

CUTTING TOOLS FOR

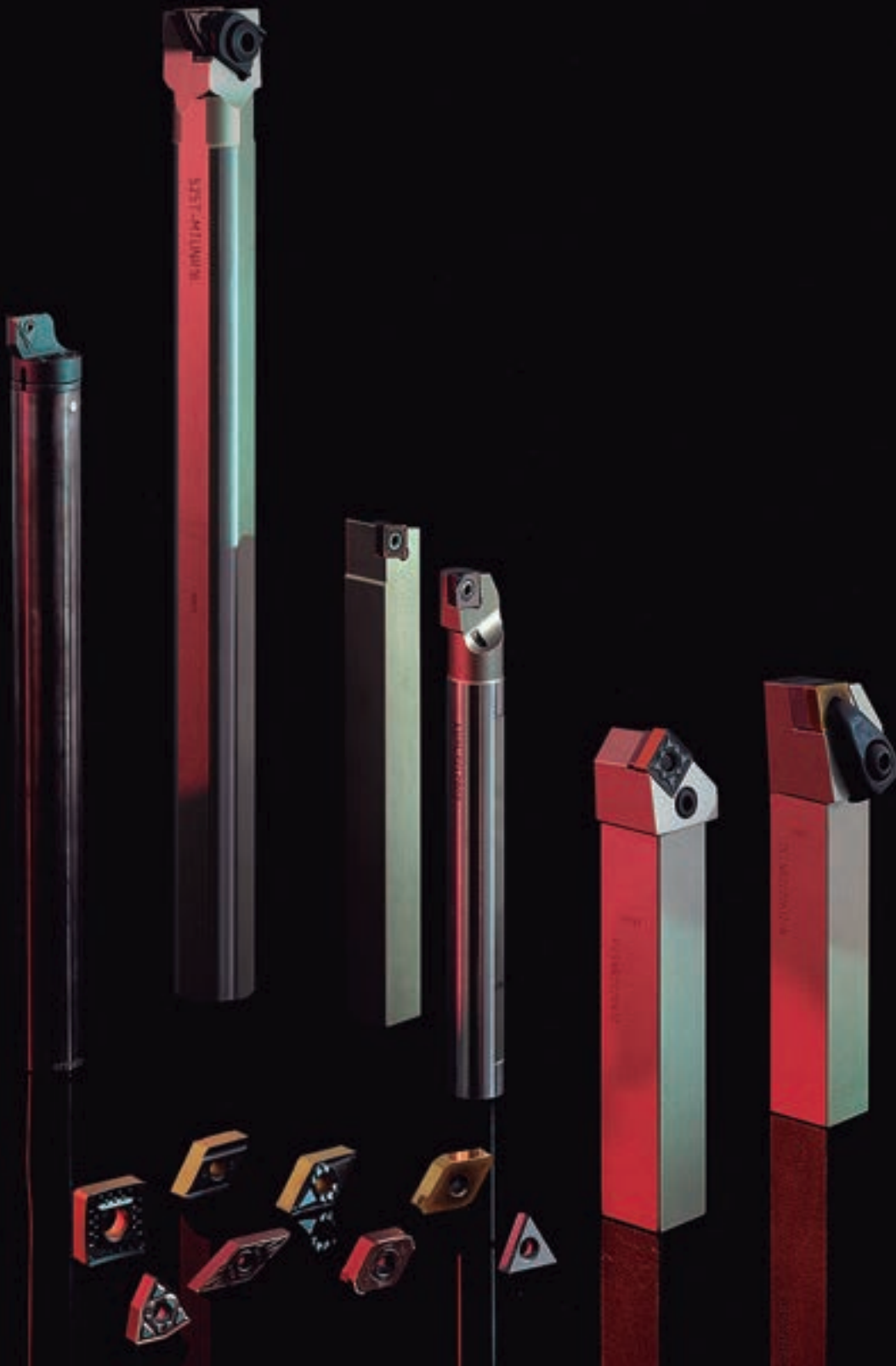
# TURNING



# C

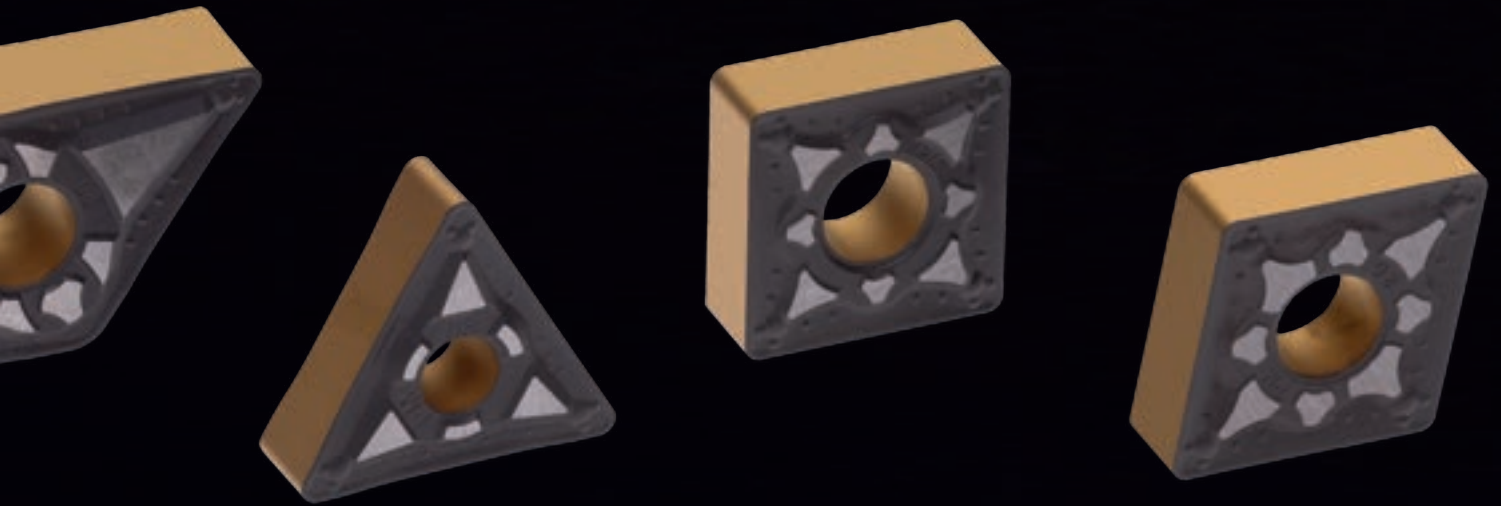
## C - TURNING

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- C - 488 | Turning overview
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C - 542 | Positive turning inserts  
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# Why Phoenix Shield

Palbit's Phoenix Shield series offers you cutting edge performance across the board in every steel turning operation.

PH2G grade series is an innovative combination of a highly dense and hard nanostructured coating base material, including new  $\text{Al}_2\text{O}_3$  layer with improved wear resistance which provides superior performance during high-speed turning operations.

This new grade series features nanolayer optimization and cutting edge stability, achieved with pre- and post-coating process technologies, designed to improve adhesion between layers and fine-tune tensile stress within coating.

Despite the high wear resistance, the new grades also display enhanced performance on chipping prevention throughout instabilities. This greatly boosts strength, wear and heat resistance as well as tool life when compared to the previous generation coating.

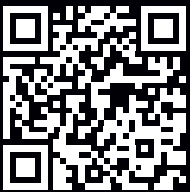
The ultimate goal is machining process optimization, in order to address market demand for greater efficiency and higher cutting speeds. In addition, the increased use of high-strength materials in automotive components also demands for cutting tools with greater wear resistance.

Longer lasting and more reliable, the new Phoenix Shield series are sure to give you a step up in productivity and process security.

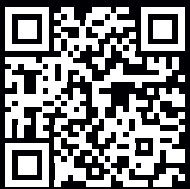
# Unleash the power of your turning operations with **Phoenix**



WEBSITE  
PAGE



BROCHURE  
DOWNLOAD



TECHNICAL  
VIDEO



HRSA TURNING

# DOMX



Designed specifically for the turning of HRSA, the DOMX insert offers exceptional performance when working with these difficult to machine materials. This novel geometry, combined with the advanced PHH coating, is sure to improve your productivity even in the toughest of challenges.

Desenvolvido especificamente para a maquinação de HRSA, a pastilha DOMX oferece um desempenho excepcional ao trabalhar com estes materiais de difícil maquinação. Esta geometria inovadora, combinada com o revestimento avançado PHH, certamente irá melhorar a sua produtividade mesmo nos desafios mais difíceis.

Diseñado específicamente para el torneado de HRSA, el plaquita DOMX ofrece un rendimiento excepcional al trabajar con estos materiales difíciles de mecanizar. Esta geometría novedosa, combinada con el avanzado recubrimiento PHH, seguramente mejorará su productividad incluso en los desafíos más difíciles.

## DOMX 1506 > page 479

- > Available in size 15 and right or left

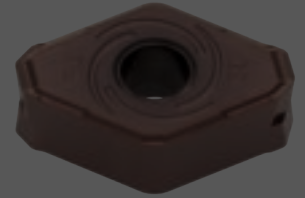
Disponível no tamanho 15 e para mãos direita ou esquerda | Disponible en talla 15 y para manos derecha o izquierda.

- > Available in PHH910 and PHH920

Disponível nos graus PHH910 e PHH920 | Disponible en las calidades PHH910 y PHH920

- > First choice for HRSA medium to rough turning

Primeira escolha para torneamento médio a desbaste de superligas | Primera elección para torneado medio a desbaste de superaleaciones



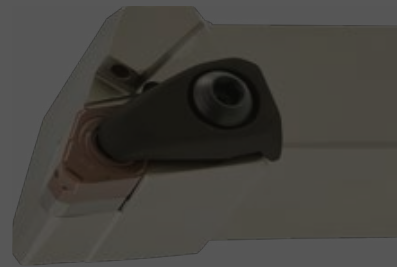
## A - DDJN-DX1 45° > page 480

- > External toolholder with internal coolant

Suporte de torneamento externo com refrigeração interna | Porta-herramienta de torneado externo con refrigeración interna

- > With length from 125 mm to 170 mm

Com comprimento de 125 mm até 170 mm | Con longitud de 125 mm hasta 170 mm



## PSC-DDJN-DX1 45° > page 481

- > PSC toolholder with internal coolant

Suporte PSC com refrigeração interna | Porta-herramienta PSC con refrigeración interna

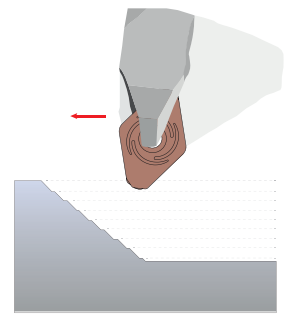
- > With PSC size from 40 mm to 80 mm

Com tamanho de PSC de 40 mm até 80 mm | Con talla de PSC de 40 mm hasta 80 mm



Designed especially for HRSA, the DOMX® combined with PHH technology, offers exceptional performance in exotic materials machining. When your material has high Ni or Co content DOMX® is the choice!

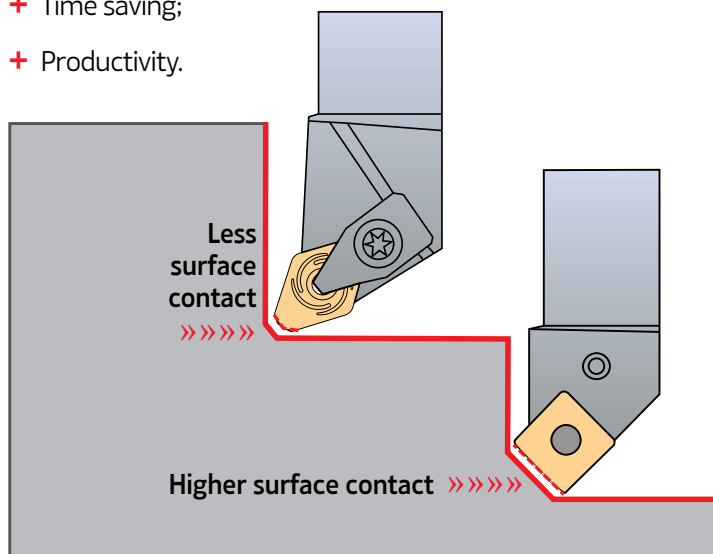
- 🔗 First choice for **HRSA** medium to rough turning;
- 🔗 **4 positive cutting edges on double sided negative insert.**



- 🔗 Machine at 45° with a 93° holder;
- 🔗 **Up to + 140% tool life improvement.**

## DOMX VS SNMG

- Surface contact;
- Heating;
- Vibration;
- Cutting effort;
- + Time saving;
- + Productivity.



