07-110150D060 | .276 | .059 | .205 | .433 | 1.024 | .079 | .236 | R | TT9030 |
| MINFR07-110200D060 | .276 | .079 | .232 | .472 | 1.063 | .118 | .315 | R | TT9030 |
| MINFR07-200200D080 | .276 | .079 | .205 | .787 | 1.378 | .118 | .315 | R | TT9030 |
| MINFL07-210150D080 | .276 | .059 | .232 | .827 | 1.417 | .098 | .315 | L | TT9030 |
| MINFR07-110150D080 | .276 | .059 | .232 | .866 | 1.417 | .098 | .315 | R | TT9030 |
| MINFR07-210150D080 | .276 | .059 | .232 | .866 | 1.417 | .098 | .315 | R | TT9030 |
| MINFL07-300200D080 | .276 | .079 | .232 | 1.220 | 1.811 | .118 | .315 | L | TT9030 |
| MINFR07-110200D080 | .276 | .079 | .232 | .472 | 1.063 | .118 | .315 | R | TT9030 |
| MINFR07-210200D080 | .276 | .079 | .232 | .866 | 1.417 | .118 | .315 | R | TT9030 |
| MINFR07-110250D080 | .276 | .098 | .232 | .472 | 1.063 | .138 | .315 | R | TT9030 |
| MINFR07-210250D080 | .276 | .098 | .232 | .866 | 1.417 | .138 | .315 | R | TT9030 |
| MINFR07-110300D080 | .276 | .118 | .232 | .472 | 1.063 | .138 | .315 | R | TT9030 |
| MINFR07-210300D080 | .276 | .118 | .232 | .866 | 1.417 | .138 | .315 | R | TT9030 |
| MINFR07-300300D080 | .276 | .118 | .232 | 1.220 | 1.811 | .138 | .315 | R | TT9030 |



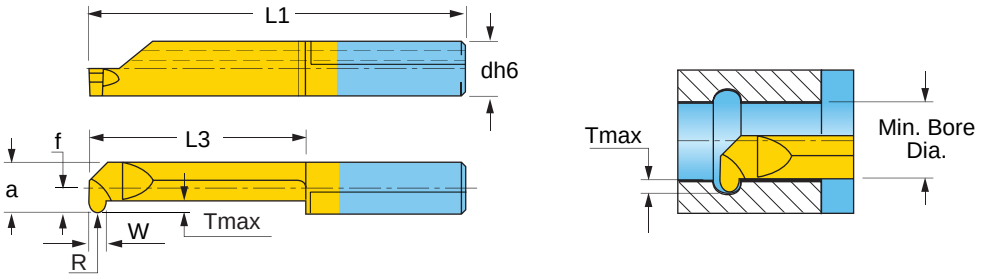
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## MINA - MINI CARBIDE BARS FOR SHAFT GROOVING




| Designation | Dimensions (inches) dh6 | W | a | L3 | L1 | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|
| MINAR07-200200D060 | .276 | .079 | .205 | .827 | 1.417 | .157 | .236 | R | TT9030 |

## MINR - MINI CARBIDE BARS, FULL RADIUS FOR INTERNAL BORING AND PROFILING

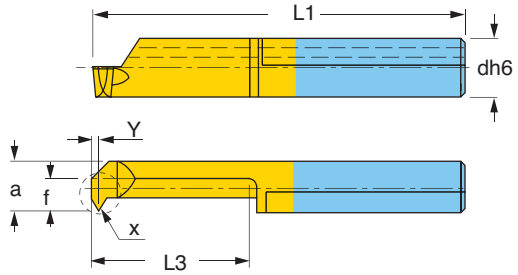


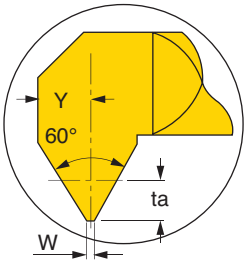

| Designation | Dimensions (inches) dh6 | W±0.002 | f | a | R | L1 | L3 | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINRR07-190050D050 | .276 | .039 | .035 | .173 | .020 | 1.378 | .787 | .039 | .197 | R | TT9030 |
| MINRR07-240050D060 | .276 | .039 | .071 | .209 | .020 | 1.575 | .984 | .071 | .236 | R | TT9030 |
| MINRR07-290050D068 | .276 | .039 | .110 | .248 | .020 | 1.772 | 1.181 | .098 | .268 | R | TT9030 |



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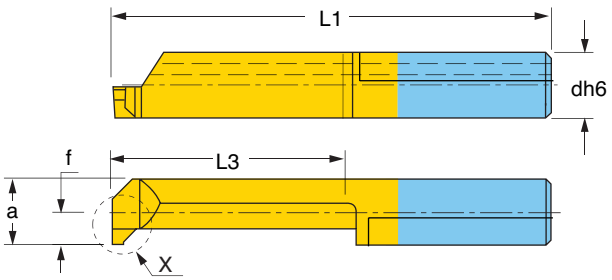
# MINN - MINI CARBIDE BARS FOR ISO FULL PROFILE INTERNAL THREAD TURNING

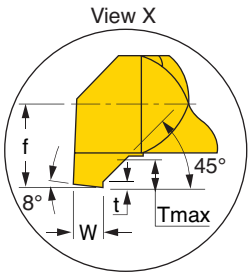



| Designation | Dimensions (inches) dh6 | Pitch | te | W+.000 -.001 | Y | f | a | L3 | L1 | Dmin | Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINNR04-140050D040 | .157 | .50 | .012 | .002 | .014 | .059 | .138 | .591 | 1.181 | .157 | TT9030 |
| MINNR07-140050D050 | .276 | .50 | .012 | .002 | .014 | .035 | .173 | .591 | 1.181 | .197 | TT9030 |
| MINNR07-140050D075 | .276 | .75 | .016 | .035 | .018 | .035 | .173 | .591 | 1.181 | .197 | TT9030 |
| MINNR07-140100D048 | .276 | 1.00 | .024 | .005 | .022 | .035 | .173 | .591 | 1.181 | .189 | TT9030 |
| MINNR07-140100D060 | .276 | 1.00 | .024 | .005 | .022 | .071 | .209 | .591 | 1.181 | .236 | TT9030 |
| MINNR07-140125D060 | .276 | 1.25 | .028 | .006 | .026 | .071 | .209 | .591 | 1.181 | .236 | TT9030 |
| MINNR07-140150D060 | .276 | 1.50 | .031 | .007 | .030 | .071 | .209 | .591 | 1.181 | .236 | TT9030 |
| MINNR07-140150D070 | .276 | 1.50 | .031 | .007 | .030 | .110 | .248 | .591 | 1.181 | .276 | TT9030 |

# MINU - MINI CARBIDE BARS FOR UNDERCUTTING AND CHAMFERING



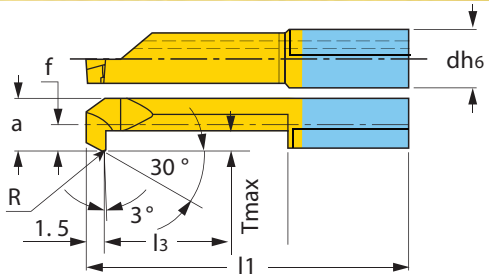



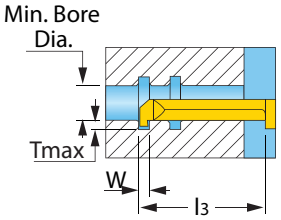

| Designation | Dimensions (inches) dh6 | W | f | a | L1 | L3 | t | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINUR07-150010D050 | .276 | .039 | .075 | .173 | 1.181 | .591 | .008 | .039 | .197 | R | TT9030 |
| MINUR07-200010D050 | .276 | .039 | .075 | .173 | 1.378 | .787 | .008 | .039 | .197 | R | TT9030 |



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# MINB - MINI CARBIDE BARS FOR INTERNAL BACK TURNING




| Designation | Dimensions (inches) dh6 | f | a | L1 | L3 | R±0.002 | Tmax | Dmin | R/L | Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| MINBR04-140010D030 | .157 | .024 | .102 | 1.181 | .591 | .008 | .020 | .118 | R | TT9030 |
| MINBR04-190010D030 | .157 | .024 | .102 | 1.378 | .787 | .008 | .020 | .118 | R | TT9030 |
| MINBR04-140015D040 | .157 | .059 | .138 | 1.181 | .591 | .006 | .031 | .157 | R | TT9030 |
| MINBR04-240015D040 | .157 | .059 | .138 | 1.575 | .984 | .006 | .031 | .157 | R | TT9030 |
| MINBR07-190020D050 | .276 | .035 | .173 | 1.378 | .787 | .008 | .039 | .197 | R | TT9030 |
| MINBR07-290020D050 | .276 | .035 | .173 | 1.772 | 1.181 | .008 | .039 | .197 | R | TT9030 |
| MINBR07-190020D060 | .276 | .071 | .209 | 1.378 | .787 | .008 | .071 | .236 | R | TT9030 |
| MINBR07-290020D060 | .276 | .071 | .209 | 1.772 | 1.181 | .008 | .071 | .236 | R | TT9030 |
| MINBR07-190020D070 | .276 | .110 | .248 | 1.378 | .787 | .008 | .098 | .276 | R | TT9030 |
| MINBR07-290020D070 | .276 | .110 | .248 | 1.772 | 1.181 | .008 | .098 | .276 | R | TT9030 |



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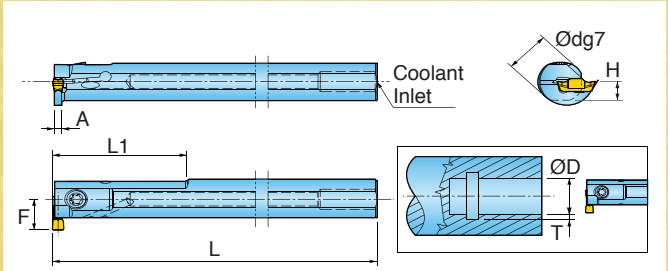
# TOOLAMP

## FOR SMALL ID TURNING AND GROOVING

- Economical double-ended insert
- Strong clamping with fully supported seat
- Internal coolant through the shank
- Various application range
  - TDIP: ground insert for precision grooving and ID turning
  - TDIM: pressed insert with efficient chipformer for ID turning and grooving operations
  - Internal machining from Dmin .492"
  - Special inserts for threading and profiling available on request

## TTSIR/L - INTERNAL GROOVING AND TURNING ON SMALL DIAMETERS



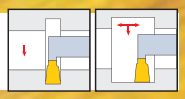




| Designation | Insert Seat Size | Dimensions (inch) Ød | L | L1 | F | H | A | Tmax | ØDmin | Coolant Inlet | Screw | Wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TTSIR/L 9.5-12.5-2 | 2 | .375 | 5.0 | .984 | .295 | .167 | .063 | .094 | .492 | Ø.138 | TS 40093I | T 15 |
| TTSIR/L 12.7-14-2 | 2 | .500 | 5.0 | 1.378 | .358 | .230 | .063 | .102 | .551 | Ø.236 | TS 40093I | T 15 |
| TTSIR/L 15.9-12.5-2 | 2 | .625 | 6.0 | .787 | .413 | .291 | .063 | .094 | .492 | Ø.315 | TS 40093I | T 15 |
| TTSIR/L 15.9-14-2 | 2 | .625 | 6.0 | .984 | .433 | .291 | .063 | .102 | .551 | Ø.315 | TS 40093I | T 15 |
| TTSIR/L 15.9-16-2 | 2 | .625 | 6.0 | 1.575 | .433 | .291 | .063 | .118 | .630 | Ø.315 | TS 50125I | T 20 |
| TTSIR/L 12.7-14-3 | 3 | .375 | 5.0 | 1.378 | .358 | .230 | .079 | .102 | .551 | Ø.236 | TS 40093I | T 15 |
| TTSIR/L 15.9-12.5-3 | 3 | .625 | 6.0 | .787 | .413 | .291 | .079 | .094 | .492 | Ø.315 | TS 40093I | T 15 |
| TTSIR/L 15.9-14-3 | 3 | .625 | 6.0 | .984 | .433 | .291 | .079 | .102 | .551 | Ø.315 | TS 40093I | T 15 |
| TTSIR/L 15.9-16-3 | 3 | .625 | 6.0 | 1.575 | .433 | .291 | .079 | .118 | .630 | Ø.315 | TS 50125I | T 20 |
| TTSIR/L 19-20-3 | 3 | .750 | 6.0 | 1.575 | .551 | .335 | .079 | .157 | .787 | PL 075 | TS 50125I | T 20 |

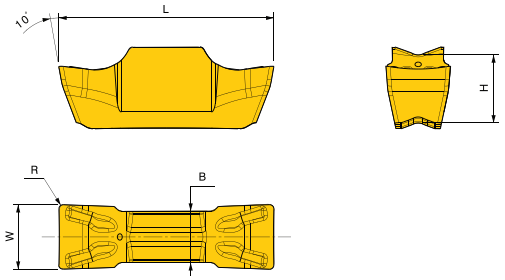


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## TDIM - PRESSED INSERTS FOR INTERNAL TURNING AND GROOVING

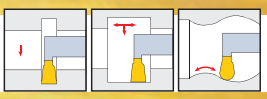




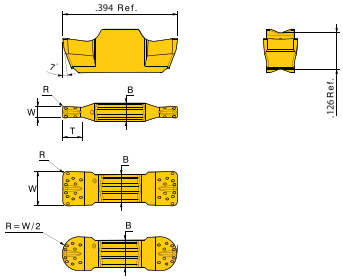



| Designation | Insert Seat Size | Dimensions (inch) W±0.002 | R | B | L | H | Grade |
|---|---|---|---|---|---|---|---|
| TDIM 2E-0.15 | 2 | .079 | .006 | .063 | .394 | .126 | TT9080 |
| TDIM 3E-0.2 | 3 | .118 | .008 | .094 | .394 | .126 | TT9080 |

## TDIP - PRECISION INSERTS FOR INTERNAL TURNING AND GROOVING








| Designation | Insert Seat Size | Dimensions (inch) W±0.0008 | R | B | T | Grade |
|---|---|---|---|---|---|---|
| TDIP 1.00-0.10* | 2 | .039 | .004 | .063 | .063 | TT9080 |
| TDIP 1.00-0.50* | 2 | .039 | .020 | .063 | .063 | TT9080 |
| TDIP 1.20-0.00* | 2 | .047 | .000 | .063 | .071 | TT9080 |
| TDIP 1.40-0.00* | 2 | .055 | .000 | .063 | .079 | TT9080 |
| TDIP 1.50-0.10* | 2 | .059 | .004 | .063 | .079 | TT9080 |
| TDIP 2.00E-0.10 | 2 | .079 | .004 | .063 | - | TT9080 |
| TDIP 2.00E-0.20 | 2 | .079 | .008 | .063 | - | TT9080 |
| TDIP 2.00E-1.00 | 2 | .079 | .039 | .063 | - | TT9080 |
| TDIP 2.15E-0.15 | 2 | .085 | .006 | .063 | - | TT9080 |
| TDIP 2.50E-0.20 | 3 | .098 | .008 | .094 | - | TT9080 |
| TDIP 3.00E-0.20 | 3 | .118 | .008 | .094 | - | TT9080 |
| TDIP 3.00E-1.50 | 3 | .118 | .059 | .094 | - | TT9080 |



GOLD-RUSH
Member MC Group Ingersoll Cutting Tools




# GOLD·RUSH GRADES FOR HOLEMAKING

## The ingenious solution that takes cutting tool materials to another level

### Features

- Improved adhesion and insert chipping resistance
- Stable and extended tool life in continuous and interrupted cutting operations
- Reduced cutting friction and minimized built-up edge on exotic materials
- High quality surface finish on the work pieces




## GOLD RUSH GRADES FOR HOLEMAKING APPLICATIONS

**IN2505 (PVD)** **GENERAL PURPOSE**

An improvement over the current IN2005 grade, IN2505 has a multi-layered PVD coating for a wide variety of materials.

**IN6505 (CVD)** **STEEL APPLICATIONS**

A 10µm thick layer has been added to the CVD coating that enhances toughness and wear resistance. It makes this grade suitable for high speed steel machining.

# GOLD•TWIST™

## NEW REPLACEABLE TIP DRILLS

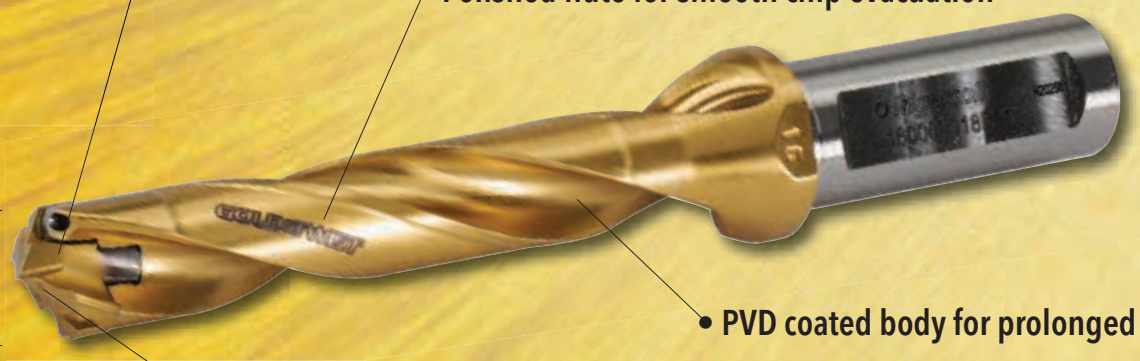


Ingersoll Cutting Tool Company is proud to announce the release of GOLD•TWIST™: The Next Generation of Replaceable Tip Drills. This new design is a standard product line with tip diameters ranging from .3937" – .7834" (10mm ~ 19.9mm) in 0.004" (.1mm) increments and drill bodies available in 3xD, 5xD and 8xD length to diameter ratios.

The precision bodies have an improved pocket design and innovative clamping system that provide stable performance after multiple tip indexes. These drill bodies also feature twisted coolant holes, polished flutes, and a PVD-coating that allows smooth chip evacuation and prolonged body life. Each body accepts a range of tips that covers .040" (1mm).

The drill tips are offered in grade IN2505 which features a multi layered PVD coating that provides excellent performance, improved wear resistance and increased tool life in a large variety of applications. The initial cutting edge geometry is designed for Steel applications. Additional cutting edge geometries for Stainless Steel, Cast Iron and Non-Ferrous materials will be available at a later date.

Ingersoll's GOLD•TWIST™ Drilling Line is excellent in higher speed applications, providing guaranteed performance and excellent results in a unique, rigid and fast-indexing clamping system. The result is a product that combines cost efficiency and higher productivity in all your drilling applications.





# GOLD•TWIST™

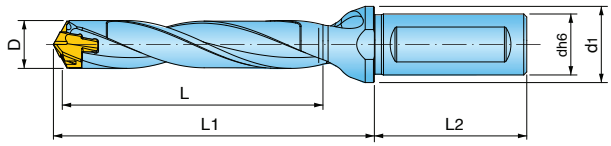


| "P" Geometry | | |
|---|---|---|
| Size | Steel | Grade |
| .3937 | TPA-1000-R01 | IN2505 |
| .3976 | TPA-1010-R01 | IN2505 |
| .4016 | TPA-1020-R01 | IN2505 |
| .4055 | TPA-1030-R01 | IN2505 |
| .4094 | TPA-1040-R01 | IN2505 |
| .4134 | TPA-1050-R01 | IN2505 |
| .4173 | TPA-1060-R01 | IN2505 |
| .4213 | TPA-1070-R01 | IN2505 |
| .4252 | TPA-1080-R01 | IN2505 |
| .4291 | TPA-1090-R01 | IN2505 |
| .4331 | TPA-1100-R01 | IN2505 |
| .4370 | TPA-1110-R01 | IN2505 |
| .4409 | TPA-1120-R01 | IN2505 |
| .4449 | TPA-1130-R01 | IN2505 |
| .4488 | TPA-1140-R01 | IN2505 |
| .4528 | TPA-1150-R01 | IN2505 |
| .4567 | TPA-1160-R01 | IN2505 |
| .4606 | TPA-1170-R01 | IN2505 |
| .4646 | TPA-1180-R01 | IN2505 |
| .4685 | TPA-1190-R01 | IN2505 |
| .4724 | TPA-1200-R01 | IN2505 |
| .4764 | TPA-1210-R01 | IN2505 |
| .4803 | TPA-1220-R01 | IN2505 |
| .4843 | TPA-1230-R01 | IN2505 |
| .4882 | TPA-1240-R01 | IN2505 |
| .4921 | TPA-1250-R01 | IN2505 |
| .4961 | TPA-1260-R01 | IN2505 |
| .5000 | TPA-1270-R01 | IN2505 |
| .5039 | TPA-1280-R01 | IN2505 |
| .5079 | TPA-1290-R01 | IN2505 |
| .5118 | TPA-1300-R01 | IN2505 |
| .5157 | TPA-1310-R01 | IN2505 |
| .5197 | TPA-1320-R01 | IN2505 |
| .5236 | TPA-1330-R01 | IN2505 |
| .5276 | TPA-1340-R01 | IN2505 |
| .5315 | TPA-1350-R01 | IN2505 |
| .5354 | TPA-1360-R01 | IN2505 |
| .5394 | TPA-1370-R01 | IN2505 |
| .5433 | TPA-1380-R01 | IN2505 |
| .5472 | TPA-1390-R01 | IN2505 |
| .5512 | TPA-1400-R01 | IN2505 |
| .5551 | TPA-1410-R01 | IN2505 |
| .5591 | TPA-1420-R01 | IN2505 |
| .5630 | TPA-1430-R01 | IN2505 |
| .5669 | TPA-1440-R01 | IN2505 |
| .5709 | TPA-1450-R01 | IN2505 |
| .5748 | TPA-1460-R01 | IN2505 |
| .5787 | TPA-1470-R01 | IN2505 |
| .5827 | TPA-1480-R01 | IN2505 |
| .5866 | TPA-1490-R01 | IN2505 |
| .5906 | TPA-1500-R01 | IN2505 |