COMERCIAL VIDEO



TECHNICAL VIDEO



APPLICATION GUIDE

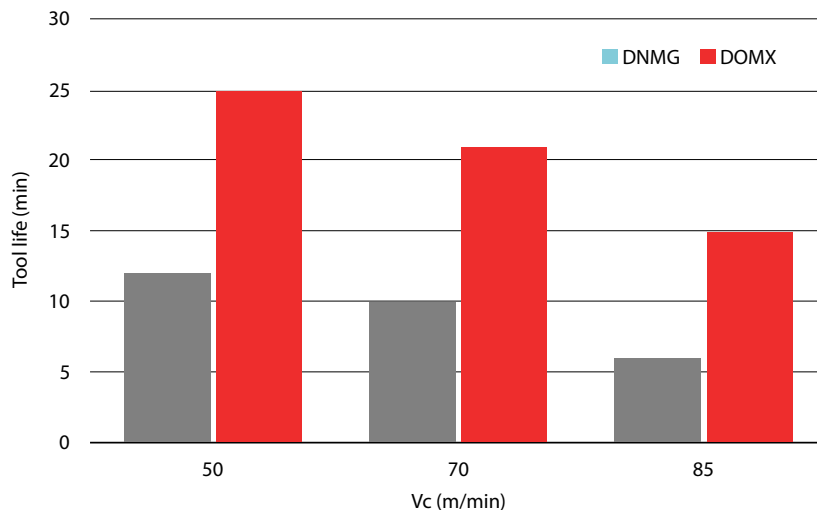
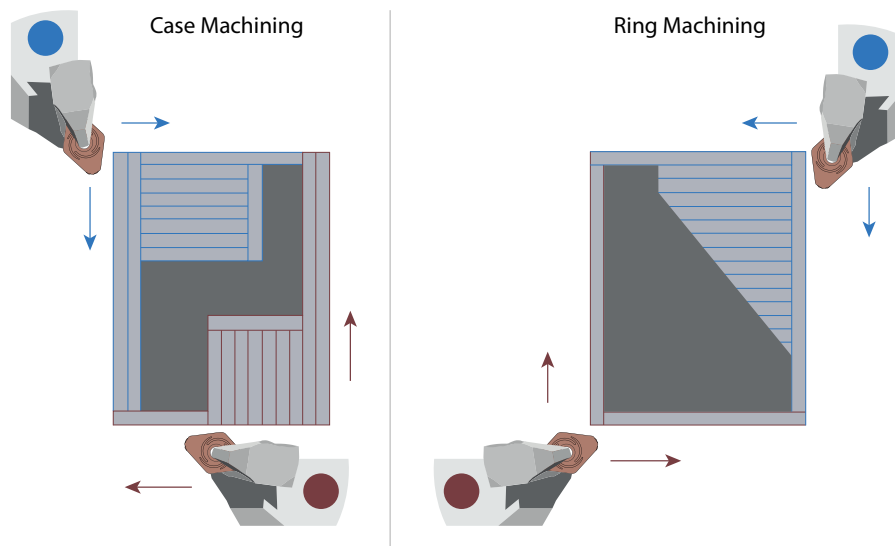


| Inserts<br>Pastilhas<br>Plaquetas | <sup>(1)</sup> Geometry code | <sup>(2)</sup> Grade code | S   |    | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |  |     |
|-----------------------------------|------------------------------|---------------------------|-----|----|---|------|------|------|--|------|------|-------------|------|--|--|-----|
|                                   |                              |                           | PVD |    |   |      |      |      |  |      |      |             |      |  |  |     |
|                                   |                              |                           | X6  | Y3 | D   | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  |  |  | MAX |
|                                   | 1124595                      | DOMX 1506R1-GS            |     |    | 12,70   | 6,35 | 0,80 | 5,16 | 1,50   | 0,30 | 1,50 | 0,30        | 0,20 | 0,50   |  |     |
|                                   | 1124493                      | DOMX 1506L1-GS            |     |    | 12,70   | 6,35 | 0,80 | 5,16 | 1,50   | 0,30 | 1,50 | 0,30        | 0,20 | 0,50   |  |     |

First choice | 1ª Escolha | 1ª Opción Stock Items | Itens de stock

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

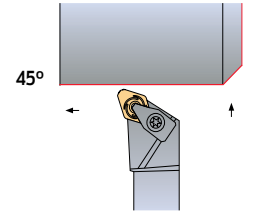
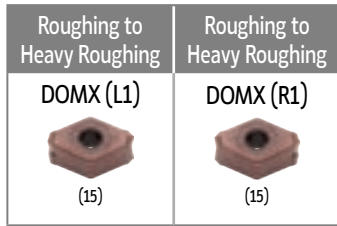
DOMX® can be used in several types of turning operations, from facing, external/internal turning to case and ring machining as seen in the examples below:



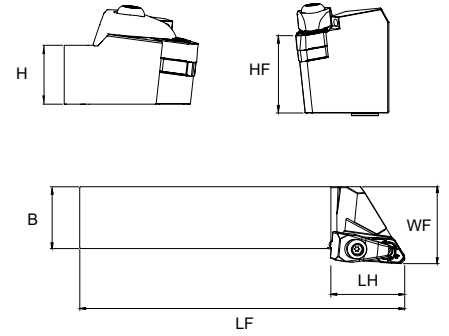
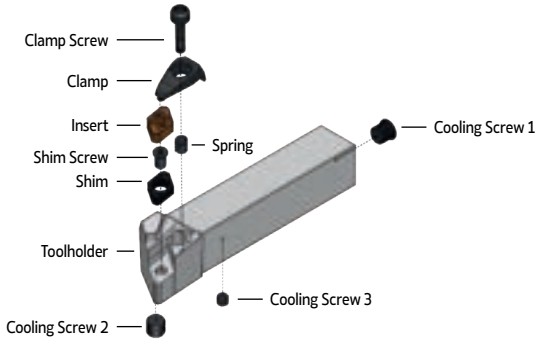
Tool life test – Inconel 625, AP 1,5mm, FN 0,15mm/r



(D) Dimple lock toolholders



**Axial: -6,25°**  
**Radial: -6,75°**













| Order code<br>Código | Reference<br>Referência<br>Referencia | Dimensions   Dimensões   Dimensiones (mm) |    |     |    |    | Insert<br>Pastilha<br>Inserto | WT   | Stock |
|----------------------|---------------------------------------|---|----|-----|----|----|-------------------------------|------|-------|
|                      |                                       | HF = H                                    | B  | LF  | LH | WF |                               |      |       |
| Right toolholder     |                                       |   |    |     |    |    |                               |      |       |
| 182000900            | DDJN R 2020 K15-A-DX1                 | 20  | 20 | 125 | 42 | 25 | DOMX 1506R1                   | 0,40 | ☼     |
| 182001000            | DDJN R 2525 M15-A-DX1                 | 25  | 25 | 150 | 42 | 32 | DOMX 1506R1                   | 0,75 | ☼     |
| 182001100            | DDJN R 3232 P15-A-DX1                 | 32  | 32 | 170 | 42 | 40 | DOMX 1506R1                   | 1,30 | ☼     |
| Left toolholder      |                                       |   |    |     |    |    |                               |      |       |
| 182001200            | DDJN L 2020 K15-A-DX1                 | 20  | 20 | 125 | 42 | 25 | DOMX 1506L1                   | 0,40 | ☼     |
| 182001300            | DDJN L 2525 M15-A-DX1                 | 25  | 25 | 150 | 42 | 32 | DOMX 1506L1                   | 0,75 | ☼     |
| 182001400            | DDJN L 3232 P15-A-DX1                 | 32  | 32 | 170 | 42 | 40 | DOMX 1506L1                   | 1,30 | ☼     |

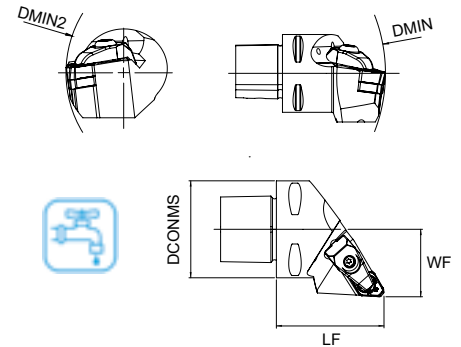
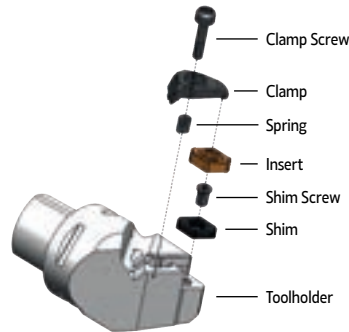
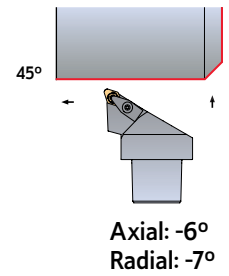
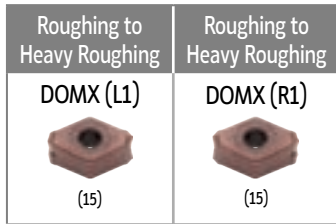
☼ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

**SPARE PARTS** Acessórios | Repuestos

| Cutter Reference        | Shim R  | Shim L  | Shim Screw  | Spring  | Clamp   | Clamp Screw  | Wrench  | Coolant Screw 1   | Coolant Screw 2   | Coolant Screw 3   |
|-------------------------|---|---|---|---|---|--|---|---|---|---|
| DDJN R/L 2020 K15-A-DX1 |  |  |  |  |  |  |  |  |  |  |
| DDJN R/L 2525 M15-A-DX1 | CD150503  | CD150502  | T06010000   | M09513  | GA07002   | D0602900   | SS40  | H0600475  | H1000875  | T1000875  |
| DDJN R/L 3232 P15-A-DX1 | CD150503  | CD150502  | T06010000   | M09513  | GA07002   | D0602900   | SS40  | -   | H1000875  | -   |

## (D) Dimple lock toolholders



| Order code<br>Código | Reference<br>Referência<br>Referencia | Dimensions (mm) |      |       |    |    | Insert<br>Pastilha<br>Inserto | WT   | Stock |
|----------------------|---------------------------------------|-----------------|------|-------|----|----|-------------------------------|------|-------|
|                      |                                       | DCONMS          | DMIN | DMIN2 | WF | LF |                               |      |       |
| Right toolholder     |                                       |                 |      |       |    |    |                               |      |       |
| 182000100            | PSC40-DDJN R 27055-15-DX1             | 40              | 110  | 145   | 27 | 55 | DOMX 1506R1                   | 0,42 | ☉     |
| 182000200            | PSC50-DDJN R 35060-15-DX1             | 50              | 110  | 165   | 35 | 60 | DOMX 1506R1                   | 0,80 | ☉     |
| 182000300            | PSC63-DDJN R 45065-15-DX1             | 63              | 110  | 190   | 45 | 65 | DOMX 1506R1                   | 1,10 | ☉     |
| 182000400            | PSC80-DDJN R 55080-15-DX1             | 80              | 110  | 250   | 55 | 80 | DOMX 1506R1                   | 2,74 | ☉     |
| Left toolholder      |                                       |                 |      |       |    |    |                               |      |       |
| 182000500            | PSC40-DDJN L 27055-15-DX1             | 40              | 110  | 145   | 27 | 55 | DOMX 1506L1                   | 0,42 | ☉     |
| 182000600            | PSC50-DDJN L 35060-15-DX1             | 50              | 110  | 165   | 35 | 60 | DOMX 1506L1                   | 0,80 | ☉     |
| 182000700            | PSC63-DDJN L 45065-15-DX1             | 63              | 110  | 190   | 45 | 65 | DOMX 1506L1                   | 1,10 | ☉     |
| 182000800            | PSC80-DDJN L 55080-15-DX1             | 80              | 110  | 250   | 55 | 80 | DOMX 1506L1                   | 2,74 | ☉     |

☉ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference          | Shim R   | Shim L   | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench |
|---------------------------|----------|----------|------------|--------|---------|-------------|--------|
| PSC40-DDJNR/L27055-15-DX1 | CD150503 | CD150502 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| PSC50-DDJNR/L35060-15-DX1 | CD150503 | CD150502 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| PSC63-DDJNR/L45065-15-DX1 | CD150503 | CD150502 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| PSC80-DDJNR/L55080-15-DX1 | CD150503 | CD150502 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |

**NEW** ALL-IN-ONE

# MULTICUT



A multipurpose tool designed to enhance productivity and reduce setup times is capable of executing internal, external, and face turning, as well as drilling with either a stationary or rotating tool.

Uma ferramenta multifuncional projetada para aumentar a produtividade e reduzir os tempos de configuração. Capaz de executar torneamento interno, externo e facejamento, e até mesmo furação com uma ferramenta estacionária ou giratória.

Una herramienta multifuncional diseñada para aumentar la productividad y reducir los tiempos de configuración. Capaz de realizar torneado interno, externo y frontal, e incluso perforación con una herramienta estacionaria o giratoria.