| "P" Geometry | | |
|---|---|---|
| Size | Steel | Grade |
| .5945 | TPA-1510-R01 | IN2505 |
| .5984 | TPA-1520-R01 | IN2505 |
| .6024 | TPA-1530-R01 | IN2505 |
| .6063 | TPA-1540-R01 | IN2505 |
| .6102 | TPA-1550-R01 | IN2505 |
| .6142 | TPA-1560-R01 | IN2505 |
| .6181 | TPA-1570-R01 | IN2505 |
| .6220 | TPA-1580-R01 | IN2505 |
| .6260 | TPA-1590-R01 | IN2505 |
| .6299 | TPA-1600-R01 | IN2505 |
| .6339 | TPA-1610-R01 | IN2505 |
| .6378 | TPA-1620-R01 | IN2505 |
| .6417 | TPA-1630-R01 | IN2505 |
| .6457 | TPA-1640-R01 | IN2505 |
| .6496 | TPA-1650-R01 | IN2505 |
| .6535 | TPA-1660-R01 | IN2505 |
| .6575 | TPA-1670-R01 | IN2505 |
| .6614 | TPA-1680-R01 | IN2505 |
| .6654 | TPA-1690-R01 | IN2505 |
| .6693 | TPA-1700-R01 | IN2505 |
| .6732 | TPA-1710-R01 | IN2505 |
| .6772 | TPA-1720-R01 | IN2505 |
| .6811 | TPA-1730-R01 | IN2505 |
| .6850 | TPA-1740-R01 | IN2505 |
| .6890 | TPA-1750-R01 | IN2505 |
| .6929 | TPA-1760-R01 | IN2505 |
| .6968 | TPA-1770-R01 | IN2505 |
| .7008 | TPA-1780-R01 | IN2505 |
| .7047 | TPA-1790-R01 | IN2505 |
| .7087 | TPA-1800-R01 | IN2505 |
| .7126 | TPA-1810-R01 | IN2505 |
| .7165 | TPA-1820-R01 | IN2505 |
| .7205 | TPA-1830-R01 | IN2505 |
| .7244 | TPA-1840-R01 | IN2505 |
| .7283 | TPA-1850-R01 | IN2505 |
| .7323 | TPA-1860-R01 | IN2505 |
| .7362 | TPA-1870-R01 | IN2505 |
| .7402 | TPA-1880-R01 | IN2505 |
| .7441 | TPA-1890-R01 | IN2505 |
| .7480 | TPA-1900-R01 | IN2505 |
| .7500 | TPA-1905-R01 | IN2505 |
| .7520 | TPA-1910-R01 | IN2505 |
| .7559 | TPA-1920-R01 | IN2505 |
| .7598 | TPA-1930-R01 | IN2505 |
| .7638 | TPA-1940-R01 | IN2505 |
| .7677 | TPA-1950-R01 | IN2505 |
| .7717 | TPA-1960-R01 | IN2505 |
| .7756 | TPA-1970-R01 | IN2505 |
| .7795 | TPA-1980-R01 | IN2505 |
| .7835 | TPA-1990-R01 | IN2505 |

## GOLD·TWIST™ GR SERIES






| 3xD Bodies DESIGNATION | D | L | Dimensions (inch) d | d1 | L1 | L2 | Pocket Size | Key |
|---|---|---|---|---|---|---|---|---|
| TD-1000030C0R01 | .3937-.4094 | 1.18 | 0.625 | 0.79 | 1.82 | 1.89 | 10 | KTD 10.0-19.9 |
| TD-1050031C0R01 | .4134-.4291 | 1.26 | 0.625 | 0.79 | 1.9 | 1.89 | 10 | KTD 10.0-19.9 |
| TD-1100033C0R01 | .4331-.4488 | 1.30 | 0.625 | 0.79 | 2.0 | 1.89 | 11 | KTD 10.0-19.9 |
| TD-1150034C0R01 | .4528-.4685 | 1.38 | 0.625 | 0.79 | 2.0 | 1.89 | 11 | KTD 10.0-19.9 |
| TD-1200036C0R01 | .4724-.4882 | 1.42 | 0.625 | 0.79 | 2.1 | 1.89 | 12 | KTD 10.0-19.9 |
| TD-1250037C0R01 | .4912-.5079 | 1.46 | 0.625 | 0.79 | 2.1 | 1.89 | 12 | KTD 10.0-19.9 |
| TD-1300039C0R01 | .5118-.5276 | 1.54 | 0.625 | 0.79 | 2.2 | 1.89 | 13 | KTD 10.0-19.9 |
| TD-1350040C0R01 | .5315-.5472 | 1.61 | 0.625 | 0.79 | 2.3 | 1.89 | 13 | KTD 10.0-19.9 |
| TD-1400042C0R01 | .5512-.5669 | 1.65 | 0.625 | 0.79 | 2.4 | 1.89 | 14 | KTD 10.0-19.9 |
| TD-1450043C0R01 | .5709-.5866 | 1.73 | 0.625 | 0.79 | 2.5 | 1.89 | 14 | KTD 10.0-19.9 |
| TD-150004518R01 | .5906-.6260 | 1.77 | 0.750 | 0.98 | 2.7 | 1.97 | 15 | KTD 10.0-19.9 |
| TD-160004818R01 | .6299-.6654 | 1.89 | 0.750 | 0.98 | 2.9 | 1.97 | 16 | KTD 10.0-19.9 |
| TD-170005118R01 | .6693-.7047 | 2.01 | 0.750 | 0.98 | 3.1 | 1.97 | 17 | KTD 10.0-19.9 |
| TD-1800054C8R01 | .7087-.7441 | 2.13 | 1.000 | 1.26 | 3.2 | 2.20 | 18 | KTD 10.0-19.9 |
| TD-1900057C8R01 | .7480-.7835 | 2.24 | 1.000 | 1.26 | 3.4 | 2.20 | 19 | KTD 10.0-19.9 |

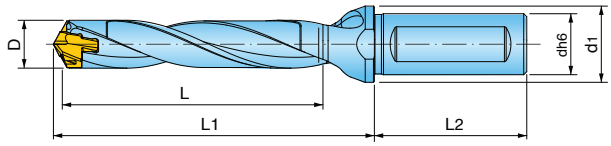
| 5xD Bodies DESIGNATION | D | L | Dimensions (inch) d | d1 | L1 | L2 | Pocket Size | Key |
|---|---|---|---|---|---|---|---|---|
| TD-1000050C0R01 | .3937-.4094 | 1.97 | .625 | .79 | 2.61 | 1.89 | 10 | KTD 10.0-19.9 |
| TD-1050052C0R01 | .4134-.4291 | 2.09 | .625 | .79 | 2.70 | 1.89 | 10 | KTD 10.0-19.9 |
| TD-1100055C0R01 | .4331-.4488 | 2.17 | .625 | .79 | 2.82 | 1.89 | 11 | KTD 10.0-19.9 |
| TD-1150057C0R01 | .4528-.4685 | 2.28 | .625 | .79 | 2.92 | 1.89 | 11 | KTD 10.0-19.9 |
| TD-1200060C0R01 | .4724-.4882 | 2.36 | .625 | .79 | 3.03 | 1.89 | 12 | KTD 10.0-19.9 |
| TD-1250062C0R01 | .4912-.5079 | 2.44 | .625 | .79 | 3.13 | 1.89 | 12 | KTD 10.0-19.9 |
| TD-1300065C0R01 | .5118-.5276 | 2.56 | .625 | .79 | 3.25 | 1.89 | 13 | KTD 10.0-19.9 |
| TD-1350067C0R01 | .5315-.5472 | 2.68 | .625 | .79 | 3.35 | 1.89 | 13 | KTD 10.0-19.9 |
| TD-1400070C0R01 | .5512-.5669 | 2.76 | .625 | .79 | 3.55 | 1.89 | 14 | KTD 10.0-19.9 |
| TD-1450072C0R01 | .5709-.5866 | 2.87 | .625 | .79 | 3.65 | 1.89 | 14 | KTD 10.0-19.9 |
| TD-150007518R01 | .5906-.6260 | 2.95 | .750 | .98 | 3.89 | 1.97 | 15 | KTD 10.0-19.9 |
| TD-160008018R01 | .6299-.6654 | 3.15 | .750 | .98 | 4.15 | 1.97 | 16 | KTD 10.0-19.9 |
| TD-170008518R01 | .6693-.7047 | 3.35 | .750 | .98 | 4.41 | 1.97 | 17 | KTD 10.0-19.9 |
| TD-1800090C8R01 | .7087-.7441 | 3.54 | 1.000 | 1.26 | 4.67 | 2.20 | 18 | KTD 10.0-19.9 |
| TD-1900095C8R01 | .7480-.7835 | 3.74 | 1.000 | 1.26 | 4.92 | 2.20 | 19 | KTD 10.0-19.9 |



NEW GOLD GOLD·RUSH

## GOLD TWIST™ GR SERIES





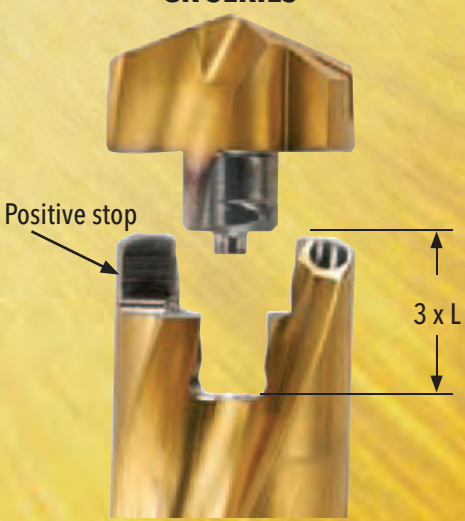

| 8xD Bodies DESIGNATION | D | Dimensions (inch) L | d | d1 | L1 | L2 | Pocket Size | Key |
|---|---|---|---|---|---|---|---|---|
| TD-1000080C0R01 | .3937-.4094 | 3.15 | .625 | .79 | 3.79 | 1.89 | 10 | KTD 10.0-19.9 |
| TD-1050084C0R01 | .4134-.4291 | 3.31 | .625 | .79 | 3.94 | 1.89 | 10 | KTD 10.0-19.9 |
| TD-1100088C0R01 | .4331-.4488 | 3.46 | .625 | .79 | 4.12 | 1.89 | 11 | KTD 10.0-19.9 |
| TD-1150092C0R01 | .4528-.4685 | 3.62 | .625 | .79 | 4.28 | 1.89 | 11 | KTD 10.0-19.9 |
| TD-1200096C0R01 | .4724-.4882 | 3.78 | .625 | .79 | 4.45 | 1.89 | 12 | KTD 10.0-19.9 |
| TD-1250100C0R01 | .4912-.5079 | 3.94 | .625 | .79 | 4.61 | 1.89 | 12 | KTD 10.0-19.9 |
| TD-1300104C0R01 | .5118-.5276 | 4.09 | .625 | .79 | 4.79 | 1.89 | 13 | KTD 10.0-19.9 |
| TD-1350108C0R01 | .5315-.5472 | 4.25 | .625 | .79 | 4.94 | 1.89 | 13 | KTD 10.0-19.9 |
| TD-1400112C0R01 | .5512-.5669 | 4.41 | .625 | .79 | 5.20 | 1.89 | 14 | KTD 10.0-19.9 |
| TD-1450116C0R01 | .5709-.5866 | 4.57 | .625 | .79 | 5.36 | 1.89 | 14 | KTD 10.0-19.9 |
| TD-150012018R01 | .5906-.6260 | 4.72 | .750 | .98 | 5.66 | 1.97 | 15 | KTD 10.0-19.9 |
| TD-160012818R01 | .6299-.6654 | 5.04 | .750 | .98 | 6.04 | 1.97 | 16 | KTD 10.0-19.9 |
| TD-170013618R01 | .6693-.7047 | 5.35 | .750 | .98 | 6.41 | 1.97 | 17 | KTD 10.0-19.9 |
| TD-1800144C8R01 | .7087-.7441 | 5.67 | 1.000 | 1.26 | 6.79 | 2.20 | 18 | KTD 10.0-19.9 |
| TD-1900152C8R01 | .7480-.7835 | 5.98 | 1.000 | 1.26 | 7.17 | 2.20 | 19 | KTD 10.0-19.9 |

## DRILL BODY COMPARISON: GOLD TWIST VS. QWIK TWIST

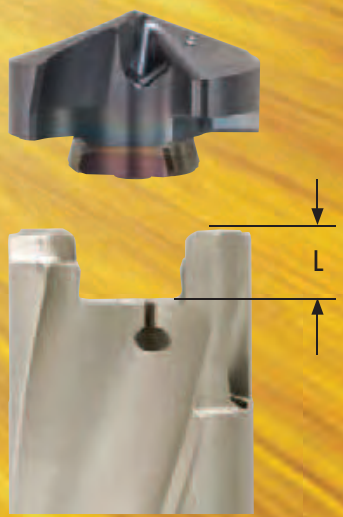
The new Gold Twist pocket design's contact/clamping area is three times deeper than our current Qwik Twist drill.