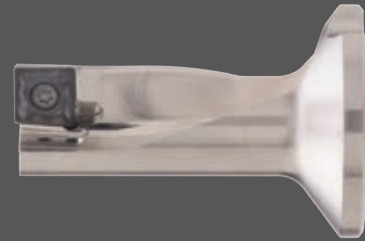
## **NEW XMS-R** > page 484

- > From DC 8mm to 32mm  
De DC 8mm a 32mm | Desde DC 8mm hasta 32mm
- > With length of 2,25xDC  
Com comprimento de 2,25xDC | Con longitud de 2,25 x DC



## **NEW XMS-L** > page 484

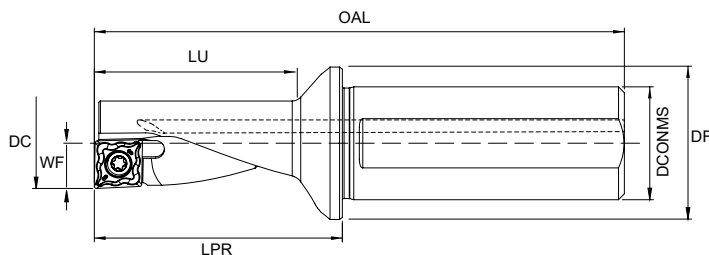
- > From DC 8mm to 32mm  
De DC de 8mm a 32mm | Desde DC 8mm hasta 32mm
- > With length of 2,25xDC  
Com comprimento de 2,25xDC | Con longitud de 2,25 x DC



## **NEW XCMT INSERTS** > page 485

- > From sizes 04 to 17  
De tamanhos de 04 a 17 | De tamaños de 04 a 17
- > Available in grades PH7920 and PHS225  
Disponível nos graus PH7920 e PHS225 | Disponible en las calidades PH7920 y PHS225
- > Suitable for machining steels, stainless steels and HRSA  
Adequado para maquinação de aços, aços inoxidáveis e HRSA | Adecuado para el mecanizado de aceros, aceros inoxidables y HRSA





\*Right hand style show

| Order code<br>Código | Reference<br>Referência<br>Referencia | Hand  |   | Dimensions   Dimensões   Dimensiones (mm) |        |    |      |       |      |      | WT    | Insert         | Stock |
|----------------------|---------------------------------------|-------|---|---|--------|----|------|-------|------|------|-------|----------------|-------|
|                      |                                       |       |   | DC  | DCONMS | DF | WF   | OAL   | LU   | LPR  |       |                |       |
| 182021200            | XMS-R 08010-2,25D                     | Right | 1 | 8,0                                       | 10     | 15 | 4    | 60,0  | 18,0 | 22,0 | 0,027 | XCMT 0401.. ER |       |
| 182021300            | XMS-R 10012-2,25D                     | Right | 1 | 10,0                                      | 12     | 18 | 5    | 69,5  | 22,5 | 27,5 | 0,046 | XCMT 0502..    |       |
| 182021400            | XMS-R 12016-2,25D                     | Right | 1 | 12,0                                      | 16     | 22 | 6    | 78,0  | 27,0 | 33,0 | 0,089 | XCMT 0602..    |       |
| 182021500            | XMS-R 14016-2,25D                     | Right | 1 | 14,0                                      | 16     | 22 | 7    | 83,5  | 31,5 | 38,5 | 0,094 | XCMT 0703..    |       |
| 182021600            | XMS-R 16020-2,25D                     | Right | 1 | 16,0                                      | 20     | 28 | 8    | 94,0  | 36,0 | 44,0 | 0,154 | XCMT 0803..    |       |
| 182021700            | XMS-R 18025-2,25D                     | Right | 1 | 18,0                                      | 25     | 36 | 9    | 109,5 | 40,5 | 53,5 | 0,293 | XCMT 09T3..    |       |
| 182021800            | XMS-R 20025-2,25D                     | Right | 1 | 20,0                                      | 25     | 36 | 10   | 111,0 | 45,0 | 55,0 | 0,311 | XCMT 10T3..    |       |
| 182021900            | XMS-R 25032-2,25D                     | Right | 1 | 25,0                                      | 32     | 44 | 12,5 | 129,0 | 56,5 | 69,0 | 0,563 | XCMT 1304..    |       |
| 182022000            | XMS-R 32040-2,25D                     | Right | 1 | 32,0                                      | 40     | 54 | 16   | 158,0 | 72,0 | 88,0 | 1,117 | XCMT 1705..    |       |
| 182022100            | XMS-L 08010-2,25D                     | Left  | 1 | 8,0                                       | 10     | 15 | 4    | 60,0  | 18,0 | 22,0 | 0,027 | XCMT 0401.. EL |       |
| 182022200            | XMS-L 10012-2,25D                     | Left  | 1 | 10,0                                      | 12     | 18 | 5    | 69,5  | 22,5 | 27,5 | 0,046 | XCMT 0502..    |       |
| 182022300            | XMS-L 12016-2,25D                     | Left  | 1 | 12,0                                      | 16     | 22 | 6    | 78,0  | 27,0 | 33,0 | 0,089 | XCMT 0602..    |       |
| 182022400            | XMS-L 14016-2,25D                     | Left  | 1 | 14,0                                      | 16     | 22 | 7    | 83,5  | 31,5 | 38,5 | 0,094 | XCMT 0703..    |       |
| 182022500            | XMS-L 16020-2,25D                     | Left  | 1 | 16,0                                      | 20     | 28 | 8    | 94,0  | 36,0 | 44,0 | 0,154 | XCMT 0803..    |       |
| 182022600            | XMS-L 18025-2,25D                     | Left  | 1 | 18,0                                      | 25     | 36 | 9    | 109,5 | 40,5 | 53,5 | 0,293 | XCMT 09T3..    |       |
| 182022700            | XMS-L 20025-2,25D                     | Left  | 1 | 20,0                                      | 25     | 36 | 10   | 111,0 | 45,0 | 55,0 | 0,311 | XCMT 10T3..    |       |
| 182022800            | XMS-L 25032-2,25D                     | Left  | 1 | 25,0                                      | 32     | 44 | 12,5 | 129,0 | 56,5 | 69,0 | 0,563 | XCMT 1304..    |       |
| 182022900            | XMS-L 32040-2,25D                     | Left  | 1 | 32,0                                      | 40     | 54 | 16   | 158,0 | 72,0 | 88,0 | 1,117 | XCMT 1705..    |       |

Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

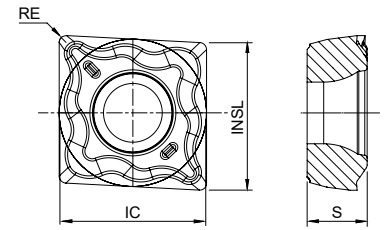
XCMT Inserts | Pastilhas | Plaquetas



XCMT-MP  
(PH7 grade)



XCMT-MP  
(PHS grade)



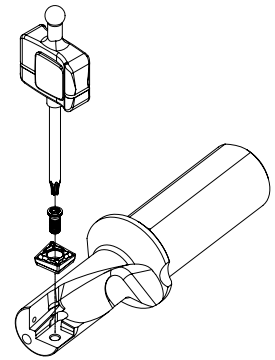
XCMT-MP

|                              |                           | P      | M      |        | S      | Dimensions   Dimensões   Dimensiones (mm) |      |       |      | Hand    |
|------------------------------|---------------------------|--------|--------|--------|--------|---|------|-------|------|---------|
|                              |                           | PVD    | CVD    | PVD    | PVD    | IC  | S    | INSL  | RE   |         |
|                              | <sup>(2)</sup> Grade code | G4     | U5     | G4     | G4     |   |      |       |      |         |
| <sup>(1)</sup> Geometry code | ISO Reference             | PH7920 | PHS225 | PH7920 | PH7920 |   |      |       |      |         |
| 1124790                      | XCMT 040104-MP ER         | ☺      | ☹      | ☺      | ☺      | 4,40                                      | 1,89 | 4,00  | 0,40 | Right   |
| 1124791                      | XCMT 040104-MP EL         | ☺      | ☹      | ☺      | ☺      | 4,40                                      | 1,89 | 4,00  | 0,40 | Left    |
| 1124792                      | XCMT 050204-MP EN         | ☺      | ☹      | ☺      | ☺      | 5,65                                      | 2,14 | 5,00  | 0,40 | Neutral |
| 1123788                      | XCMT 060204-MP EN         | ☺      | ☹      | ☺      | ☺      | 6,40                                      | 2,47 | 6,00  | 0,40 | Neutral |
| 1124784                      | XCMT 070304-MP EN         | ☺      | ☹      | ☺      | ☺      | 7,50                                      | 3,25 | 7,00  | 0,40 | Neutral |
| 1124785                      | XCMT 080304-MP EN         | ☺      | ☹      | ☺      | ☺      | 8,40                                      | 3,26 | 8,00  | 0,40 | Neutral |
| 1124786                      | XCMT 09T304-MP EN         | ☺      | ☹      | ☺      | ☺      | 9,45                                      | 4,00 | 9,00  | 0,40 | Neutral |
| 1124787                      | XCMT 10T308-MP EN         | ☺      | ☹      | ☺      | ☺      | 10,40                                     | 4,00 | 10,00 | 0,80 | Neutral |
| 1124788                      | XCMT 130408-MP EN         | ☺      | ☹      | ☺      | ☺      | 13,35                                     | 4,85 | 12,50 | 0,80 | Neutral |
| 1124789                      | XCMT 170508-MP EN         | ☺      | ☹      | ☺      | ☺      | 17,30                                     | 5,58 | 16,00 | 0,80 | Neutral |

☺ First choice | Primeira opção | 1ª opción    ☹ Stock item | Produto de stock | Itens de stock    ○ Available under request | Disponível sobre consulta | Disponible bajo consulta    Insert order code = (1) Geometry Code + (2) Grade Code

## SPARE PARTS Acessórios | Repuestos

| Cutter<br>ØDc       | Insert Screw | Key (Torx) | Order separately   |              |
|---------------------|--------------|------------|--------------------|--------------|
|                     |              |            | Key<br>(Torx - Nm) | Torque Value |
| XMS-R/L 08010-2,25D | P0180400     | XT06IP     | DT0606IP           | 0,60         |
| XMS-R/L 10012-2,25D | P0200500     | XT06       | DT0606             | 0,60         |
| XMS-R/L 12016-2,25D | P0220500     | XT07       | DT0709             | 0,90         |
| XMS-R/L 14016-2,25D | P0250704     | XT08       | DT0812             | 1,20         |
| XMS-R/L 16020-2,25D | P0300701     | XT08       | DT0812             | 1,20         |
| XMS-R/L 18025-2,25D | P0300701     | XT08       | DT0812             | 1,20         |
| XMS-R/L 20025-2,25D | P0350800     | PT15       | DT1530             | 3,00         |
| XMS-R/L 25032-2,25D | P0500900     | PT20       | DT2050             | 4,00         |
| XMS-R/L 32040-2,25D | P0501302     | PT20       | DT2050             | 4,00         |



## GRADES SELECTION GUIDE Guia para seleção de graus | Tabla para selección de calidades

| ISO | PSM | Material                          | HB<br>(Brinell) | Grades            |             |
|-----|-----|-----------------------------------|-----------------|-------------------|-------------|
|     |     |                                   |                 | ← Wear Resistance | Toughness → |
|     |     |                                   |                 | PH7920            | PHS225      |
|     |     |                                   |                 |                   |             |
| P   | 1   | Unalloyed Steel                   | 125-170         | ✓                 |             |
|     | 2   | Low-Alloyed Steel                 | 180-350         | ✓                 |             |
|     | 3   | High-Alloyed Steel                | 200-325         | ✓                 |             |
| M   | 4   | SS - Ferritic / Martensitic       | 200-330         | ✓                 | ✓           |
|     | 5   | SS - Austenitic                   | 180-330         | ✓                 | ✓           |
|     | 6   | SS - Austenitic-ferritic (Duplex) | 230-260         | ✓                 | ✓           |
| S   | 11  | Heat Resistant Super Alloys       | 200-320         | ✓                 |             |

Good Conditions     
 Average Conditions     
 Difficult Conditions

RECOMMENDED CUTTING CONDITIONS Condições de corte recomendadas | Condiciones de corte recomendables

| ISO | PSM | Material                          | HB<br>(Brinell) | Vc (m/min)        |             |
|-----|-----|-----------------------------------|-----------------|-------------------|-------------|
|     |     |                                   |                 | ← Wear Resistance | Toughness → |
|     |     |                                   |                 | PH7920            | PHS225      |
| P   | 1   | Unalloyed Steel                   | 125-170         | 110-220           | -           |
|     | 2   | Low-Alloyed Steel                 | 180-350         | 100-210           | -           |
|     | 3   | High-Alloyed Steel                | 200-325         | 85-190            | -           |
| M   | 4   | SS - Ferritic / Martensitic       | 200-330         | 95-210            | 70-230      |
|     | 5   | SS - Austenitic                   | 180-330         | 85-205            | 65-225      |
|     | 6   | SS - Austenitic-ferritic (Duplex) | 230-260         | 80-195            | 55-215      |
| S   | 11  | Heat Resistant Super Alloys       | 200-320         | 25-210            | -           |

| Reference           | FN (mm/rev)  |                 |            | AP (mm)      |                 |
|---------------------|--------------|-----------------|------------|--------------|-----------------|
|                     | Face Turning | Int/Ext Turning | Holemaking | Face Turning | Int/Ext Turning |
| XCMT 040104-MP ER/L | 0,02-0,09    | 0,02-0,13       | 0,01-0,04  | 0,50-1,90    | 0,50-2,70       |
| XCMT 050204-MP EN   | 0,02-0,12    | 0,02-0,15       | 0,01-0,05  | 0,50-2,20    | 0,50-3,20       |
| XCMT 060204-MP EN   | 0,02-0,14    | 0,02-0,16       | 0,01-0,06  | 0,70-2,70    | 0,70-3,70       |
| XCMT 070304-MP EN   | 0,02-0,16    | 0,02-0,18       | 0,01-0,08  | 0,80-3,00    | 0,80-4,00       |
| XCMT 080304-MP EN   | 0,03-0,18    | 0,03-0,20       | 0,02-0,08  | 0,90-3,40    | 0,90-4,20       |
| XCMT 09T304-MP EN   | 0,03-0,20    | 0,03-0,22       | 0,03-0,09  | 0,90-3,80    | 0,90-4,70       |
| XCMT 10T308-MP EN   | 0,03-0,22    | 0,03-0,24       | 0,03-0,10  | 1,00-4,20    | 1,00-5,30       |
| XCMT 130408-MP EN   | 0,03-0,24    | 0,03-0,26       | 0,04-0,12  | 1,00-5,00    | 1,00-6,50       |
| XCMT 170508-MP EN   | 0,03-0,27    | 0,03-0,30       | 0,04-0,15  | 1,00-6,00    | 1,00-7,00       |

**Note:** For additional details on drilling operations check the page B-377.





# TURNING OVERVIEW

## 1 NEGATIVE INSERTS

> See page C-504

## 2 POSITIVE INSERTS

> See page C-542

## 3 PCBN INSERTS

> See page C-576

## 4 PCD INSERTS

> See page C-600

## 5 HEAVY TURNING

> See page C-622

## 6 EXTERNAL TOOLHOLDERS

> See page C-646

## 7 INTERNAL TOOLHOLDERS

> See page C-754

## 8 AUTOMATIC LATHES

> See page C-832

## 9 SPARE PARTS

> See page C-846

## 10 TECHNICAL DATA

> See page C-856

# TURNING INSERTS ISO IDENTIFICATION SYSTEM

|   |  |   |         |
|---|--|---|---------|
| H |  | M |         |
| O |  | V |         |
| P |  | W |         |
| S |  | L |         |
| T |  | A |         |
| C |  | B |         |
| D |  | K |         |
| E |  | R |         |
| F |  | X | Special |

1 - Insert shape symbol

| Symbol | m (mm)      | d (mm)      | s (mm) |
|--------|-------------|-------------|--------|
| A      | ±0.005      | ±0.025      | ±0.025 |
| F      | ±0.005      | ±0.013      | ±0.025 |
| C      | ±0.013      | ±0.025      | ±0.025 |
| H      | ±0.013      | ±0.013      | ±0.025 |
| E      | ±0.025      | ±0.025      | ±0.025 |
| G      | ±0.025      | ±0.025      | ±0.13  |
| J      | ±0.005      | ±0.05~±0.13 | ±0.025 |
| K*     | ±0.013      | ±0.05~±0.13 | ±0.025 |
| L*     | ±0.025      | ±0.05~±0.13 | ±0.025 |
| M*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.13  |
| N*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.025 |
| U*     | ±0.13~±0.38 | ±0.08~±0.25 | ±0.13  |

\*As a rule, the sides of these inserts are as sintered. Tolerance differs with insert size, for the accuracy of class M, refer to the table on the right.