The accuracy of the added cylinder to the clamping area improves rigidity and helps reduce internal stresses. The two precision ground positive stop locations improve the drilling tips' position and support.

GOLD TWIST™ GR SERIES




QWIK TWIST™



## SET UP (DRILLING TIP MOUNTING PROCEDURE)



1. Clean the pocket and put oil



2. Mount the drill tip on the pocket



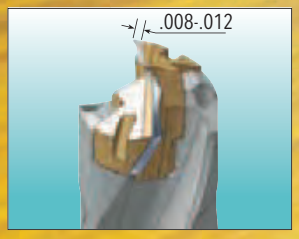
3. Insert key into the slots on tip



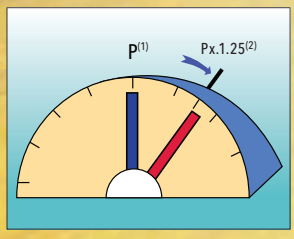
4. Tighten the tip by rotating the key CW

## INDICATION OF HEAD WEAR

### Wear Limit

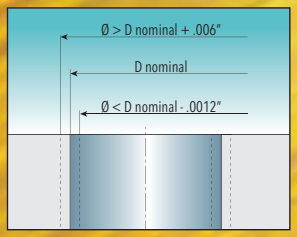



### Power Restriction

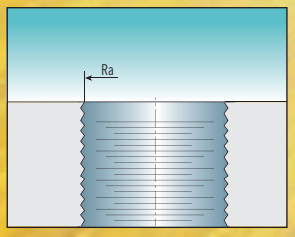



(1) New drilling head
(2) Worn-out drilling head

### Diameter Change




### Surface Finish Declines




### Vibration Noise Drastically Increases





NEW GOLD GOLD·RUSH

| MTL | Group | SFM | | | D=10-11.9 | D= 12-13.9 | D= 14-15.9 | D= 16-19.9 |
|---|---|---|---|---|---|---|---|---|
| Steel | 1 | 260 | 360 | 460 | .006<br>.008<br>.011 | .007<br>.009<br>.012 | .008<br>.011<br>.014 | .010<br>.014<br>.018 |
| P | 2 | 260 | 345 | 430 | | | | |
| | 3 | 260 | 330 | 400 | | | | |
| | 4 | 230 | 295 | 360 | | | | |
| | 5 | 165 | 230 | 300 | | | | |
| | 6 | 230 | 315 | 400 | .006<br>.008<br>.011 | .006<br>.009<br>.013 | .007<br>.010<br>.014 | .009<br>.012<br>.016 |
| | 7 | 230 | 295 | 360 | | | | |
| | 8 | 165 | 230 | 300 | | | | |
| | 9 | 135 | 180 | 230 | | | | |
| | 10 | 165 | 230 | 300 | .005<br>.007<br>.009 | .006<br>.008<br>.010 | .007<br>.009<br>.011 | .008<br>.010<br>.012 |
| | 11 | 130 | 200 | 265 | | | | |
| Stainless Steel | 12 | 130 | 180 | 230 | .005<br>.006<br>.007 | .006<br>.007<br>.008 | .006<br>.008<br>.009 | .006<br>.008<br>.010 |
| M | 13 | 130 | 180 | 230 | | | | |
| | 14 | 100 | 165 | 230 | | | | |
| Gray Cast Iron | 15 | 300 | 410 | 525 | .008<br>.011<br>.014 | .010<br>.013<br>.016 | .012<br>.015<br>.018 | .014<br>.018<br>.022 |
| | 16 | 265 | 360 | 460 | | | | |
| K | 17 | 300 | 450 | 600 | | | | |
| | 18 | 265 | 360 | 460 | | | | |
| | 19 | 300 | 410 | 525 | | | | |
| | 20 | 265 | 360 | 460 | | | | |
| Aluminum | 21 | 300 | 510 | 725 | .010<br>.013<br>.016 | .012<br>.015<br>.018 | .014<br>.017<br>.020 | .016<br>.020<br>.024 |
| N | 22 | 300 | 510 | 725 | | | | |
| | 23 | 300 | 510 | 725 | | | | |
| | 24 | 300 | 510 | 725 | | | | |
| | 25 | 265 | 400 | 525 | | | | |
| | 26 | 300 | 510 | 725 | | | | |
| | 27 | 300 | 510 | 725 | | | | |
| | 28 | 300 | 510 | 725 | | | | |
| | 29 | - | - | - | - | - | - | - |
| | 30 | - | - | - | - | - | - | - |
| Super Alloys | 31 | 100 | 150 | 200 | .003<br>.004<br>.005 | .004<br>.005<br>.006 | .005<br>.006<br>.007 | .005<br>.006<br>.008 |
| S | 32 | 70 | 115 | 165 | | | | |
| | 33 | 70 | 115 | 165 | | | | |
| | 34 | 70 | 115 | 165 | | | | |
| | 35 | 70 | 115 | 165 | | | | |
| | 36 | 70 | 115 | 165 | .003<br>.004<br>.006 | .004<br>.006<br>.007 | .005<br>.007<br>.008 | .006<br>.007<br>.009 |
| | 37 | 70 | 115 | 165 | | | | |
| Copper | 38 | 70 | 115 | 165 | .003<br>.004<br>.006 | .004<br>.006<br>.007 | .005<br>.007<br>.008 | .006<br>.007<br>.009 |
| | 39 | 70 | 115 | 165 | | | | |
| | 40 | - | - | - | - | - | - | - |
| | 41 | - | - | - | - | - | - | - |

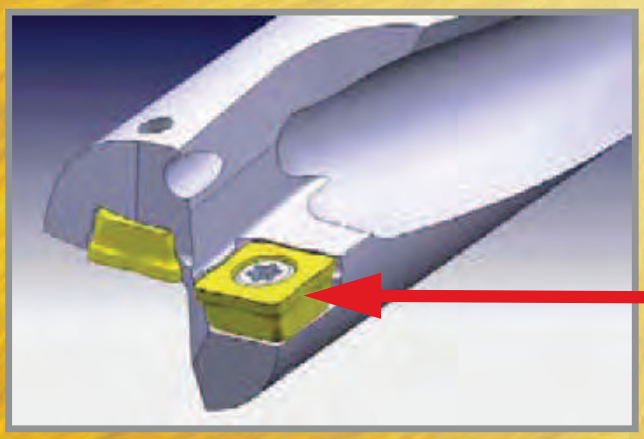


GOLD-RUSH
Member MC Group
Ingersoll Cutting Tools

# QUAD·TWIST™ DRILL

## NEW GENERATION OF INDEXABLE DRILL

- 4 cornered economical insert design
- Grade IN2505 can be used for both inboard and outboard pockets
- Improved machinability due to ideally configured cutting edge
- Applicable to most materials including low carbon and mild steel
- Twisted coolant design provides for excellent chip evacuation and better hole quality
- Enhanced insert durability with new grade (IN2505)









## IN2505 (PVD) - GENERAL PURPOSE

- Sub-micron grade with high hardness and toughness
- New Multi-layered coating for higher chipping resistance
- Post-coat surface treatment improves chipping resistance and reduces cutting forces
- First choice for general applications





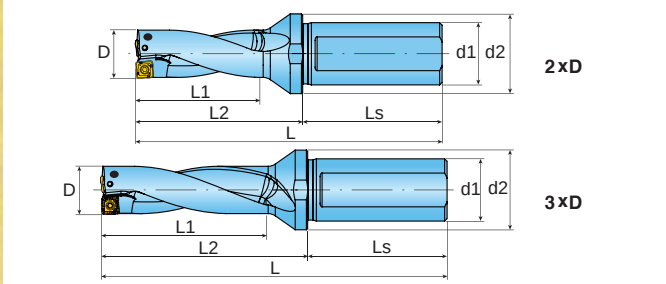
BLACK color

## IN6505 (CVD) - STEEL APPLICATION

- Multi-layered CVD coating along with post coat surface treatment provides excellent wear resistance and improves chipping resistance
- Peripheral (Outboard) pocket only

# QR SERIES INDEXABLE DRILL






| 2xD Bodies Drill Number | D | Dimensions (inch) D1 | D2 | L3 | L2 | L1 | L | INSERT | Spare Parts Screw | Torx | Torque (Nam ) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QR0143029N5R01 | .563 | 1.00 | 1.26 | 2.21 | 2.13 | 1.10 | 4.33 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0150030N5R01 | .591 | 1.00 | 1.26 | 2.21 | 2.24 | 1.20 | 4.45 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0159032N5R01 | .626 | 1.00 | 1.26 | 2.21 | 2.36 | 1.30 | 4.57 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0167033N5R01 | .658 | 1.00 | 1.26 | 2.21 | 2.44 | 1.30 | 4.65 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0175035N5R01 | .689 | 1.00 | 1.26 | 2.21 | 2.56 | 1.40 | 4.77 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0183037N5R01 | .721 | 1.00 | 1.26 | 2.21 | 2.56 | 1.40 | 4.77 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0191038N5R01 | .750 | 1.00 | 1.26 | 2.21 | 2.64 | 1.50 | 4.84 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0198040N5R01 | .780 | 1.00 | 1.26 | 2.21 | 2.80 | 1.60 | 5.00 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0206041N5R01 | .811 | 1.00 | 1.26 | 2.21 | 2.87 | 1.60 | 5.08 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0214042N5R01 | .843 | 1.00 | 1.26 | 2.21 | 2.95 | 1.70 | 5.16 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0222044N5R01 | .874 | 1.00 | 1.26 | 2.21 | 2.95 | 1.70 | 5.16 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0230046N6R01 | .906 | 1.25 | 1.77 | 2.36 | 3.19 | 1.80 | 5.55 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0238048N6R01 | .937 | 1.25 | 1.77 | 2.36 | 3.31 | 1.90 | 5.67 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0246049N6R01 | .969 | 1.25 | 1.77 | 2.36 | 3.43 | 1.90 | 5.79 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0254051N6R01 | 1.000 | 1.25 | 1.77 | 2.36 | 3.50 | 2.00 | 5.87 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0262052N6R01 | 1.031 | 1.25 | 1.77 | 2.36 | 3.50 | 2.10 | 5.87 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |

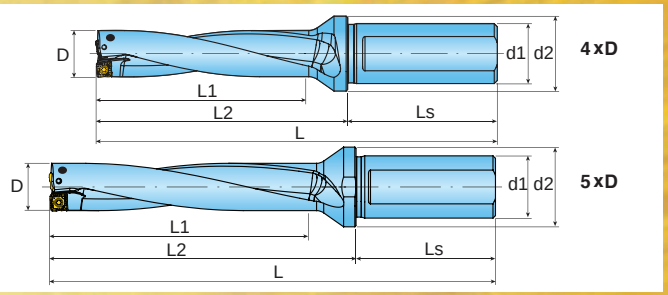
| 3xD Bodies Drill Number | D | Dimensions (inch) D1 | D2 | L3 | L2 | L1 | L | INSERT | Spare Parts Screw | Torx | Torque (Nam ) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QR0143043N5R01 | .563 | 1.00 | 1.26 | 2.21 | 2.68 | 1.70 | 4.88 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0150045N5R01 | .591 | 1.00 | 1.26 | 2.21 | 2.84 | 1.80 | 5.04 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0159048N5R01 | .626 | 1.00 | 1.26 | 2.21 | 2.99 | 1.90 | 5.20 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0167050N5R01 | .658 | 1.00 | 1.26 | 2.21 | 3.11 | 2.00 | 5.32 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0175053N5R01 | .689 | 1.00 | 1.26 | 2.21 | 3.27 | 2.10 | 5.47 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0183055N5R01 | .721 | 1.00 | 1.26 | 2.21 | 3.27 | 2.20 | 5.47 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0191057N5R01 | .750 | 1.00 | 1.26 | 2.21 | 3.39 | 2.30 | 5.59 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0198059N5R01 | .780 | 1.00 | 1.26 | 2.21 | 3.58 | 2.30 | 5.79 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0206062N5R01 | .811 | 1.00 | 1.26 | 2.21 | 3.70 | 2.40 | 5.91 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0214064N5R01 | .843 | 1.00 | 1.26 | 2.21 | 3.82 | 2.50 | 6.02 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0222067N5R01 | .874 | 1.00 | 1.26 | 2.21 | 3.82 | 2.60 | 6.02 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0230069N6R01 | .906 | 1.25 | 1.77 | 2.36 | 4.09 | 2.70 | 6.46 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0238071N6R01 | .937 | 1.25 | 1.77 | 2.36 | 4.25 | 2.80 | 6.61 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0246074N6R01 | .969 | 1.25 | 1.77 | 2.36 | 4.41 | 2.90 | 6.77 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0254076N6R01 | 1.000 | 1.25 | 1.77 | 2.36 | 4.53 | 3.00 | 6.89 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0262079N6R01 | 1.031 | 1.25 | 1.77 | 2.36 | 4.53 | 3.10 | 6.89 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |



NEW GOLD GOLD RUSH

# QR SERIES INDEXABLE DRILL






| 4xD Bodies Drill Number | Dimensions (inch) D | D1 | D2 | L3 | L2 | L1 | L | INSERT | Spare Parts Screw | Torx | Torque (Nam ) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QR0143057N5R01 | .563 | 1.00 | 1.26 | 2.21 | 3.23 | 2.30 | 5.43 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0150060N5R01 | .591 | 1.00 | 1.26 | 2.21 | 3.43 | 2.40 | 5.63 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0159064N5R01 | .626 | 1.00 | 1.26 | 2.21 | 3.62 | 2.50 | 5.83 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0167067N5R01 | .658 | 1.00 | 1.26 | 2.21 | 3.78 | 2.60 | 5.98 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0175070N5R01 | .689 | 1.00 | 1.26 | 2.21 | 3.98 | 2.80 | 6.18 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0183073N5R01 | .721 | 1.00 | 1.26 | 2.21 | 3.98 | 2.90 | 6.18 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0191076N5R01 | .750 | 1.00 | 1.26 | 2.21 | 4.13 | 3.00 | 6.34 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0198079N5R01 | .780 | 1.00 | 1.26 | 2.21 | 4.37 | 3.10 | 6.58 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0206082N5R01 | .811 | 1.00 | 1.26 | 2.21 | 4.53 | 3.20 | 6.73 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0214086N5R01 | .843 | 1.00 | 1.26 | 2.21 | 4.69 | 3.40 | 6.89 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0222089N5R01 | .874 | 1.00 | 1.26 | 2.21 | 4.69 | 3.50 | 6.89 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0230092N6R01 | .906 | 1.25 | 1.77 | 2.36 | 5.00 | 3.60 | 7.21 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0238095N6R01 | .937 | 1.25 | 1.77 | 2.36 | 5.20 | 3.70 | 7.40 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0246098N6R01 | .969 | 1.25 | 1.77 | 2.36 | 5.39 | 3.90 | 7.60 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0254102N6R01 | 1.000 | 1.25 | 1.77 | 2.36 | 5.55 | 4.00 | 7.76 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0262105N6R01 | 1.031 | 1.25 | 1.77 | 2.36 | 5.55 | 4.10 | 7.76 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |

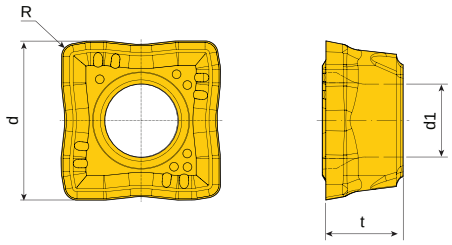
| 5xD Bodies Drill Number | Dimensions (inch) D | D1 | D2 | L3 | L2 | L1 | L | INSERT | Spare Parts Screw | Torx | Torque (Nam ) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QR0143072N5R01 | .563 | 1.00 | 1.26 | 2.21 | 3.78 | 2.80 | 5.99 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0150075N5R01 | .591 | 1.00 | 1.26 | 2.21 | 4.02 | 3.00 | 6.22 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0159080N5R01 | .626 | 1.00 | 1.26 | 2.21 | 4.25 | 3.10 | 6.46 | SOMT 050204 SK | TS 20043I/HG-P | TD 6P | 50-70 |
| QR0167084N5R01 | .658 | 1.00 | 1.26 | 2.21 | 4.45 | 3.30 | 6.65 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0175088N5R01 | .689 | 1.00 | 1.26 | 2.21 | 4.69 | 3.40 | 6.89 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0183092N5R01 | .721 | 1.00 | 1.26 | 2.21 | 4.69 | 3.60 | 6.89 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0191095N5R01 | .750 | 1.00 | 1.26 | 2.21 | 4.88 | 3.80 | 7.09 | SOMT 060204 SK | TS 22052I/HG-P | DS-TP07S | 80-100 |
| QR0198099N5R01 | .780 | 1.00 | 1.26 | 2.21 | 5.16 | 3.90 | 7.36 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0206103N5R01 | .811 | 1.00 | 1.26 | 2.21 | 5.35 | 4.10 | 7.56 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0214107N5R01 | .843 | 1.00 | 1.26 | 2.21 | 5.55 | 4.20 | 7.76 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0222111N5R01 | .874 | 1.00 | 1.26 | 2.21 | 5.55 | 4.40 | 7.76 | SOMT 070306 SK | TS 22052I/HG-P | DS-TP07S | 100-120 |
| QR0230115N6R01 | .906 | 1.25 | 1.77 | 2.36 | 5.91 | 4.50 | 8.11 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0238119N6R01 | .937 | 1.25 | 1.77 | 2.36 | 6.14 | 4.70 | 8.35 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0246123N6R01 | .969 | 1.25 | 1.77 | 2.36 | 6.38 | 4.80 | 8.58 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0254127N6R01 | 1.000 | 1.25 | 1.77 | 2.36 | 6.58 | 5.00 | 8.78 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |
| QR0262131N6R01 | 1.031 | 1.25 | 1.77 | 2.36 | 6.58 | 5.20 | 8.78 | SOMT 08T306 SK | SO 250651 | TD 7 | 100-120 |



GOLD RUSH
Member MC Group Ingersoll Cutting Tools

# SOMT SK



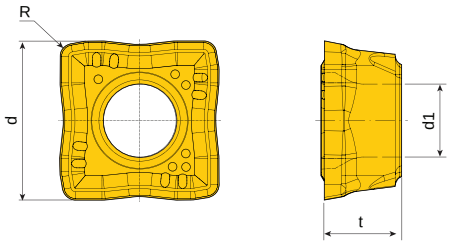



| Grade: IN2505 | Dimension (inch) | | | | |
|---|---|---|---|---|---|
| Designation | d | t | R | d1 | Drill Range |
| SOMT 050204 SK | .193 | .094 | .016 | .089 | .551 - .645 |
| SOMT 060204 SK | .224 | .094 | .016 | .102 | .649 - .763 |
| SOMT 070306 SK | .268 | .110 | .024 | .102 | .767 - .882 |
| SOMT 08T306 SK | .311 | .156 | .024 | .112 | .886 - 1.039 |

- General Purpose

# SOMT SK






| Grade: IN6505 | Dimension (inch) | | | | |
|---|---|---|---|---|---|
| Designation | d | t | R | d1 | Drill Range |
| SOMT 050204 SK | .193 | .094 | .016 | .089 | .551 - .645 |
| SOMT 060204 SK | .224 | .094 | .016 | .102 | .649 - .763 |
| SOMT 070306 SK | .268 | .110 | .024 | .102 | .767 - .882 |
| SOMT 08T306 SK | .311 | .156 | .024 | .112 | .886 - 1.039 |

- For Steel Applications
- For Peripheral Pockets Only



NEW GOLD GOLD·RUSH

| Recommended Cutting Condition: | | | Feed v.s. Drill Diameter In/Rev Drill Length 2, 3, 4xD | | | | Feed v.s. Drill Diameter In/Rev Drill Length 5xD | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MTL | Group | SFM | SOMT 05 Ø.551-.645 | SOMT 06 Ø.649-.763 | SOMT 07 Ø.767-.882 | SOMT 08 Ø.886-1.039 | SOMT 05 Ø.551-.645 | SOMT 06 Ø.649-.763 | SOMT 07 Ø.767-.882 | SOMT 08 Ø.886-1.039 |
| P | 1 | 700 -1200 | .0015" - .0025" | .0015" - .0025" | .0015" - .003" | .0015" - .003" | .0015" - .002" | .0015" - .002" | .0015" - .0025" | .0015" - .0025" |
| | 2 | 600 - 950 | .0025" - .004" | .0025" - .004" | .0025" - .005" | .0025" - .005" | .0025" - .003" | .0025" - .003" | .0025" - .004" | .0025" - .004" |
| | 3 | 450 - 800 | .003" - .005" | .003" - .005" | .003" - .006" | .003" - .006" | .0025" - .004" | .0025" - .004" | .0025" - .005" | .0025" - .005" |
| | 4 | 450 - 800 | .003" - .005" | .003" - .005" | .003" - .006" | .003" - .006" | .0025" - .004" | .0025" - .004" | .0025" - .005" | .0025" - .005" |
| | 5 | 450 - 800 | .003" - .005" | .003" - .005" | .003" - .006" | .003" - .006" | .0025" - .004" | .0025" - .004" | .0025" - .005" | .0025" - .005" |
| | 6 | 450 - 800 | .0025" - .006" | .0025" - .006" | .003" - .008" | .003" - .008" | .0025" - .005" | .0025" - .005" | .003" - ..006" | .003" - .006" |
| | 7 | 325 - 600 | .0025" - .006" | .0025" - .006" | .003" - .008" | .003" - .008" | .0025" - .005" | .0025" - .005" | .003" - ..006" | .003" - .006" |
| | 8 | 325 - 600 | .0025" - .006" | .0025" - .006" | .003" - .008" | .003" - .008" | .0025" - .005" | .0025" - .005" | .003" - ..006" | .003" - .006" |
| | 9 | 325 - 600 | .0025" - .006" | .0025" - .006" | .003" - .008" | .003" - .008" | .0025" - .005" | .0025" - .005" | .003" - ..006" | .003" - .006" |
| | 10 | 450 - 675 | .0025" - .005" | .0025" - .005" | .003" - ..006" | .003" - ..006" | .0025" - .004" | .0025" - .004" | .003" - .005" | .003" - .005" |
| | 11 | 130 - 265 | .0025" - .005" | .0025" - .005" | .003" - ..006" | .003" - ..006" | .0025" - .004" | .0025" - .004" | .003" - .005" | .003" - .005" |
| M | 12 | 500 - 800 | .0025" - .005" | .0025" - .005" | .0025" - .006" | .0025" - .006" | .0025" - .004" | .0025" - .004" | .0025" - .005" | .0025" - .005" |
| | 13 | 500 - 800 | .0025" - .005" | .0025" - .005" | .0025" - .006" | .0025" - .006" | .0025" - .004" | .0025" - .004" | .0025" - .005" | .0025" - .005" |
| | 14 | 500 - 800 | .0025" - .005" | .0025" - .005" | .0025" - .006" | .0025" - .006" | .0025" - .004" | .0025" - .004" | .0025" - .005" | .0025" - .005" |
| K | 15 | 525 - 850 | .003" - .007" | .003" - .007" | .004" - .008" | .004" - .008" | .003" - .0055" | .003" - .0055" | .003" - .006" | .003" - .006" |
| | 16 | 525 - 850 | .003" - .007" | .003" - .007" | .004" - .008" | .004" - .008" | .003" - .0055" | .003" - .0055" | .003" - .006" | .003" - .006" |
| | 17 | 525 - 850 | .003" - .007" | .003" - .007" | .004" - .008" | .004" - .008" | .003" - .0055" | .003" - .0055" | .003" - .006" | .003" - .006" |
| | 18 | 525 - 850 | .003" - .007" | .003" - .007" | .004" - .008" | .004" - .008" | .003" - .0055" | .003" - .0055" | .003" - .006" | .003" - .006" |
| | 19 | 400 - 725 | .003" - .0055" | .003" - .0055" | .004" - .006" | .004" - .006" | .003" - .005" | .003" - .0055" | .003" - .006" | .003" - .006" |
| | 20 | 400 - 725 | .003" - .0055" | .003" - .0055" | .004" - .006" | .004" - .006" | .003" - .005" | .003" - .0055" | .003" - .006" | .003" - .006" |
| N | 21 | 650 - 1150 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 22 | 650 - 1150 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 23 | 650 - 1150 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 24 | 650 - 1150 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 25 | 650 - 1150 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 26 | 490 - 825 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 27 | 490 - 825 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 28 | 490 - 825 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 29 | 490 - 825 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| | 30 | 490 - 825 | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" | .0025" - .006" | .0025" - .006" | .003" - .006" | .003" - .006" |
| S | 31 | 100 - 200 | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" | .002" - .003" | .002" - .003" | .002" - .003" | .002" - .003" |
| | 32 | 100 - 200 | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" | .002" - .003" | .002" - .003" | .002" - .003" | .002" - .003" |
| | 33 | 100 - 200 | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" | .002" - .003" | .002" - .003" | .002" - .003" | .002" - .003" |
| | 34 | 100 - 200 | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" | .002" - .003" | .002" - .003" | .002" - .003" | .002" - .003" |
| | 35 | 100 - 200 | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" | .002" - .003" | .002" - .003" | .002" - .003" | .002" - .003" |
| | 36 | 165 - 265 | .0025" - .0035" | .0025" - .0035" | .0025" - .004" | .0025" - .004" | .002" - .003" | .002" - .003" | .0025" - .0035" | .0025" - .0035" |
| | 37 | 165 - 265 | .0025" - .0035" | .0025" - .0035" | .0025" - .004" | .0025" - .004" | .002" - .003" | .002" - .003" | .0025" - .0035" | .0025" - .0035" |
| H | 38 | 100 - 200 | .002" - .0035" | .002" - .0035" | .002" - .004" | .002" - .004" | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" |
| | 39 | 100 - 200 | .002" - .0035" | .002" - .0035" | .002" - .004" | .002" - .004" | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" |
| | 40 | 100 - 200 | .002" - .0035" | .002" - .0035" | .002" - .004" | .002" - .004" | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" |
| | 41 | 100 - 200 | .002" - .0035" | .002" - .0035" | .002" - .004" | .002" - .004" | .002" - .003" | .002" - .003" | .002" - .0035" | .002" - .0035" |