Triangular inserts with a facet (secondary cutting edge)

| Detailed dimension of M class insert<br>Insert height Tolerances (mm) |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| Inscribed circle  | T     | S     | C     | D     | V     |
| 6.35  | ±0.08 | -     | -     | -     | -     |
| 9.525   | ±0.08 | ±0.08 | ±0.11 | ±0.10 | ±0.13 |
| 12.70   | ±0.13 | ±0.13 | ±0.13 | ±0.15 | -     |
| 15.875  | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 19.05   | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 25.40   | -     | ±0.18 | -     | -     | -     |
| 31.75   | -     | ±0.25 | -     | -     | -     |

| Inscribed circle Tolerances (mm) |       |       |       |       |       |
|----------------------------------|-------|-------|-------|-------|-------|
| Inscribed circle                 | T     | S     | C     | D     | V     |
| 6.35                             | ±0.05 | -     | -     | -     | -     |
| 9.525                            | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 |
| 12.70                            | ±0.08 | ±0.08 | ±0.08 | ±0.08 | ±0.08 |
| 15.875                           | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 |
| 19.05                            | -     | -     | -     | -     | ±0.10 |
| 25.40                            | -     | ±0.13 | -     | -     | ±0.10 |
| 31.75                            | -     | ±0.20 | -     | -     | ±0.12 |

3 - Tolerances symbol

| A | B | C | D | E                     |
|---|---|---|---|-----------------------|
|   |   |   |   |                       |
| F | G | N | P | O                     |
|   |   |   |   | Other clearance angle |

2 - Normal clearance symbol



| 4 - Insert symbol |           |   |                            |       |        |           |   |                            |       |        |              |           |                          |                            |  |
|-------------------|-----------|---|----------------------------|-------|--------|-----------|---|----------------------------|-------|--------|--------------|-----------|--------------------------|----------------------------|--|
| symbol            | Type      | Hole type                                 | Chip breaker               | Shape | symbol | Type      | Hole type                                 | Chip breaker               | Shape | symbol | Type         | Hole type | Chip breaker             | Shape                      |  |
| W                 | with hole | Round hole / one countersink (40°-60°)    | Without chip breaker       |       | H      | with hole | Round hole / one countersink (70°-90°)    | Chip breaker on one side   |       | G      | without hole | with hole | Round hole               | Chip breaker on both sides |  |
| T                 |           |   | Chip breaker on one side   |       | C      |           | Round hole / double countersink (70°-90°) | Without chip breaker       |       | N      |              | -         | Without chip breaker     |                            |  |
| Q                 | with hole | Round hole / double countersink (40°-60°) | Without chip breaker       |       | J      | with hole | Round hole                                | Chip breaker on both sides |       | R      | without hole | -         | Chip breaker on one side |                            |  |
| U                 |           |   | Chip breaker on both sides |       | A      |           |   | Without chip breaker       |       | F      |              |           | -                        | Chip breaker on both sides |  |
| B                 | with hole | Round hole / one countersink (70°-90°)    | Without chip breaker       |       | M      | with hole | Round hole                                | Chip breaker on one side   |       | X      | -            | -         | -                        | On request                 |  |

# TURNING INSERTS ISO IDENTIFICATION SYSTEM

Sistema de identificação ISO para pastilhas | Codificación ISO para plaquitas

| R's  | 35°<br>V's | 55°<br>D's | 80°<br>C's | 90°<br>S's | 60°<br>T's | 80°<br>W's | IC     |       | ANSI   |
|------|------------|------------|------------|------------|------------|------------|--------|-------|--------|
|      |            |            |            |            |            |            | mm     | inch  | Symbol |
| -    | 06         | 04         | -          | 03         | 06         | 02         | 3,97   | 5/32  | 1,20   |
| -    | 08         | 05         | 04         | 04         | 08         | L3         | 4,76   | 3/16  | 1,50   |
| -    | 09         | 06         | 05         | 05         | 09         | 03         | 5,56   | 7/32  | 1,80   |
| 06** | -          | -          | -          | -          | -          | -          | 6,00   | 0,236 |        |
| 06*  | 11         | 07         | 06         | 06         | 11         | 04         | 6,35   | 1/4   | 2,00   |
| 07*  | 13         | 09         | 08         | 07         | 13         | 05         | 7,94   | 5/16  | 2,50   |
| 08*  | -          | -          | -          | -          | -          | -          | 8,00   | 0,315 |        |
| 09*  | 16         | 11         | 09         | 09         | 16         | 06         | 9,525  | 3/8   | 3,00   |
| 10** | -          | -          | -          | -          | -          | -          | 10,00  | 0,394 |        |
| 12** | -          | -          | -          | -          | -          | -          | 12,00  | 0,472 |        |
| 12*  | 22         | 15         | 12         | 12         | 22         | 08         | 12,70  | 1/2   | 4,00   |
| 15*  | 27         | 19         | 16         | 15         | 27         | 10         | 15,875 | 5/8   | 5,00   |
| 16** | -          | -          | -          | -          | -          | -          | 16,00  | 0,63  |        |
| 19*  | 33         | 23         | 19         | 19         | 33         | 13         | 19,05  | 3/4   | 6,00   |
| 20** | -          | -          | -          | -          | -          | -          | 20,00  | 0,787 |        |
| 25** | -          | -          | -          | -          | -          | -          | 25,00  | 0,984 |        |
| 25*  | 44         | 31         | 25         | 25         | 44         | 17         | 25,40  | 1,00  | 8,00   |
| 31*  | 54         | 38         | 32         | 31         | 54         | 21         | 31,75  | 1 1/4 | 10,00  |
| 32** | -          | -          | -          | -          | -          | -          | 32,00  | 1,26  |        |

\* ANSI designation only (Radius Designation is R0)

\*\* Metric designation only (Radius Designation is M0)

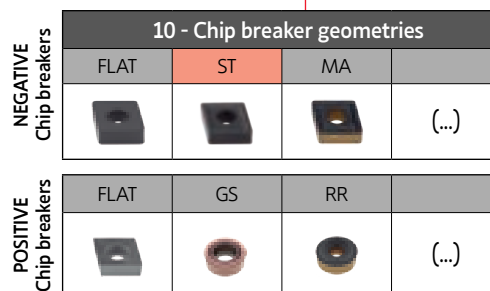
According to International Standard ISO 1832 - 2012(E)

"Indexable inserts for cutting tools - Designation"

| ISO | mm    | ANSI | inch  |
|-----|-------|------|-------|
| 01  | 1.59  | 1    | 0.062 |
| T1  | 1.98  | 1.2  | 0.078 |
| 02  | 2.38  | 1.5  | 0.094 |
| 03  | 3.18  | 2    | 0.125 |
| T3  | 3.97  | 2.5  | 0.156 |
| 04  | 4.76  | 3    | 0.188 |
| 05  | 5.56  | 3.5  | 0.219 |
| 06  | 6.35  | 4    | 0.250 |
| 07  | 7.94  | 5    | 0.312 |
| 09  | 9.52  | 6    | 0.375 |
| 12  | 12.70 | 8    | 0.500 |

5 - Insert size symbol

6 - Insert thickness symbol



| 7 - Insert corner symbol |              |      |      |
|--------------------------|--------------|------|------|
| ISO                      | mm           | inch | ANSI |
| 00                       | Sharp nose   |      | 0    |
| 01                       | 0.10         | .004 | 0.2  |
| 02                       | 0.20         | .008 | 0.5  |
| 04                       | 0.40         | .015 | 1    |
| 08                       | 0.80         | .032 | 2    |
| 12                       | 1.2          | .047 | 3    |
| 16                       | 1.6          | .062 | 4    |
| 20                       | 2.0          | .078 | 5    |
| 24                       | 2.4          | .094 | 6    |
| 28                       | 2.8          | .109 | 7    |
| 32                       | 3.2          | .125 | 8    |
| 00 (inch or M0/metric)   | Round insert |      | 0    |

| 7.1* - Insert edges symbol                              |         |   |         |
|---|---------|---|---------|
| For inserts having secondary edges two digits are used: |         |   |         |
| 1 <sup>st</sup> digit is secondary edge                 |         | 2 <sup>nd</sup> digit is secondary edges relief angle |         |
| A   | 45°     | A   | 3°      |
| D   | 60°     | B   | 5°      |
| E   | 75°     | C   | 7°      |
| F   | 85°     | D   | 15°     |
| P   | 90°     | E   | 20°     |
| Z   | special | F   | 25°     |
| *only when required.                                    |         | G   | 30°     |
|   |         | N   | 0°      |
|   |         | P   | 11°     |
|   |         | Z   | special |

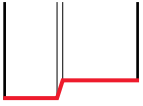

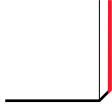
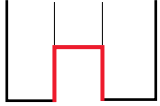
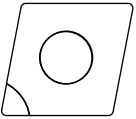
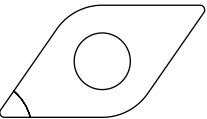

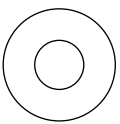
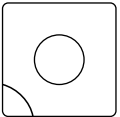
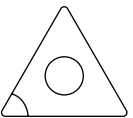
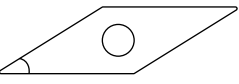
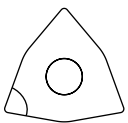
| 8* - Cutting edge information |                       |        |
|-------------------------------|-----------------------|--------|
| Shape                         | Honing                | Symbol |
|                               | No honing             | F      |
|                               | With honing           | E      |
|                               | Chamfered No honing   | T      |
|                               | Chamfered with honing | S      |
| *only when required.          |                       |        |

| 9* - Cutting direction |       |        |
|------------------------|-------|--------|
| Shape                  | Hand  | Symbol |
|                        | Right | R      |
|                        | Left  | L      |
|                        | None  | N      |
| *only when required.   |       |        |

### EXTERNAL MACHINING Maquinação externa | Maquinación externa

General Recommendation:

1. The choice of the insert shape depends of the operation
2. The insert shape should be selected to the required lead angle and the accessibility or versatility required of the tool.
3. Select the largest suitable point angle on the insert for strenght and economy.

| Insert Shape  | Operation         | Longitudinal turning  | Profiling   | Facing  | Plunging  |
|---|-------------------|---|---|---|---|
|   |                   |  |  |  |  |
|    | Rhombic 80°       | ●●  |   | ●   |   |
|   | Rhombic 55°       | ●   | ●●  | ●   |   |
|  | Parallelogram 55° | ●   | ●   |   | ●   |
|  | Round             | ●   | ●   | ●   | ●●  |
|  | Square 90°        | ●   |   | ●●  |   |
|  | Triangular 60°    | ●   | ●   | ●   | ●   |
|  | Rhombic 35°       |   | ●   |   |   |
|  | Trigon 80°        | ●   |   | ●   |   |

●● Recommended Insert Shape

● Alternative Insert Shape

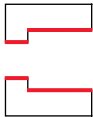
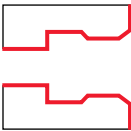
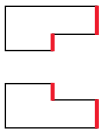
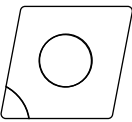
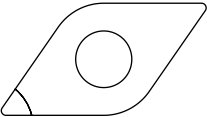

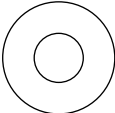
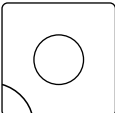
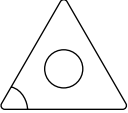
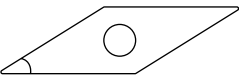
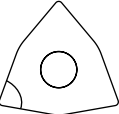
## INSERTS RECOMENDATION

Recomendações de maquinação | Recomendaciones de maquinación

## INTERNAL MACHINING Maquinação interna | Maquinación interna

General Recommendation:

1. The choice of the insert shape depends of the operation
2. The insert shape should be selected to the required lead angle and the accessibility or versatility required of the tool.
3. Select the largest suitable point angle on the insert for strenght and economy.

| Insert Shape  | Operation            | Longitudinal turning  | Profiling  | Facing  |
|---|----------------------|---|--|---|
|   |                      |  |  |  |
|    | Rhombic<br>80°       | ●   |  | ●●  |
|   | Rhombic<br>55°       | ●   | ●●   | ●   |
|  | Parallelogram<br>55° | ●●  |  |   |
|  | Round                | ●   |  | ●   |
|  | Square<br>90°        | ●   |  |   |
|  | Triangular<br>60°    | ●●  | ●  | ●   |
|  | Rhombic<br>35°       |   | ●  |   |
|  | Trigon<br>80°        | ●   |  | ●   |

●● Recommended Insert Shape

● Alternative Insert Shape

P

| Fine finishing                     | Finishing                | Medium                        | Roughing                      | Heavy roughing           |
|------------------------------------|--------------------------|-------------------------------|-------------------------------|--------------------------|
|                                    | MF                       | LC                            | MR                            | HR                       |
|                                    |                          | PM                            | MA                            | RP                       |
|                                    |                          | MW                            | GR                            | HY                       |
|                                    |                          | wiper                         |                               | 1 face                   |
|                                    |                          |                               |                               | 1 face                   |
|                                    |                          |                               |                               | 1 face                   |
| CVD Grades                         |                          |                               |                               |                          |
|                                    | <b>PHG105</b><br>P05-P10 | <b>PHG115</b><br>P10-P25      | <b>PHG125</b><br>P20-P35      | <b>PHG140</b><br>P25-P45 |
|                                    |                          | <b>NEW PH2G115</b><br>P10-P25 | <b>NEW PH2G125</b><br>P20-P35 |                          |
| PVD Grades                         |                          |                               |                               |                          |
|                                    |                          | <b>PH7910</b><br>P05-P10      |                               |                          |
| Continuous cut ← → Interrupted cut |                          |                               |                               |                          |

M

| Fine finishing                     | Finishing                | Medium                   | Roughing                 | Heavy roughing           |
|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>NEW</b> GSF                     | GS                       | SF                       | SS                       |                          |
|                                    | MS                       |                          | RP                       | HY                       |
|                                    |                          |                          | 1 face                   | 1 face                   |
| CVD Grades                         |                          |                          |                          |                          |
|                                    | <b>PHS215</b><br>M10-M25 |                          | <b>PHS225</b><br>M15-M30 | <b>PHS240</b><br>M25-M45 |
| PVD Grades                         |                          |                          |                          |                          |
| <b>PH7910</b><br>M05-M10           | <b>PHH910</b><br>M05-M10 | <b>PH7920</b><br>M10-M25 | <b>PHH920</b><br>M10-M25 |                          |
| Continuous cut ← → Interrupted cut |                          |                          |                          |                          |

# NEGATIVE TURNING APPLICATION RANGE OVERVIEW

Vista geral de aplicações | Vista general de aplicaciones




| K                                  | Fine finishing | Finishing | Medium                   | Roughing                 | Heavy roughing           |
|------------------------------------|----------------|-----------|--------------------------|--------------------------|--------------------------|
|                                    |                |           |                          | ST<br>                   | FLAT<br>HR<br>           |
|                                    |                |           | MW<br>wiper              |                          |                          |
| CVD Grades                         |                |           |                          |                          |                          |
|                                    |                |           | <b>PH5705</b><br>K05-K15 | <b>PH5320</b><br>K10-K25 | <b>PH5740</b><br>K20-K40 |
| Continuous cut ← → Interrupted cut |                |           |                          |                          |                          |

| N                                  | Fine finishing | Finishing | Medium                   | Roughing | Heavy roughing |
|------------------------------------|----------------|-----------|--------------------------|----------|----------------|
|                                    |                |           |                          | MS<br>   |                |
| Uncoated Grades                    |                |           |                          |          |                |
|                                    |                |           | <b>PH0910</b><br>N01-N20 |          |                |
| Continuous cut ← → Interrupted cut |                |           |                          |          |                |

| S                                  | Fine finishing | Finishing                | Medium                   | Roughing                 | Heavy roughing           |
|------------------------------------|----------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                                    |                | <b>NEW</b> GSF<br>       | GS<br>                   | SF<br>                   | SS<br>                   |
|                                    |                |                          | MS<br>                   |                          | DOMX<br>                 |
| PVD Grades                         |                |                          |                          |                          |                          |
|                                    |                | <b>PH7910</b><br>S05-S10 | <b>PHH910</b><br>S10-S25 | <b>PH7920</b><br>S10-S25 | <b>PHH920</b><br>S10-S25 |
| Continuous cut ← → Interrupted cut |                |                          |                          |                          |                          |



|                     | Fine finishing  | Finishing   | Medium  | Roughing   |   | Heavy roughing |
|---------------------|---|---|---|--|---|----------------|
| <b>P</b><br>5° & 7° | BO  | FP  | MP  | RF   | RM  |                |
|                     |  |        |        |  |  |                |
|                     |   | FW  | MW  | ST   | RR  |                |
|                     |   |  wiper |  wiper |  |  |                |
|                     | CVD Grades  |   |   |  |   |                |
|                     |   | <b>PHG115</b><br>P10-P25  | <b>PHG125</b><br>P20-P35  | <b>PHG140</b><br>P25-P45   |   |                |
|                     |   | <b>NEW PH2G115</b><br>P10-P25   | <b>NEW PH2G125</b><br>P20-P35   |  |   |                |
|                     | PVD Grades  |   |   |  |   |                |
|                     |   | <b>PH7910</b><br>P05-P10  | <b>PH7920</b><br>P10-P35  |  |   |                |
|                     |   | Continuous cut ←  |   | → Interrupted cut  |   |                |


|                 | Fine finishing | Finishing   | Medium  | Roughing  | Heavy roughing |  |
|-----------------|----------------|---|---|---|----------------|--|
| <b>P</b><br>11° |                | 12  | 13  | FLAT  |                |  |
|                 |                |  |  |  |                |  |
|                 | CVD Grades     |   |   |   |                |  |
|                 |                |   | <b>PH5115</b><br>P05-P20  | <b>PH5125</b><br>P20-P35  |                |  |
|                 | PVD Grades     |   |   |   |                |  |
|                 |                | Continuous cut ←  |   | → Interrupted cut   |                |  |










# POSITIVE TURNING APPLICATION RANGE OVERVIEW

Vista geral de aplicações | Vista general de aplicaciones

|                         |                          | Fine finishing           | Finishing                |        | Medium                   | Roughing                 | Heavy roughing |                          |
|-------------------------|--------------------------|--------------------------|--------------------------|--------|--------------------------|--------------------------|----------------|--------------------------|
| <b>M</b><br><br>5° & 7° |                          | FS<br>                   | FM<br>                   | LM<br> | MM<br>                   |                          |                |                          |
|                         |                          | NEW FF<br>               | BO<br>                   | FW<br> | MW<br>                   | GS<br>                   |                |                          |
|                         |                          | CVD Grades               |                          |        |                          |                          |                |                          |
|                         |                          |                          | <b>PHS215</b><br>M10-M25 |        |                          | <b>PHS225</b><br>M15-M30 |                | <b>PHS240</b><br>M25-M45 |
|                         |                          | PVD Grades               |                          |        |                          |                          |                |                          |
|                         | <b>PHH910</b><br>M05-M15 | <b>PH7910</b><br>M05-M10 |                          |        | <b>PH7920</b><br>M10-M25 | <b>PHH920</b><br>M10-M25 |                |                          |
|                         |                          | Continuous cut ←         |                          |        | → Interrupted cut        |                          |                |                          |

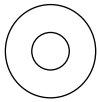
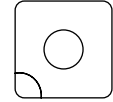
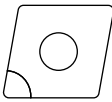

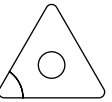
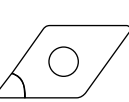
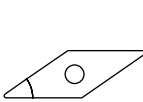
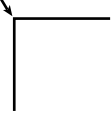


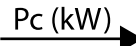
|                         |  | Fine finishing           | Finishing                | Medium | Roughing          | Heavy roughing           |  |  |
|-------------------------|--|--------------------------|--------------------------|--------|-------------------|--------------------------|--|--|
| <b>K</b><br><br>5° & 7° |  | FK<br>                   |                          | MK<br> | FLAT<br>          | RM<br>                   |  |  |
|                         |  |                          | FW<br>                   |        | MW<br>            | ST<br>                   |  |  |
|                         |  | CVD Grades               |                          |        |                   |                          |  |  |
|                         |  |                          | <b>PH5705</b><br>K05-K15 |        |                   | <b>PH5320</b><br>K10-K25 |  |  |
|                         |  | Uncoated Grades          |                          |        |                   |                          |  |  |
|                         |  | <b>PH0705</b><br>K05-K15 |                          |        |                   |                          |  |  |
|                         |  | Continuous cut ←         |                          |        | → Interrupted cut |                          |  |  |

|   |    | Fine finishing   | Finishing   | Medium | Roughing | Heavy roughing |
|---|----|--|---|--------|----------|----------------|
| N | 7° |  | LN<br> |        |          |                |
|   |    | Uncoated Grades  |   |        |          |                |
|   |    | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>PH0910</b><br/> <small>N01-N20</small> </div> |   |        |          |                |
|   |    | Continuous cut ← → Interrupted cut   |   |        |          |                |

|   |         | Fine finishing   | Finishing  | Medium  | Roughing   | Heavy roughing   |
|---|---------|--|--|---|--|--|
| S | 5° & 7° | FS<br>                                     | FM<br>                                     | LM<br>  | MM<br>                                     | GS<br>                                    |
|   |         | NEW FF<br>                                | BO<br>                                    | FW<br> | MW<br>                                    |  |
|   |         | PVD Grades   |  |   |  |  |
|   |         | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>PHH910</b><br/> <small>S05-S15</small> </div> | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>PH7910</b><br/> <small>S05-S10</small> </div> |   | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>PH7920</b><br/> <small>S10-S25</small> </div> | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>PHH920</b><br/> <small>S10-S25</small> </div> |
|   |         | Continuous cut ← → Interrupted cut   |  |   |  |  |

# INSERT SHAPE SELECTION

Seleção de geometria para pastilha | Selección de geometria para plaqueta

| Shape angle           |   | 90°   | 80°   | 80°   | 60°  | 55°   | 35°   |  |
|-----------------------|---|---|---|---|--|---|---|--|
| Geometry shape code   | <b>R</b>  | <b>S</b>  | <b>C</b>  | <b>W</b>  | <b>T</b>   | <b>D</b>  | <b>V</b>  |  |
| Geometry shape design |  |  |  |  |  |  |  |  |
| Cutting edge strength |  |   |   |   |  |   |   | <br>Accessibility                     |
| Vibration tendency    |  |   |   |   |  |   |   | Less power consumption<br><br>Pc (kW) |

## INSERT SHAPE

The insert shape should be selected relative to the entering angle accessibility from tools requirements.

The largest possible nose angle should be selected to provide insert strength and reliability, however, this has to be balanced against the cut variation need to be performed.

A large nose angle is strong, but requires more machine power and has a higher tendency for vibration.

A small nose angle is weaker and has a small cutting edge engagement, both of which can make it more sensitive to the heat effects.

Scale 1: indicates the cutting edge strength. The inserts to the left have larger nose angles and are correspondingly stronger. The right hand inserts have better versatility and accessibility.

Scale 2: indicates that vibration tendencies increase to the left side, while power requirements decrease to the right.

# NEGATIVE TURNING INSERTS OVERVIEW

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning








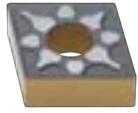
















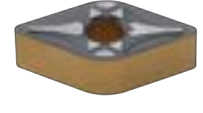
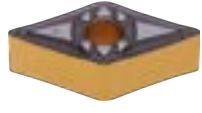