GOLD-RUSH
Member MC Group Ingersoll Cutting Tools

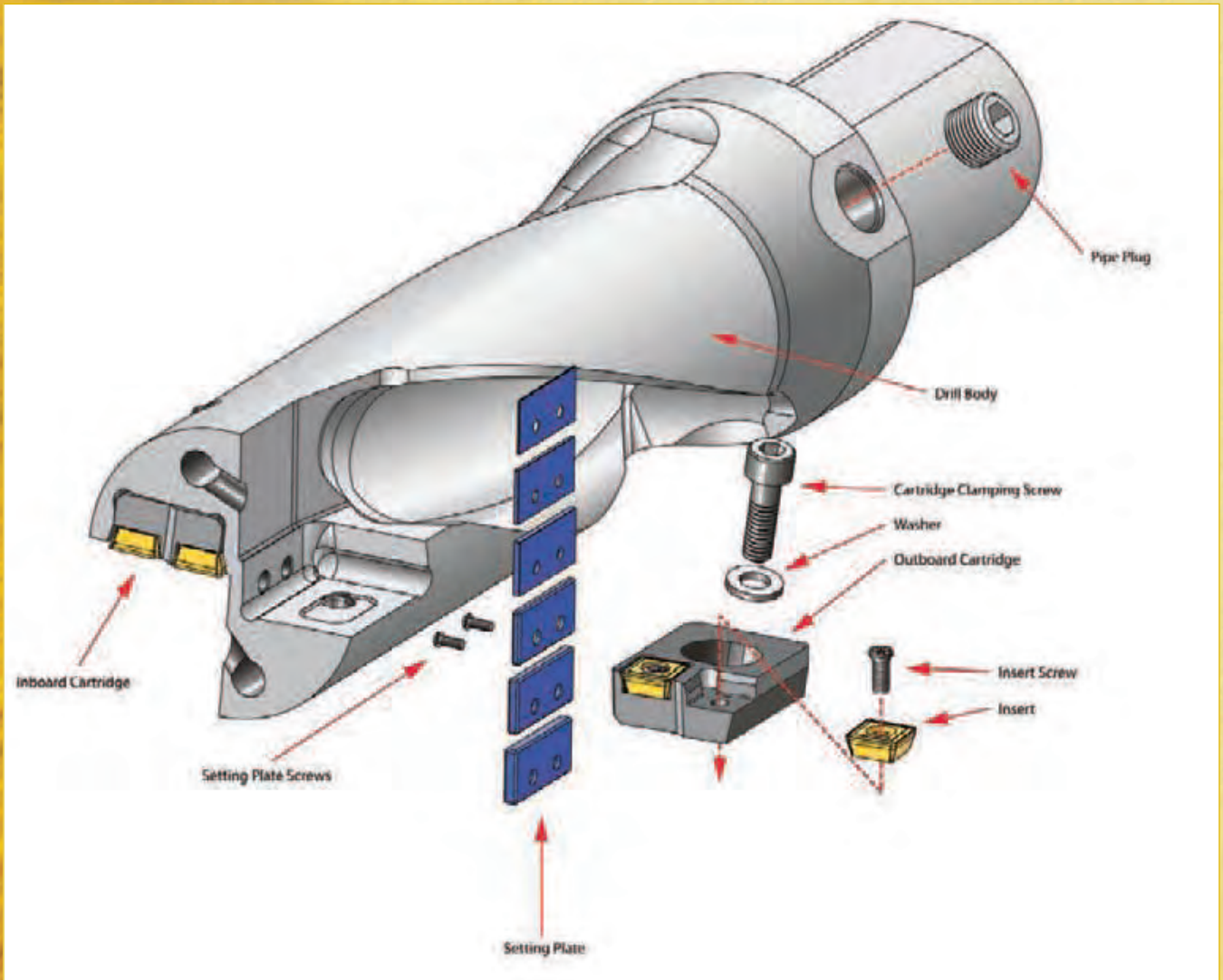
# QUAD•DRILL+™

## QA ADJUSTABLE DRILLS

### NEW GENERATION OF INDEXABLE DRILL

- Adjustability enables multiple diameters with the same body.
- Five drill bodies cover (17) standard sizes.
- Minimum Drill inventory for Cost savings.
- Two coolant access ports, side port specifically for non-rotational lathe drilling applications.
- Cartridge design protects the drill body - a significant feature on larger size expensive drill bodies.
- 4 inserts per body: 2 cartridges per body, 2 inserts per cartridges.

- QUAD•DRILL+™ SERIES QA DRILL ASSEMBLY

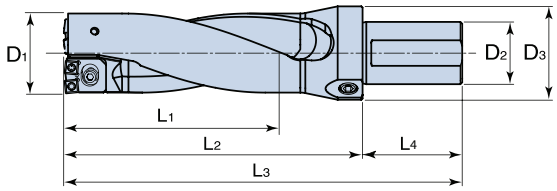





NEW GOLD GOLD•RUSH

# 2XD ADJUSTABLE CARTRIDGE DRILL SERIES QA





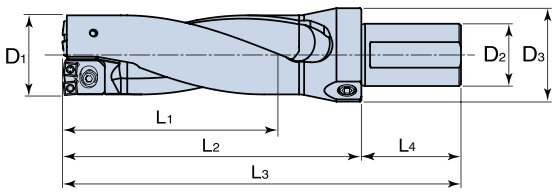

| Drill Number | Dimensions (inch) D1 | L1 | L2 | L3 | L4 | D2 | D3 | # of inserts | Setting Plates Part Number | Setting Plates Plate Thickness | Cartridge Outboard | Cartridge Inboard |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QA0540111N8R01 | 2.125<br>2.188<br>2.250 | 4.41 | 5.98 | 9.23 | 3.25 | 2.000 Universal | 2.95 | 4 | -<br>DS07-080-01<br>- | -<br>.031<br>- | 55E223R01 | 55E213R01 |
| QA0572121N8R01 | 2.313<br>2.375<br>2.438 | 4.82 | 6.69 | 9.94 | 3.25 | 2.000 Universal | 2.95 | 4 | DS09-080-01<br>DS09-159-01<br>- | .031<br>.063<br>- | 55F243R02 | 55F233R01 |
| QA0619130N8R01 | 2.500<br>2.563<br>2.625 | 5.13 | 7.17 | 10.42 | 3.25 | 2.000 Universal | 2.95 | 4 | DS09-080-01<br>DS09-159-01<br>- | .031<br>.063<br>- | 55F263R01 | 55F243R03 |
| QA0667143N8R01 | 2.688<br>2.750<br>2.813<br>2.875<br>2.938 | 5.67 | 7.99 | 11.24 | 3.25 | 2.000 Universal | 2.95 | 4 | DS11-080-01<br>DS11-159-01<br>DS11-238-01<br>-<br>DS11-080-01 | .031<br>.063<br>.094<br>-<br>.031 | 55G294R01 | 55G264R01 |
| QA0730159N8R01 | 3.000<br>3.063<br>3.125 | 6.25 | 8.27 | 11.52 | 3.25 | 2.000 Universal | 2.95 | 4 | DS11-159-01<br>DS11-238-01<br>DS11-320-01 | .063<br>.094<br>.125 | 55H314R00 | 55H294R00 |

# HARDWARE

| Drill Diameter Size Range | Outboard Cartridge | Inboard Cartridge | Cartridge Mounting Screw | Cartridge Mounting Screw Washer | Allen Wrench | Insert Screw | Insert Screw Wrench | Setting Plate Screws | Setting Plate Screw Wrench |
|---|---|---|---|---|---|---|---|---|---|
| 2.125-2.188 | 55E223R01 | 55E213R01 | SD040-16 (M4 X 0.7 X 16MM SHCS) | WA004-01 (4.3MM X 8MM) | L-W3 (3MM) | SM25-064-00 | DS-T08W (Tx-08) | SM20-043-00 | DS-TP06S (TxP-06) |
| 2.250-2.375 | 55F243R02 | 55F233R01 | SD050-16 (M5 X 0.8 X 16MM SHCS) | WA005-01 (5.5MM X 10MM) | L-W4 (4MM) | SM35-088-60 | DS-T10T (Tx-10) | SM30-055-10 | DS-T09W (Tx-09) |
| 2.437-2.563 | 55F263R01 | 55F243R03 | SD050-16 (M5 X 0.8 X 16MM SHCS) | WA005-01 (5.5MM X 10MM) | L-W4 (4MM) | SM35-088-60 | DS-T10T (Tx-10) | SM30-055-10 | DS-T09W (Tx-09) |
| 2.625-2.813 | 55G294R01 | 55G264R01 | SD060-20 (M6 X 1 X 20MM SHCS) | WA006-01 (6.4 MM X 12MM) | L-W5 (5MM) | SM40-093-20 | DS-T15T (Tx-15) | SM30-055-10 | DS-T09W (Tx-09) |
| 2.875-3.125 | 55H314R00 | 55H294R00 | SD060-20 (M6 X 1 X 20MM SHCS) | WA006-01 (6.4 MM X 12MM) | L-W5 (5MM) | SM40-093-20 | DS-T15T (Tx-15) | SM30-055-10 | DS-T09W (Tx-09) |