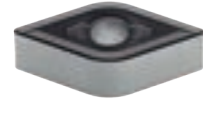

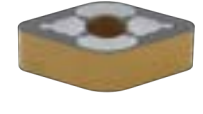


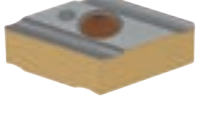










External Toolholders

Internal Toolholders

Automatic Lathes
































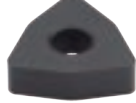













Spare Parts

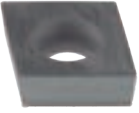









































Technical Data

|   |  |  |  |   |  |
|---|--|--|--|---|--|
| <p><b>CNMA</b></p>  <p>Roughing</p> <p>Page C - 506 Rhombic 80°</p>              | <p><b>NEW CNMG-GSF</b></p>  <p>Fine Finishing</p> <p>Page C - 506 Rhombic 80°</p> | <p><b>CNMG-MF</b></p>  <p>Finishing</p> <p>Page C - 506 Rhombic 80°</p>             | <p><b>CNMG-MS</b></p>  <p>Medium to Finishing</p> <p>Page C - 506 Rhombic 80°</p>   | <p><b>CNMG-SF</b></p>  <p>Medium to Finishing</p> <p>Page C - 506 Rhombic 80°</p>  | <p><b>CNMG-LC</b></p>  <p>Medium to Finishing</p> <p>Page C - 506 Rhombic 80°</p> |
| <p><b>CNMG-GS</b></p>  <p>Medium</p> <p>Page C - 506 Rhombic 80°</p>             | <p><b>CNMG-MR</b></p>  <p>Medium</p> <p>Page C - 508 Rhombic 80°</p>              | <p><b>CNMG-PM</b></p>  <p>Medium</p> <p>Page C - 508 Rhombic 80°</p>                | <p><b>CNMG-ST</b></p>  <p>Medium</p> <p>Page C - 508 Rhombic 80°</p>                | <p><b>CNMG-MW</b></p>  <p>Medium wiper</p> <p>Page C - 508 Rhombic 80°</p>         | <p><b>CNMG-MA</b></p>  <p>Medium to Roughing</p> <p>Page C - 510 Rhombic 80°</p>  |
| <p><b>CNMG-SS</b></p>  <p>Roughing to Medium</p> <p>Page C - 510 Rhombic 80°</p> | <p><b>CNMG-HR</b></p>  <p>Roughing</p> <p>Page C - 510 Rhombic 80°</p>            | <p><b>CNMM-RP</b></p>  <p>Roughing</p> <p>Page C - 512 Rhombic 80°</p>              | <p><b>CNMM-GR</b></p>  <p>Roughing</p> <p>Page C - 512 Rhombic 80°</p>              | <p><b>CNMM-HY</b></p>  <p>Heavy to Roughing</p> <p>Page C - 512 Rhombic 80°</p>    | <p><b>CNMM-HZ</b></p>  <p>Heavy to Roughing</p> <p>Page C - 512 Rhombic 80°</p>   |
| <p><b>DNMA</b></p>  <p>Roughing</p> <p>Page C - 514 Rhombic 55°</p>             | <p><b>DNMG-MF</b></p>  <p>Finishing</p> <p>Page C - 514 Rhombic 55°</p>          | <p><b>DNMG-MS</b></p>  <p>Medium to Finishing</p> <p>Page C - 514 Rhombic 55°</p>  | <p><b>DNMG-SF</b></p>  <p>Medium to Finishing</p> <p>Page C - 514 Rhombic 55°</p> | <p><b>DNMG-LC</b></p>  <p>Medium to Finishing</p> <p>Page C - 516 Rhombic 55°</p> | <p><b>DNMG-GS</b></p>  <p>Medium</p> <p>Page C - 516 Rhombic 55°</p>             |
| <p><b>DNMG-MR</b></p>  <p>Medium</p> <p>Page C - 516 Rhombic 55°</p>           | <p><b>DNMG-PM</b></p>  <p>Medium</p> <p>Page C - 516 Rhombic 55°</p>            | <p><b>DNMG-ST</b></p>  <p>Medium</p> <p>Page C - 518 Rhombic 55°</p>              | <p><b>DNMG-MW</b></p>  <p>Medium wiper</p> <p>Page C - 518 Rhombic 55°</p>       | <p><b>DNMG-SS</b></p>  <p>Roughing to Medium</p> <p>Page C - 518 Rhombic 55°</p> | <p><b>DOMX-GS</b></p>  <p>Roughing</p> <p>Page C - 518 Rhombic 55°</p>          |
| <p><b>DNMG-HR</b></p>  <p>Roughing</p> <p>Page C - 518 Rhombic 55°</p>         | <p><b>DNMM-RP</b></p>  <p>Roughing</p> <p>Page C - 518 Rhombic 55°</p>          | <p><b>DNMX-02</b></p>  <p>Medium to Finishing</p> <p>Page C - 520 Rhombic 55°</p> | <p><b>DNMX-03</b></p>  <p>Medium</p> <p>Page C - 520 Rhombic 55°</p>             | <p><b>DNMX-01</b></p>  <p>Roughing to Medium</p> <p>Page C - 520 Rhombic 55°</p> |  |
| <p><b>KNUX-01</b></p>  <p>Finishing</p> <p>Page C - 522 Parallelogram 55°</p>  | <p><b>KNUX-02</b></p>  <p>Medium</p> <p>Page C - 522 Parallelogram 55°</p>      | <p><b>RNMG-ST</b></p>  <p>Medium</p> <p>Page C - 522 Round R°</p>                 |  |   |  |
| <p><b>SNMA</b></p>  <p>Roughing</p> <p>Page C - 524 Square 90°</p>             | <p><b>SNMG-MF</b></p>  <p>Finishing</p> <p>Page C - 524 Square 90°</p>          | <p><b>SNMG-SF</b></p>  <p>Medium to Finishing</p> <p>Page C - 524 Square 90°</p>  | <p><b>SNMG-GS</b></p>  <p>Medium to Finishing</p> <p>Page C - 524 Square 90°</p>  | <p><b>SNMG-MR</b></p>  <p>Medium</p> <p>Page C - 524 Square 90°</p>              | <p><b>SNMG-PM</b></p>  <p>Medium</p> <p>Page C - 524 Square 90°</p>             |

# NEGATIVE TURNING INSERTS OVERVIEW






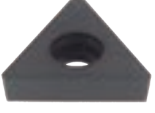

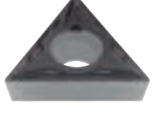




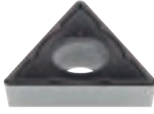
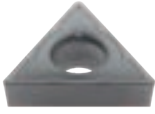






















Vista genérica de pastilhas de torneamento negativas | Vista general de plaquitas de torneado negativas

|  |  |  |   |   |   |
|--|--|--|---|---|---|
| <p><b>SNMG-ST</b></p>  <p>Medium</p> <p>Page C - 526 Square 90°</p>                 | <p><b>SNMG-SS</b></p>  <p>Roughing to Medium</p> <p>Page C - 526 Square 90°</p>       | <p><b>SNMG-HR</b></p>  <p>Roughing</p> <p>Page C - 526 Square 90°</p>               | <p><b>SNMM-RP</b></p>  <p>Roughing</p> <p>Page C - 528 Square 90°</p>                | <p><b>SNMM-HY</b></p>  <p>Heavy to Roughing</p> <p>Page C - 528 Square 90°</p>       | <p><b>SNMM-HZ</b></p>  <p>Heavy to Roughing</p> <p>Page C - 528 Square 90°</p>       |
| <p><b>TNMA</b></p>  <p>Roughing</p> <p>Page C - 530 Triangular 60°</p>              | <p><b>NEW TNMG-GSF</b></p>  <p>Fine Finishing</p> <p>Page C - 530 Triangular 60°</p>  | <p><b>TNMG-MF</b></p>  <p>Finishing</p> <p>Page C - 530 Triangular 60°</p>          | <p><b>TNMG-MS</b></p>  <p>Medium to Finishing</p> <p>Page C - 530 Triangular 60°</p> | <p><b>TNMG-SF</b></p>  <p>Medium to Finishing</p> <p>Page C - 530 Triangular 60°</p> | <p><b>TNMG-LC</b></p>  <p>Medium to Finishing</p> <p>Page C - 530 Triangular 60°</p> |
| <p><b>TNMG-GS</b></p>  <p>Medium</p> <p>Page C - 532 Triangular 60°</p>             | <p><b>TNMG-MR</b></p>  <p>Medium</p> <p>Page C - 532 Triangular 60°</p>               | <p><b>TNMG-PM</b></p>  <p>Medium</p> <p>Page C - 532 Triangular 60°</p>             | <p><b>TNMG-ST</b></p>  <p>Medium</p> <p>Page C - 532 Triangular 60°</p>              | <p><b>TNMG-MW</b></p>  <p>Medium wiper</p> <p>Page C - 534 Triangular 60°</p>        | <p><b>TNMG-SS</b></p>  <p>Roughing to Medium</p> <p>Page C - 534 Triangular 60°</p>  |
| <p><b>TNMG-HR</b></p>  <p>Roughing</p> <p>Page C - 534 Triangular 60°</p>          | <p><b>TNMX-01</b></p>  <p>Medium to Finishing</p> <p>Page C - 534 Triangular 60°</p> | <p><b>VNMA</b></p>  <p>Roughing</p> <p>Page C - 536 Rhombic 35°</p>              |   | <p><b>NEW VNMG-GSF</b></p>  <p>Fine Finishing</p> <p>Page C - 536 Rhombic 35°</p>  | <p><b>VNMG-MF</b></p>  <p>Finishing</p> <p>Page C - 536 Rhombic 35°</p>            |
| <p><b>VNMG-MS</b></p>  <p>Medium to Finishing</p> <p>Page C - 536 Rhombic 35°</p> | <p><b>VNMG-SF</b></p>  <p>Medium to Finishing</p> <p>Page C - 536 Rhombic 35°</p>   | <p><b>VNMG-LC</b></p>  <p>Medium to Finishing</p> <p>Page C - 536 Rhombic 35°</p> | <p><b>VNMG-GS</b></p>  <p>Medium</p> <p>Page C - 536 Rhombic 35°</p>              | <p><b>VNMG-MR</b></p>  <p>Medium</p> <p>Page C - 536 Rhombic 35°</p>               | <p><b>VNMG-PM</b></p>  <p>Medium</p> <p>Page C - 536 Rhombic 35°</p>               |
| <p><b>VNMG-ST</b></p>  <p>Medium</p> <p>Page C - 536 Rhombic 35°</p>              | <p><b>VNMG-SS</b></p>  <p>Roughing to Medium</p> <p>Page C - 536 Rhombic 35°</p>    | <p><b>WNMA</b></p>  <p>Roughing</p> <p>Page C - 538 Trigon 80°</p>                | <p><b>NEW WNMG-GSF</b></p>  <p>Fine Finishing</p> <p>Page C - 538 Trigon 80°</p>   | <p><b>WNMG-MF</b></p>  <p>Finishing</p> <p>Page C - 538 Trigon 80°</p>             | <p><b>WNMG-MS</b></p>  <p>Medium</p> <p>Page C - 538 Trigon 80°</p>                |
| <p><b>WNMG-SF</b></p>  <p>Medium to Finishing</p> <p>Page C - 538 Trigon 80°</p>  | <p><b>WNMG-LC</b></p>  <p>Medium to Finishing</p> <p>Page C - 538 Trigon 80°</p>    | <p><b>WNMG-GS</b></p>  <p>Medium</p> <p>Page C - 538 Trigon 80°</p>               | <p><b>WNMG-MR</b></p>  <p>Medium</p> <p>Page C - 540 Trigon 80°</p>                | <p><b>WNMG-PM</b></p>  <p>Medium</p> <p>Page C - 540 Trigon 80°</p>                | <p><b>WNMG-ST</b></p>  <p>Medium</p> <p>Page C - 540 Trigon 80°</p>                |
| <p><b>WNMG-MW</b></p>  <p>Medium wiper</p> <p>Page C - 540 Trigon 80°</p>         | <p><b>WNMG-SS</b></p>  <p>Roughing to Medium</p> <p>Page C - 540 Trigon 80°</p>     | <p><b>NEW WNMG-PR</b></p>  <p>Roughing</p> <p>Page C - 538 Trigon 80°</p>         | <p><b>WNMG-HR</b></p>  <p>Roughing</p> <p>Page C - 540 Trigon 80°</p>              |   |   |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <p><b>CCMW</b></p>  <p>Finishing</p> <p>Page C - 544 Rhombic 80°</p>                      | <p><b>NEW CCMT-FF</b></p>  <p>Fine Finishing</p> <p>Page C - 544 Rhombic 80°</p>          | <p><b>CCMT-FP</b></p>  <p>Finishing</p> <p>Page C - 544 Rhombic 80°</p>                 | <p><b>CCMT-BO</b></p>  <p>Finishing</p> <p>Page C - 544 Rhombic 80°</p>         | <p><b>CCMT-FM</b></p>  <p>Finishing</p> <p>Page C - 544 Rhombic 80°</p>         | <p><b>CCMT-FK</b></p>  <p>Finishing</p> <p>Page C - 544 Rhombic 80°</p>                     |
| <p><b>CCMT-FW</b></p>  <p>Finishing wiper</p> <p>Page C - 546 Rhombic 80°</p>             | <p><b>CCMT-LM</b></p>  <p>Medium to Finishing</p> <p>Page C - 546 Rhombic 80°</p>         | <p><b>CCMT-MW</b></p>  <p>Medium to Finishing wiper</p> <p>Page C - 546 Rhombic 80°</p> | <p><b>CCMT-MP</b></p>  <p>Medium</p> <p>Page C - 546 Rhombic 80°</p>            | <p><b>CCMT-MM</b></p>  <p>Medium</p> <p>Page C - 546 Rhombic 80°</p>            | <p><b>CCMT-MK</b></p>  <p>Medium</p> <p>Page C - 546 Rhombic 80°</p>                        |
| <p><b>CCGT-FS</b></p>  <p>Finishing to Fine finishing</p> <p>Page C - 548 Rhombic 80°</p> | <p><b>CCGT-LN</b></p>  <p>Medium to Finishing</p> <p>Page C - 548 Rhombic 80°</p>         |  |  |  |  |
| <p><b>DCMW</b></p>  <p>Finishing</p> <p>Page C - 550 Rhombic 55°</p>                    | <p><b>NEW DCMT-FF</b></p>  <p>Fine Finishing</p> <p>Page C - 550 Rhombic 55°</p>        | <p><b>DCMT-FP</b></p>  <p>Finishing</p> <p>Page C - 550 Rhombic 55°</p>               | <p><b>DCMT-FM</b></p>  <p>Finishing</p> <p>Page C - 550 Rhombic 55°</p>      | <p><b>DCMT-FK</b></p>  <p>Finishing</p> <p>Page C - 550 Rhombic 55°</p>       | <p><b>DCMT-FW</b></p>  <p>Finishing wiper</p> <p>Page C - 550 Rhombic 55°</p>             |
| <p><b>DCMT-LM</b></p>  <p>Medium to Finishing</p> <p>Page C - 550 Rhombic 55°</p>       | <p><b>DCMT-MW</b></p>  <p>Medium to Finishing wiper</p> <p>Page C - 550 Rhombic 55°</p> | <p><b>DCMT-MP</b></p>  <p>Medium</p> <p>Page C - 552 Rhombic 55°</p>                  | <p><b>DCMT-MM</b></p>  <p>Medium</p> <p>Page C - 552 Rhombic 55°</p>         | <p><b>DCMT-MK</b></p>  <p>Medium</p> <p>Page C - 552 Rhombic 55°</p>          | <p><b>DCGT-FS</b></p>  <p>Finishing to Fine finishing</p> <p>Page C - 552 Rhombic 55°</p> |
| <p><b>DCGT-LN</b></p>  <p>Medium to Finishing</p> <p>Page C - 552 Rhombic 55°</p>       | <p><b>RCGT-LN</b></p>  <p>Finishing to Fine finishing</p> <p>Page C - 554 Round R°</p>  |  | <p><b>RCMT-GS</b></p>  <p>Medium</p> <p>Page C - 554 Round R°</p>             | <p><b>RCMT-CP</b></p>  <p>Medium</p> <p>Page C - 554 Round R°</p>             | <p><b>RCMT-ST</b></p>  <p>Roughing to Medium</p> <p>Page C - 554 Round R°</p>             |
| <p><b>RCMT-RF</b></p>  <p>Roughing to Medium</p> <p>Page C - 554 Round R°</p>           | <p><b>RCMT-RM</b></p>  <p>Roughing to Medium</p> <p>Page C - 554 Round R°</p>           | <p><b>RCMX-ST</b></p>  <p>Roughing to Medium</p> <p>Page C - 554 Round R°</p>         | <p><b>RCMX-RM</b></p>  <p>Roughing to Medium</p> <p>Page C - 554 Round R°</p> | <p><b>RCMX-RR</b></p>  <p>Roughing to Medium</p> <p>Page C - 554 Round R°</p> |  |
| <p><b>SCMW</b></p>  <p>Finishing</p> <p>Page C - 556 Square 90°</p>                     | <p><b>SCMT-FP</b></p>  <p>Finishing</p> <p>Page C - 556 Square 90°</p>                  | <p><b>SCMT-FM</b></p>  <p>Finishing</p> <p>Page C - 556 Square 90°</p>                | <p><b>SCMT-FK</b></p>  <p>Finishing</p> <p>Page C - 556 Square 90°</p>        | <p><b>SCMT-MP</b></p>  <p>Medium</p> <p>Page C - 556 Square 90°</p>           | <p><b>SCMT-MM</b></p>  <p>Medium</p> <p>Page C - 556 Square 90°</p>                       |

# POSITIVE TURNING INSERTS OVERVIEW

Vista genérica de pastilhas de torneamento positivas | Vista general de plaquitas de torneado positivas

|   |  |  |   |   |   |
|---|--|--|---|---|---|
| <p><b>SCMT-MK</b></p>  <p>Medium</p> <p>Page C - 556 Square 90°</p>                | <p><b>SCGT-LN</b></p>  <p>Medium to Finishing</p> <p>Page C - 556 Square 90°</p>              | <p><b>SPUN</b></p>  <p>Medium to Finishing</p> <p>Page C - 558 Square 90°</p>       | <p><b>SPMR-12</b></p>  <p>Finishing to Fine finishing</p> <p>Page C - 558 Square 90°</p>   | <p><b>SPMR-13</b></p>  <p>Medium</p> <p>Page C - 558 Square 90°</p>                  |   |
| <p><b>TCMW</b></p>  <p>Finishing</p> <p>Page C - 560 Triangular 60°</p>            | <p><b>TCMT-FP</b></p>  <p>Finishing</p> <p>Page C - 560 Triangular 60°</p>                    | <p><b>TCMT-FM</b></p>  <p>Finishing</p> <p>Page C - 560 Triangular 60°</p>          | <p><b>TCMT-FK</b></p>  <p>Finishing</p> <p>Page C - 562 Triangular 60°</p>                   | <p><b>TCMT-FW</b></p>  <p>Finishing wiper</p> <p>Page C - 562 Triangular 60°</p>     | <p><b>TCMT-MW</b></p>  <p>Medium to Finishing wiper</p> <p>Page C - 562 Triangular 60°</p> |
| <p><b>TCMT-MP</b></p>  <p>Medium</p> <p>Page C - 564 Triangular 60°</p>            | <p><b>TCMT-MM</b></p>  <p>Medium</p> <p>Page C - 564 Triangular 60°</p>                       | <p><b>TCMT-MK</b></p>  <p>Medium</p> <p>Page C - 564 Triangular 60°</p>             | <p><b>TCGT-FS</b></p>  <p>Finishing to Fine finishing</p> <p>Page C - 566 Triangular 60°</p> | <p><b>TCGT-LN</b></p>  <p>Medium to Finishing</p> <p>Page C - 566 Triangular 60°</p> |   |
| <p><b>TPUN</b></p>  <p>Medium to Finishing</p> <p>Page C - 568 Triangular 60°</p> | <p><b>TPMR-12</b></p>  <p>Finishing to Fine finishing</p> <p>Page C - 568 Triangular 60°</p> | <p><b>TPMR-13</b></p>  <p>Medium</p> <p>Page C - 568 Triangular 60°</p>            |   |   |   |
| <p><b>VBMW</b></p>  <p>Finishing</p> <p>Page C - 570 Rhombic 35°</p>             | <p><b>NEW VBMT-FF</b></p>  <p>Finishing</p> <p>Page C - 570 Rhombic 35°</p>                 | <p><b>VBMT-FP</b></p>  <p>Finishing</p> <p>Page C - 570 Rhombic 35°</p>           | <p><b>VBMT-FM</b></p>  <p>Finishing</p> <p>Page C - 570 Rhombic 35°</p>                   | <p><b>VBMT-FK</b></p>  <p>Finishing</p> <p>Page C - 570 Rhombic 35°</p>            | <p><b>VBMT-MP</b></p>  <p>Medium</p> <p>Page C - 570 Rhombic 35°</p>                     |
| <p><b>VBMT-MM</b></p>  <p>Medium</p> <p>Page C - 570 Rhombic 35°</p>             | <p><b>VBMT-MK</b></p>  <p>Medium</p> <p>Page C - 570 Rhombic 35°</p>                        |  |   |   |   |
| <p><b>VCMW</b></p>  <p>Finishing</p> <p>Page C - 572 Rhombic 35°</p>             | <p><b>VCMT-FP</b></p>  <p>Finishing</p> <p>Page C - 572 Rhombic 35°</p>                     | <p><b>VCMT-FM</b></p>  <p>Finishing</p> <p>Page C - 572 Rhombic 35°</p>           | <p><b>VCMT-FK</b></p>  <p>Finishing</p> <p>Page C - 572 Rhombic 35°</p>                   | <p><b>VCMT-MP</b></p>  <p>Medium</p> <p>Page C - 572 Rhombic 35°</p>               | <p><b>VCMT-MM</b></p>  <p>Medium</p> <p>Page C - 572 Rhombic 35°</p>                     |
| <p><b>VCMT-MK</b></p>  <p>Medium</p> <p>Page C - 572 Rhombic 35°</p>             | <p><b>VCGT-FS</b></p>  <p>Finishing to Fine finishing</p> <p>Page C - 574 Rhombic 35°</p>   | <p><b>VCGT-LN</b></p>  <p>Medium to Finishing</p> <p>Page C - 574 Rhombic 35°</p> |   |   |   |



INSERTS

# NEGATIVE



Negative inserts have a  $0^\circ$  clearance angle, lending them increased strength and durability. They are ideal for external turning, or any time heavy cutting conditions are required. Additionally, they are often double-sided, making them a more economical choice.

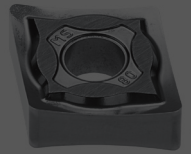
Pastilhas negativas têm um ângulo de folga de  $0^\circ$ , conferindo-lhes maior resistência e durabilidade. São ideais para torneamento externo, ou sempre que são necessárias condições de corte pesadas. Além disso, são frequentemente de dupla face, tornando-as uma escolha mais econômica.

Plaquetas negativas tienen un ángulo de despeje de  $0^\circ$ , lo que les confiere mayor resistencia y durabilidad. Son ideales para el torneado externo, o en cualquier momento que se requieran condiciones de corte pesadas. Además, a menudo son de doble cara, lo que las convierte en una opción más económica.

## CN.. > page 506

- > Rhombic 80° inserts are very popular thanks to their versatility

Rhombic 80° inserts são muito populares devido à sua versatilidade | Las plaquitas de 80° rúbicas son muy populares gracias a su versatilidad



## DN.. > page 514

- > Rhombic 55° inserts offer balanced roughing and finishing capabilities

Pastilhas rúbicas de 55° oferecem capacidades equilibradas de desbaste e acabamento | Las plaquitas rúbicas de 55° ofrecen capacidades equilibradas para desbaste y acabado



## KN.. > page 522

- > Parallelogram 55° inserts for profile turning

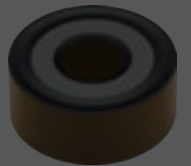
Pastilhas em paralelogramo de 55° para torneamento de perfil | Plaquitas em paralelogramo de 55° para torneamento de perfil



## RN.. > page 522

- > Round inserts are extremely tough, and well suited for high feed turning

Pastilhas redondas são extremamente resistentes e adequadas para torneamento em alto avanço | Las plaquitas redondas son extremadamente resistentes y adecuadas para el torneamento de alto avance



## SN.. > page 524

- > Square inserts excel in roughing, especially at a shallow angle

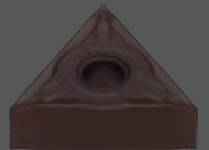
Pastilhas quadradas destacam-se no desbaste, especialmente a um ângulo raso | Plaquitas cuadradas destacan en el desbaste, especialmente a un ángulo bajo



## TN.. > page 530

- > Triangular inserts are versatile, suitable for both finishing and roughing

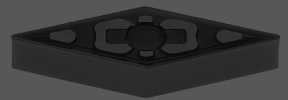
As pastilhas triangulares são versáteis, adequadas tanto para acabamento quanto para desbaste | Las plaquitas triangulares son versátiles, adecuadas tanto para acabado como para desbaste



## VN.. > page 536

- > Rhombic 35° inserts are best suited for finishing operations

Pastilhas rúbicas de 35° são mais adequadas para operações de acabamento | Las plaquitas rúbicas de 35° son más adecuadas para operaciones de acabado



## WN.. > page 538

- > Trigon 80° inserts perform like rhombic 80° inserts, with extra edges

Pastilhas em formato W de 80° têm desempenho semelhante às pastilhas rúbicas de 80° mas com arestas adicionais | Las plaquitas formato W de 80° tienen un rendimiento similar a las plaquitas rúbicas de 80°, con bordes adicionales



# CN - RHOMBIC 80° NEGATIVE

RÔMBICA 80° NEGATIVA | RÓMBICA 80° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning









External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|  |  |                | P               |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |  |
|--|--|----------------|-----------------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|  |  |                | CVD             |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |  |
|  |  | (2) Grade code | T6              | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas  | (1) Geometry code  | ISO Reference  | PHG105          | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>Roughing              | CNMA   | 1120219        | CNMA 120404     |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1120220        | CNMA 120408     |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1120221        | CNMA 120412     |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1120223        | CNMA 120416     |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1120224        | CNMA 160608     |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1120225        | CNMA 160612     |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1121470        | CNMA 160616     |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1120226        | CNMA 190612     |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Fine Finishing        | NEW CNMG-GSF   | 1124855        | CNMG 120402-GSF |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | CNMG-MF  | 1121472        | CNMG 090304-MF  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | <br>Finishing | 1121318        | CNMG 090308-MF  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1121320        | CNMG 09T304-MF  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121317  |  | CNMG 09T308-MF |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Medium to Finishing | 1121478  | CNMG 120404-MF |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121480  | CNMG 120408-MF |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121482  | CNMG 120412-MF |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1124854  | CNMG 120402-MS |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Medium to Finishing | 1121479  | CNMG 120404-MS |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121481  | CNMG 120408-MS |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121483  | CNMG 120412-MS |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121486  | CNMG 120416-MS |                 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Medium to Finishing | CNMG-SF  | 1123747        | CNMG 120404-SF  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1123717        | CNMG 120408-SF  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1123748        | CNMG 120412-SF  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Medium to Finishing | CNMG-LC  | 1122024        | CNMG 120404-LC  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1122021        | CNMG 120408-LC  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1124029        | CNMG 120412-LC  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Medium to Finishing | CNMG-GS  | 1124514        | CNMG 120404-GS  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1124502        | CNMG 120408-GS  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |  | 1124515        | CNMG 120412-GS  |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