# 3XD ADJUSTABLE CARTRIDGE DRILL SERIES QA






| Drill Number | Dimensions (inch) D1 | L1 | L2 | L3 | L4 | D2 | D3 | # of inserts | Setting Plates Part Number | Setting Plates Plate Thickness | Cartridge Outboard | Cartridge Inboard |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QA0540167N8R01 | 2.125<br>2.188<br>2.250 | 6.61 | 8.19 | 11.44 | 3.25 | 2.000 Universal | 2.95 | 4 | -<br>DS07-080-01<br>- | -<br>.031<br>- | 55E223R01 | 55E213R01 |
| QA0572181N8R01 | 2.313<br>2.375<br>2.438 | 7.23 | 9.13 | 12.38 | 3.25 | 2.000 Universal | 2.95 | 4 | DS09-080-01<br>DS09-159-01<br>- | .031<br>.063<br>- | 55F243R02 | 55F233R01 |
| QA0619195N8R01 | 2.500<br>2.563<br>2.625 | 7.69 | 9.76 | 13.01 | 3.25 | 2.000 Universal | 2.95 | 4 | DS09-080-01<br>DS09-159-01<br>- | .031<br>.063<br>- | 55F263R01 | 55F243R03 |
| QA0667214N8R01 | 2.688<br>2.750<br>2.813<br>2.875<br>2.938 | 8.50 | 10.87 | 14.12 | 3.25 | 2.000 Universal | 2.95 | 4 | DS11-080-01<br>DS11-159-01<br>DS11-238-01<br>-<br>DS11-080-01 | .031<br>.063<br>.094<br>-<br>.031 | 55G294R01 | 5G264R01 |
| QA0730238N8R01 | 3.000<br>3.063<br>3.125 | 9.38 | 11.42 | 14.67 | 3.25 | 2.000 Universal | 2.95 | 4 | DS11-159-01<br>DS11-238-01<br>DS11-320-01 | .063<br>.094<br>.125 | 55H314R00 | 55H294R00 |

# HARDWARE

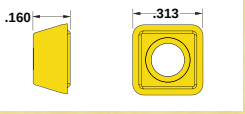
| Drill Diameter Size Range | Outboard Cartridge | Inboard Cartridge | Cartridge Mounting Screw | Cartridge Mounting Screw Washer | Allen Wrench | Insert Screw | Insert Screw Wrench | Setting Plate Screws | Setting Plate Screw Wrench |
|---|---|---|---|---|---|---|---|---|---|
| 2.125-2.188 | 55E223R01 | 55E213R01 | SD040-16 (M4 X 0.7 X 16MM SHCS) | WA004-01 (4.3MM X 8MM) | L-W3 (3MM) | SM25-064-00 | DS-T08W (Tx-08) | SM20-043-00 | DS-TP06S (TxP-06) |
| 2.250-2.375 | 55F243R02 | 55F233R01 | SD050-16 (M5 X 0.8 X 16MM SHCS) | WA005-01 (5.5MM X 10MM) | L-W4 (4MM) | SM35-088-60 | DS-T10T (Tx-10) | SM30-055-10 | DS-T09W (Tx-09) |
| 2.437-2.563 | 55F263R01 | 55F243R03 | SD050-16 (M5 X 0.8 X 16MM SHCS) | WA005-01 (5.5MM X 10MM) | L-W4 (4MM) | SM35-088-60 | DS-T10T (Tx-10) | SM30-055-10 | DS-T09W (Tx-09) |
| 2.625-2.813 | 55G294R01 | 55G264R01 | SD060-20 (M6 X 1 X 20MM SHCS) | WA006-01 (6.4 MM X 12MM) | L-W5 (5MM) | SM40-093-20 | DS-T15T (Tx-15) | SM30-055-10 | DS-T09W (Tx-09) |
| 2.875-3.125 | 55H314R00 | 55H294R00 | SD060-20 (M6 X 1 X 20MM SHCS) | WA006-01 (6.4 MM X 12MM) | L-W5 (5MM) | SM40-093-20 | DS-T15T (Tx-15) | SM30-055-10 | DS-T09W (Tx-09) |



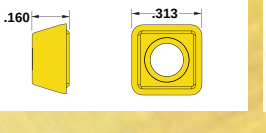
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# INSERTS

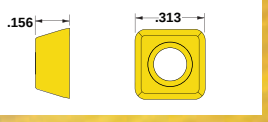
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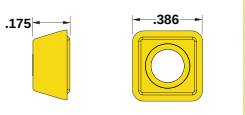

**SPLT07T308N**

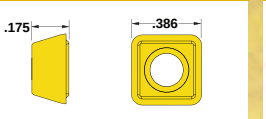

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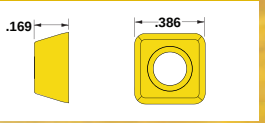

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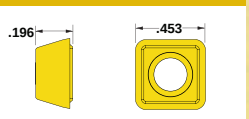

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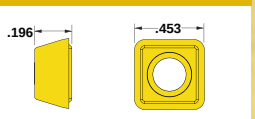

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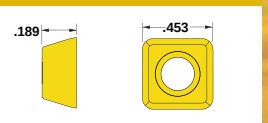

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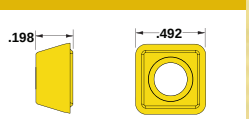

**SHLT110408N**


**SHGT110408-HP**


**SPLT120408-PH**


| Drill Diameter Range | Insert Number (n) | Cast Iron Inserts Grade IN2010 only (s) | Aluminum Inserts Grade IN10K only (l) | Corner | Grades 1030 | 2005 | 2010 | 6520 | 10K |
|---|---|---|---|---|---|---|---|---|---|
| 2.125-2.188 | SPLT07T308N-PH | SPLT07T308N | SDGT07T308-HP | .030R | • | • | • | • | • |
| 2.250-2.563 | SHLT090408N-PH1 | SHLT090408N | SHGT090408-HP | .030R | • | • | • | • | • |
| 2.625-2.813 | SHLT110408N-PH1 | SHLT110408N | SHGT110408-HP | .030R | • | • | • | • | • |
| 2.875-3.125 | SPLT120408-PH | - | - | .030R | | • | | | |

| Grade | Purpose |
|---|---|
| IN 2005 | General Purpose |
| IN 1030 | For use in unstable conditions, low SFM |
| IN 6520 | Peripheral pocket only |
| IN 2010 | Cast iron applications |
| IN 10K | Aluminum, non-ferrous materials |



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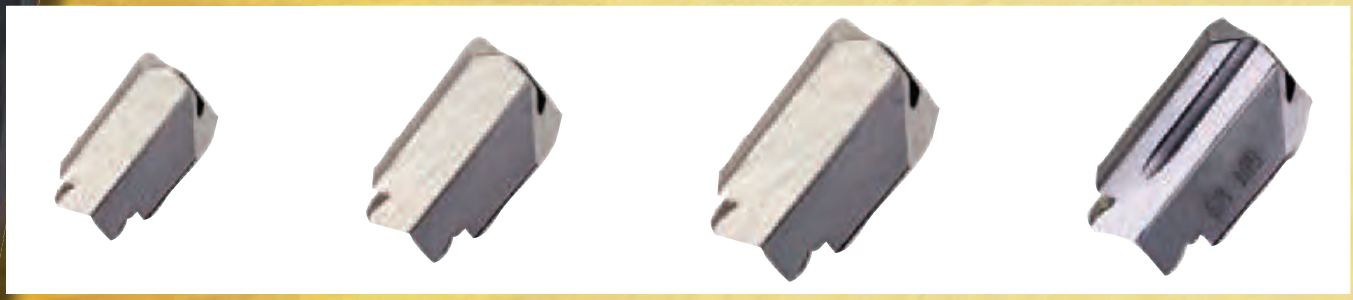
# QWIK-GUN™

# REPLACEABLE POINT GUNDRILLS

## REGRINDABLE TIPS

- Eliminate Re-grind Costs
- Reduce Downtime! - Replace points right at the machine
- Multiple Standard Grades and Geometries.
- Consistant performance from point to point.
- Excellent Straightness and Concentricity.
- Surface roughness of .4 - 1.6 Ra attainable
- Regrindable tip

## QWIK-GUN GR SERIES



| DESIGNATION | Diameter | Key |
|---|---|---|
| GXT105M IN05S | 10.5 | K GDT-100 |
| GXT105P IN05S | 10.5 | K GDT-100 |
| GXT110M IN05S | 11.0 | K-GDT-110 |
| GXT110P IN05S | 11.0 | K-GDT-110 |
| GXT115M IN05S | 11.5 | K-GDT-110 |
| GXT115P IN05S | 11.5 | K-GDT-110 |
| GXT120M IN05S | 12.0 | K-GDT-120 |
| GXT120P IN05S | 12.0 | K-GDT-120 |
| GXT125M IN05S | 12.5 | K-GDT-120 |
| GXT125P IN05S | 12.5 | K-GDT-120 |
| GXT130M IN05S | 13.0 | K-GDT-130 |
| GXT130P IN05S | 13.0 | K-GDT-130 |
| GXT135M IN05S | 13.5 | K-GDT-130 |
| GXT135P IN05S | 13.5 | K-GDT-130 |
| GXT140M IN05S | 14.0 | K-GDT-140 |
| GXT140P IN05S | 14.0 | K-GDT-140 |
| GXT145M IN05S | 14.5 | K-GDT-140 |
| GXT145P IN05S | 14.5 | K-GDT-140 |
| GXT150M IN05S | 15.0 | K-GDT-150 |
| GXT150P IN05S | 15.0 | K-GDT-150 |



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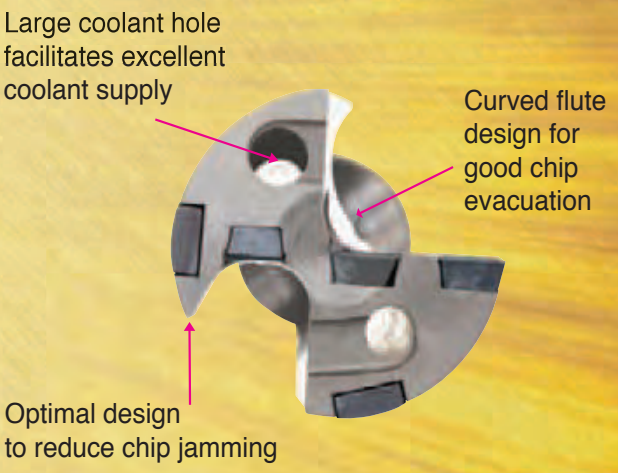
DEEP TWIST™
DEEP DRILL

# HF SERIES DEEP DRILL



## INSERT GRADE APPLICATIONS

| | | | | |
|---|---|---|---|---|
| IN6542 | P25 | P20-30 | CVD 3-Layered | Steel<br>Alloyed Steel<br>Steel Coating |
| IN1510 | M30 | K15-25<br>M35-40<br>P30-40<br>S15-25 | PVD-TiCN | Stainless<br>HRSA<br>Cast iron |
| IN2005 | P30 | M10-30<br>P15-35 | PVD-TiAlN | Multipurpose |




## INSERTS

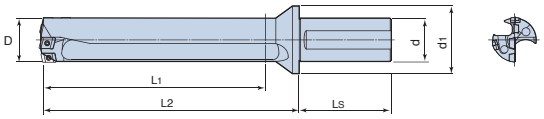
| D | Insert Outer | Insert Inner | Insert Center | Guide Pad |
|---|---|---|---|---|
| 30 - 33 | NPMT06504R2 | NPMT06504R2 | NPMT06504L2 | PAD-GO-07CD |
| 33.01 - 36 | NPMT06504R2 | NPMT06504R2 | NPMT0804L2 | PAD-GO-07CD |
| 36.01 - 39 | NPMT0804R2 | NPMT06504R2 | NPMT0804L2 | PAD-GO-07CD |
| 39.01 - 42 | NPMT0804R2 | NPMT0804R2 | NPMT0804L2 | PAD-GO-08CD |
| 42.01 - 45 | NPMT0804R2 | NPMT0804R2 | NPMT09504L2 | PAD-GO-08CD |
| 45.01 - 48 | NPMT09504R2 | NPMT0804R2 | NPMT09504L2 | PAD-GO-10CD |
| 48.01 - 51 | NPMT09504R2 | NPMT09504R2 | NPMT09504L2 | PAD-GO-10CD |
| 51.01 - 57 | NPMT09504R2 | NPMT09504R2 | NPMT12504L2 | PAD-GO-10CD |
| 57.01 - 63 | NPMT12504R2 | NPMT09504R2 | NPMT12504L2 | PAD-GO-12CD |
| 63.01- 69 | NPMT12504R2 | NPMT12504R2 | NPMT12504L2 | PAD-GO-12CD |



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# HF SERIES DEEP DRILL





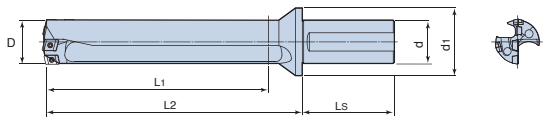

| Description | Dimensions (inch) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | D" | D mm | L | L1 | L2 | D1 | D2 | L/D |
| HF0300420WYR01 | 1.181 | 30 | 16.54 | 17.68 | 2.36 | 1.26 | 1.57 | 14 |
| HF0310420WYR01 | 1.22 | 31 | 16.54 | 17.68 | 2.36 | 1.26 | 1.57 | 13 |
| HF0318420WZR01 | 1.25 | 31.8 | 16.54 | 17.68 | 2.76 | 1.57 | 1.97 | 13 |
| HF0320420WZR01 | 1.26 | 32 | 16.54 | 17.68 | 2.76 | 1.57 | 1.97 | 13 |
| HF0330420WZR01 | 1.299 | 33 | 16.54 | 17.68 | 2.76 | 1.57 | 1.97 | 12 |
| HF0340420WZR01 | 1.339 | 34 | 16.54 | 17.72 | 2.76 | 1.57 | 1.97 | 12 |
| HF0350420WZR01 | 1.378 | 35 | 16.54 | 17.72 | 2.76 | 1.57 | 1.97 | 12 |
| HF0360420WZR01 | 1.417 | 36 | 16.54 | 17.72 | 2.76 | 1.57 | 1.97 | 12 |
| HF0370420WZR01 | 1.457 | 37 | 16.54 | 17.83 | 2.76 | 1.57 | 1.97 | 11 |
| HF0380420WZR01 | 1.496 | 38 | 16.54 | 17.83 | 2.76 | 1.57 | 1.97 | 11 |
| HF0381420WZR01 | 1.5 | 38.1 | 16.54 | 17.83 | 2.76 | 1.57 | 1.97 | 11 |
| HF0390420WZR01 | 1.535 | 39 | 16.54 | 17.83 | 2.76 | 1.57 | 1.97 | 10 |
| HF0400420WZR01 | 1.575 | 40 | 16.54 | 17.87 | 2.76 | 1.57 | 1.97 | 10 |
| HF0410420WZR01 | 1.614 | 41 | 16.54 | 17.87 | 2.76 | 1.57 | 1.97 | 10 |
| HF0420420WZR01 | 1.654 | 42 | 16.54 | 17.87 | 2.76 | 1.57 | 1.97 | 10 |
| HF0430420WZR01 | 1.693 | 43 | 16.54 | 17.95 | 2.76 | 1.57 | 1.97 | 9 |
| HF0440420WZR01 | 1.732 | 44 | 16.54 | 17.95 | 2.76 | 1.57 | 1.97 | 9 |
| HF0445420WZR01 | 1.75 | 44.5 | 16.54 | 17.95 | 2.76 | 1.57 | 1.97 | 9 |
| HF0450420WZR01 | 1.772 | 45 | 16.54 | 17.95 | 2.76 | 1.57 | 1.97 | 9 |
| HF0460420WZR01 | 1.811 | 46 | 16.54 | 18.07 | 2.76 | 1.57 | 1.97 | 9 |
| HF0470420WZR01 | 1.85 | 47 | 16.54 | 18.07 | 2.76 | 1.57 | 1.97 | 8 |
| HF0480420WZR01 | 1.89 | 48 | 16.54 | 18.07 | 2.76 | 1.57 | 1.97 | 8 |
| HF0490420WZR01 | .283 | 49 | 16.54 | 18.15 | 2.76 | 1.57 | 1.97 | 8 |



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# HF SERIES DEEP DRILL






| Description | Dimensions (inch) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | D" | D mm | L | L1 | L2 | D1 | D2 | L/D |
| HF0500420WZR01 | 1.969 | 50 | 16.54 | 18.15 | 2.76 | 1.57 | 1.97 | 8 |
| HF0508420W7R01 | 2 | 50.8 | 16.54 | 18.15 | 2.76 | 1.57 | 1.97 | 8 |
| HF0510420WZR01 | 2.008 | 51 | 16.54 | 18.15 | 2.76 | 1.57 | 1.97 | 8 |
| HF0520420WZR01 | 2.047 | 52 | 16.54 | 18.27 | 2.76 | 1.57 | - | 8 |
| HF0530420WZR01 | 2.087 | 53 | 16.54 | 18.27 | 2.76 | 1.57 | - | 7 |
| HF0540420WZR01 | 2.126 | 54 | 16.54 | 18.27 | 2.76 | 1.57 | - | 7 |
| HF0550420WZR01 | 2.165 | 55 | 16.54 | 18.27 | 2.76 | 1.57 | - | 7 |
| HF0560420WZR01 | 2.205 | 56 | 16.54 | 18.27 | 2.76 | 1.57 | - | 7 |
| HF0570420WZR01 | 2.244 | 57 | 16.54 | 18.27 | 2.76 | 1.57 | - | 7 |
| HF0571420WZR01 | 2.248 | 57.1 | 16.54 | 18.27 | 2.76 | 1.57 | - | 7 |
| HF0580420WZR01 | 2.283 | 58 | 16.54 | 18.50 | 2.76 | 1.57 | - | 7 |
| HF0590420WZR01 | 2.323 | 59 | 16.54 | 18.50 | 2.76 | 1.57 | - | 7 |
| HF0600420WZR01 | 2.362 | 60 | 16.54 | 18.50 | 2.76 | 1.57 | - | 7 |
| HF0610420WZR01 | 2.402 | 61 | 16.54 | 18.50 | 2.76 | 1.57 | - | 6 |
| HF0620420WZR01 | 2.441 | 62 | 16.54 | 18.50 | 2.76 | 1.57 | - | 6 |
| HF0630420WZR01 | 2.48 | 63 | 16.54 | 18.50 | 2.76 | 1.57 | - | 6 |
| HF0635420WZR01 | 2.5 | 63.5 | 16.54 | 18.50 | 2.76 | 1.57 | - | 6 |
| HF0640420WZR01 | 2.52 | 64 | 16.54 | 18.62 | 2.76 | 1.57 | - | 6 |
| HF0650420WZR01 | 2.559 | 65 | 16.54 | 18.62 | 2.76 | 1.57 | - | 6 |
| HF0660420WZR01 | 2.598 | 66 | 16.54 | 18.62 | 2.76 | 1.57 | - | 6 |
| HF0670420WZR01 | 2.638 | 67 | 16.54 | 18.62 | 2.76 | 1.57 | - | 6 |
| HF0680420WZR01 | 2.677 | 68 | 16.54 | 18.62 | 2.76 | 1.57 | - | 6 |
| HF0690420WZR01 | 2.716 | 69 | 16.54 | 18.62 | 2.76 | 1.57 | - | 6 |



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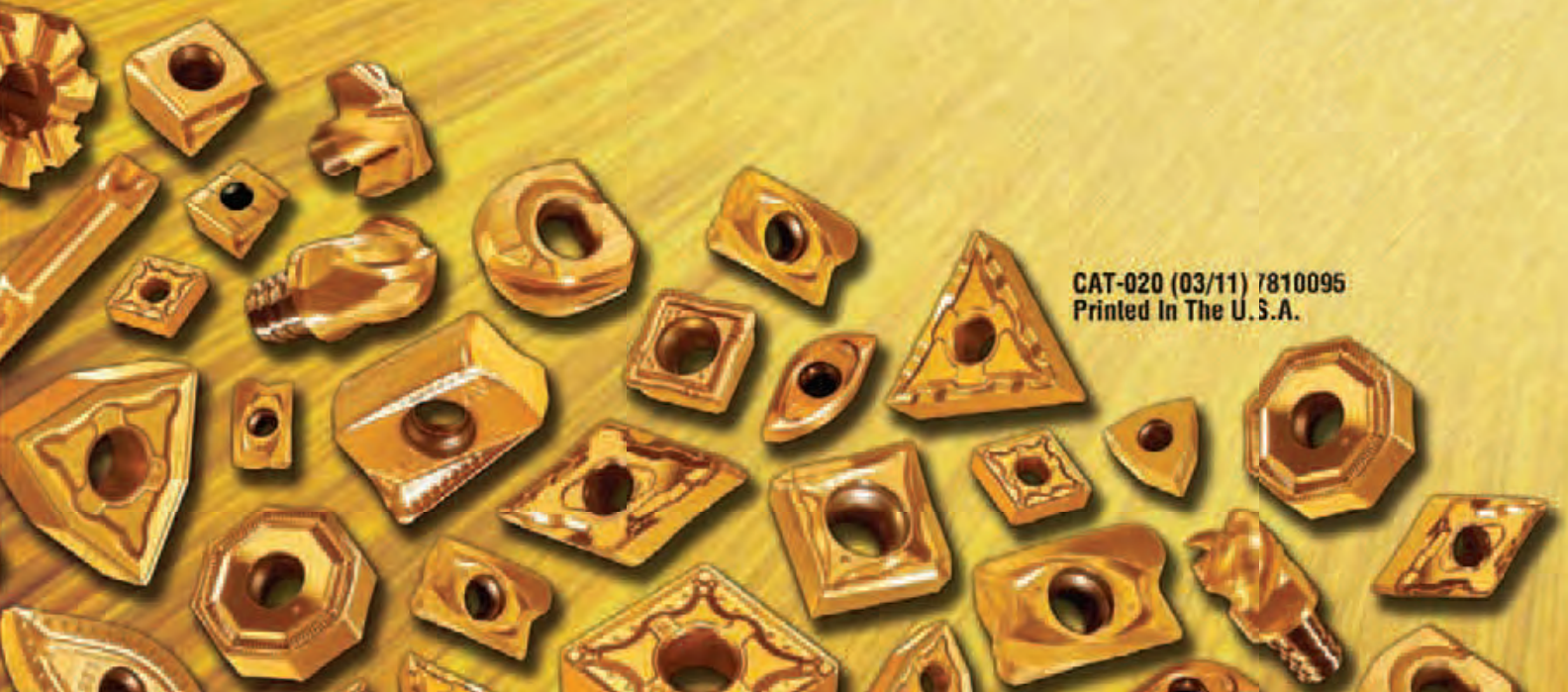
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