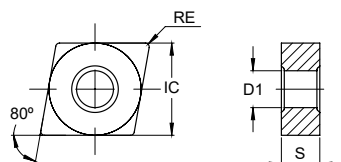
🔴 First choice | 1ª Escolha | 1ª Opción

⊖ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

📦 Stock Items | Itens de stock

📦 Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock







| ISO Reference   | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|-----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                 |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| CNMA 120404     | CNMA 431       | 12,700  | 4,76 | 0,40 | 5,16 | 2,50   | 0,20 | 5,00  | 0,20        | 0,10 | 0,30 |
| CNMA 120408     | CNMA 432       | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,20 | 8,00  | 0,35        | 0,15 | 0,60 |
| CNMA 120412     | CNMA 433       | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 0,30 | 8,00  | 0,45        | 0,20 | 0,80 |
| CNMA 120416     | CNMA 434       | 12,700  | 4,76 | 1,60 | 5,16 | 4,00   | 0,30 | 8,00  | 0,55        | 0,20 | 1,00 |
| CNMA 160608     | CNMA 542       | 15,875  | 6,35 | 0,80 | 6,35 | 5,00   | 0,30 | 10,00 | 0,45        | 0,20 | 0,80 |
| CNMA 160612     | CNMA 543       | 15,875  | 6,35 | 1,20 | 6,35 | 5,00   | 0,30 | 10,00 | 0,45        | 0,20 | 0,80 |
| CNMA 160616     | CNMA 544       | 15,875  | 6,35 | 1,60 | 6,35 | 5,00   | 0,30 | 10,00 | 0,55        | 0,20 | 1,00 |
| CNMA 190612     | CNMA 643       | 19,050  | 6,35 | 1,20 | 7,94 | 6,00   | 0,30 | 12,00 | 0,45        | 0,20 | 0,80 |
| CNMA 190616     | CNMA 644       | 19,050  | 6,35 | 1,60 | 7,94 | 6,00   | 0,30 | 12,00 | 0,55        | 0,20 | 1,00 |
| CNMA 190624     | CNMA 646       | 19,050  | 6,35 | 2,40 | 7,94 | 6,00   | 0,40 | 12,00 | 0,60        | 0,20 | 1,40 |
| CNMG 120402-GSF | CNMG 430.5-GSF | 12,700  | 4,76 | 0,20 | 5,16 | 1,30   | 0,10 | 2,50  | 0,12        | 0,08 | 0,15 |
| CNMG 090304-MF  | CNMG 321-MF    | 9,525   | 3,18 | 0,40 | 3,81 | 0,50   | 0,10 | 1,50  | 0,15        | 0,05 | 0,25 |
| CNMG 090308-MF  | CNMG 322-MF    | 9,525   | 3,18 | 0,80 | 3,81 | 0,55   | 0,10 | 1,50  | 0,20        | 0,10 | 0,40 |
| CNMG 09T304-MF  | CNMG 32.51-MF  | 9,525   | 3,97 | 0,40 | 3,81 | 0,50   | 0,10 | 1,50  | 0,15        | 0,05 | 0,25 |
| CNMG 09T308-MF  | CNMG 32.52-MF  | 9,525   | 3,97 | 0,80 | 3,81 | 0,55   | 0,10 | 1,50  | 0,20        | 0,10 | 0,40 |
| CNMG 120404-MF  | CNMG 431-MF    | 12,700  | 4,76 | 0,40 | 5,16 | 0,80   | 0,20 | 1,50  | 0,15        | 0,05 | 0,25 |
| CNMG 120408-MF  | CNMG 432-MF    | 12,700  | 4,76 | 0,80 | 5,16 | 1,00   | 0,25 | 1,50  | 0,20        | 0,10 | 0,40 |
| CNMG 120412-MF  | CNMG 433-MF    | 12,700  | 4,76 | 1,20 | 5,16 | 1,25   | 0,50 | 2,50  | 0,25        | 0,15 | 0,50 |
| CNMG 120402-MS  | CCGT 430.5-MS  | 12,700  | 4,76 | 0,20 | 5,16 | 1,00   | 0,10 | 3,60  | 0,10        | 0,08 | 0,15 |
| CNMG 120404-MS  | CNMG 431-MS    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,20 | 3,60  | 0,15        | 0,10 | 0,20 |
| CNMG 120408-MS  | CNMG 432-MS    | 12,700  | 4,76 | 0,80 | 5,16 | 2,00   | 0,30 | 3,60  | 0,25        | 0,10 | 0,40 |
| CNMG 120412-MS  | CNMG 433-MS    | 12,700  | 4,76 | 1,20 | 5,16 | 2,40   | 0,40 | 3,60  | 0,30        | 0,15 | 0,60 |
| CNMG 120416-MS  | CNMG 434-MS    | 12,700  | 4,76 | 1,60 | 5,16 | 2,40   | 0,40 | 3,60  | 0,40        | 0,15 | 0,80 |
| CNMG 120404-SF  | CNMG 431-SF    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,60 | 3,00  | 0,15        | 0,10 | 0,23 |
| CNMG 120408-SF  | CNMG 432-SF    | 12,700  | 4,76 | 0,80 | 5,16 | 1,50   | 0,60 | 3,00  | 0,25        | 0,12 | 0,38 |
| CNMG 120412-SF  | CNMG 433-SF    | 12,700  | 4,76 | 1,20 | 5,16 | 1,50   | 0,60 | 3,00  | 0,35        | 0,15 | 0,55 |
| CNMG 120404-LC  | CNMG 431-LC    | 12,700  | 4,76 | 0,40 | 5,16 | 1,00   | 0,40 | 2,50  | 0,10        | 0,07 | 0,30 |
| CNMG 120408-LC  | CNMG 432-LC    | 12,700  | 4,76 | 0,80 | 5,16 | 1,50   | 0,40 | 2,50  | 0,15        | 0,10 | 0,40 |
| CNMG 120412-LC  | CNMG 433-LC    | 12,700  | 4,76 | 1,20 | 5,16 | 1,50   | 0,40 | 2,50  | 0,20        | 0,15 | 0,40 |
| CNMG 120404-GS  | CNMG 431-GS    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,15 | 2,50  | 0,20        | 0,10 | 0,30 |
| CNMG 120408-GS  | CNMG 432-GS    | 12,700  | 4,76 | 0,80 | 5,16 | 2,00   | 0,20 | 3,00  | 0,25        | 0,10 | 0,35 |
| CNMG 120412-GS  | CNMG 433-GS    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,30 | 4,00  | 0,30        | 0,10 | 0,45 |

# CN - RHOMBIC 80° NEGATIVE

RÔMBICA 80° NEGATIVA | RÓMBICA 80° NEGATIVA

TURNING

|  |                   |                | P              |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      |        | S      |        |        |        |
|--|-------------------|----------------|----------------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|  |                   |                | CVD            |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |
|  |                   | (2) Grade code | T6             | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitras   | (1) Geometry code | ISO Reference  | PHG105         | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>CNMG-MR<br>Medium         | 1121473           | CNMG 090304-MR |                |        | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1121293           | CNMG 090308-MR |                |        | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1121180           | CNMG 120404-MR |                | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
|  | 1121174           | CNMG 120408-MR |                | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
|  | 1121198           | CNMG 120412-MR |                |        | ○       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
|  | 1121485           | CNMG 120416-MR |                |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1121239           | CNMG 160608-MR |                | ⊗      | ○       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
|  | 1121355           | CNMG 160612-MR |                | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
|  | 1121490           | CNMG 160616-MR |                | ⊗      | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |
|  | 1121302           | CNMG 190612-MR |                | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
| 1121301  | CNMG 190616-MR    |                | ⊗              | ○      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
| <br>CNMG-PM<br>Medium       | 1123919           | CNMG 120404-PM | ⊗              | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1123790           | CNMG 120408-PM | ⊗              | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1123920           | CNMG 120412-PM | ⊗              | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1123921           | CNMG 120416-PM | ⊗              | ⊗      | ⊗       | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>CNMG-ST<br>Medium       | 1121344           | CNMG 120404-ST |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121165           | CNMG 120408-ST |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121166           | CNMG 120412-ST |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121488           | CNMG 120416-ST |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
| Internal Toolholders   | 1121335           | CNMG 160608-ST |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121303           | CNMG 160612-ST |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121491           | CNMG 160616-ST |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | Automatic Lathes  | 1121336        | CNMG 190612-ST |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |
| 1121345  |                   | CNMG 190616-ST |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
| <br>CNMG-MW<br>Medium Wiper | 1121339           | CNMG 120408-MW | ⊗              | ⊗      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |
|  | 1121191           | CNMG 120412-MW |                | ⊗      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |
|  | 1125061           | CNMG 120612-MW |                | ⊗      | ⊗       |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

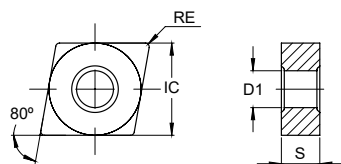
⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock






| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| CNMG 090304-MR | CNMG 321-MR    | 9,525   | 3,18 | 0,40 | 3,81 | 2,00   | 0,40 | 4,00 | 0,20        | 0,10 | 0,30 |
| CNMG 090308-MR | CNMG 322-MR    | 9,525   | 3,18 | 0,80 | 3,81 | 2,00   | 0,50 | 4,00 | 0,30        | 0,15 | 0,50 |
| CNMG 120404-MR | CNMG 431-MR    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,40 | 5,50 | 0,20        | 0,10 | 0,30 |
| CNMG 120408-MR | CNMG 432-MR    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 5,50 | 0,30        | 0,15 | 0,50 |
| CNMG 120412-MR | CNMG 433-MR    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,80 | 5,50 | 0,35        | 0,18 | 0,60 |
| CNMG 120416-MR | CNMG 434-MR    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 1,00 | 5,50 | 0,40        | 0,23 | 0,65 |
| CNMG 160608-MR | CNMG 542-MR    | 15,875  | 6,35 | 0,80 | 6,35 | 4,00   | 0,50 | 7,20 | 0,30        | 0,15 | 0,50 |
| CNMG 160612-MR | CNMG 543-MR    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 0,80 | 7,20 | 0,35        | 0,18 | 0,60 |
| CNMG 160616-MR | CNMG 544-MR    | 15,875  | 6,35 | 1,60 | 6,35 | 4,00   | 1,00 | 7,20 | 0,40        | 0,23 | 0,65 |
| CNMG 190612-MR | CNMG 643-MR    | 19,050  | 6,35 | 1,20 | 7,94 | 4,00   | 0,80 | 8,60 | 0,35        | 0,18 | 0,60 |
| CNMG 190616-MR | CNMG 644-MR    | 19,050  | 6,35 | 1,60 | 7,94 | 4,00   | 1,00 | 8,60 | 0,40        | 0,23 | 0,65 |
| CNMG 120404-PM | CNMG 431-PM    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,40 | 5,50 | 0,20        | 0,10 | 0,30 |
| CNMG 120408-PM | CNMG 432-PM    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 5,50 | 0,30        | 0,15 | 0,50 |
| CNMG 120412-PM | CNMG 433-PM    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,80 | 5,50 | 0,35        | 0,18 | 0,60 |
| CNMG 120416-PM | CNMG 434-PM    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 1,00 | 5,50 | 0,40        | 0,23 | 0,65 |
| CNMG 120404-ST | CNMG 431-ST    | 12,700  | 4,76 | 0,40 | 5,16 | 2,50   | 0,20 | 5,00 | 0,22        | 0,15 | 0,26 |
| CNMG 120408-ST | CNMG 432-ST    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,20 | 6,00 | 0,35        | 0,15 | 0,50 |
| CNMG 120412-ST | CNMG 433-ST    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,30 | 6,00 | 0,40        | 0,15 | 0,60 |
| CNMG 120416-ST | CNMG 434-ST    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,30 | 6,00 | 0,45        | 0,20 | 0,70 |
| CNMG 160608-ST | CNMG 542-ST    | 15,875  | 6,35 | 0,80 | 6,35 | 4,00   | 0,20 | 8,00 | 0,35        | 0,15 | 0,50 |
| CNMG 160612-ST | CNMG 543-ST    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 0,30 | 8,00 | 0,40        | 0,15 | 0,60 |
| CNMG 160616-ST | CNMG 544-ST    | 15,875  | 6,35 | 1,60 | 6,35 | 4,00   | 0,30 | 8,00 | 0,45        | 0,20 | 0,70 |
| CNMG 190612-ST | CNMG 643-ST    | 19,050  | 6,35 | 1,20 | 7,94 | 4,50   | 0,30 | 9,00 | 0,40        | 0,15 | 0,60 |
| CNMG 190616-ST | CNMG 644-ST    | 19,050  | 6,35 | 1,60 | 7,94 | 4,50   | 0,30 | 9,00 | 0,45        | 0,20 | 0,70 |
| CNMG 120408-MW | CNMG 432-MW    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 5,00 | 0,30        | 0,15 | 0,60 |
| CNMG 120412-MW | CNMG 433-MW    | 12,700  | 4,76 | 1,20 | 5,16 | 3,50   | 0,80 | 6,00 | 0,50        | 0,20 | 0,90 |
| CNMG 120612-MW | CNMG 443-MW    | 12,700  | 6,35 | 1,20 | 5,16 | 3,50   | 0,80 | 6,00 | 0,50        | 0,20 | 0,90 |

# CN - RHOMBIC 80° NEGATIVE

RÔMBICA 80° NEGATIVA | RÓMBICA 80° NEGATIVA

TURNING

|  |                   |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|--|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|  |                   |                | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |
|  |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas  | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>CNMG-MA<br>Medium to Roughing | 1124504           | CNMG 160612-MA |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1123785           | CNMG 160616-MA | ○      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>CNMG-SS<br>Roughing to Medium | 1121474           | CNMG 090304-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |
|  | 1121476           | CNMG 090308-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |
|  | 1121243           | CNMG 120404-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |
|  | 1121201           | CNMG 120408-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |
|  | 1121202           | CNMG 120412-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |
|  | 1121487           | CNMG 120416-SS |        |        |         |        |         |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      |        |
|  | 1121332           | CNMG 160608-SS |        |        |         |        |         |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      |        |
|  | 1121333           | CNMG 160612-SS |        |        |         |        |         |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      |        |
| <br>CNMG-HR<br>Roughing         | 1121193           | CNMG 120408-HR | ⊗      | ⊗      | ⊗       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121192           | CNMG 120412-HR | ⊗      |        | ⊗       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121484           | CNMG 120416-HR |        |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |
|  | 1121331           | CNMG 160608-HR |        | ⊗      | ⊗       | ⊗      | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121358           | CNMG 160612-HR |        | ⊗      | ⊗       |        | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121489           | CNMG 160616-HR |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |
|  | 1121359           | CNMG 190612-HR |        | ⊗      | ○       | ⊗      | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|  | 1121360           | CNMG 190616-HR |        |        | ○       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
| 1121636  | CNMG 250924-HR    |                |        |        |         | ○      |         | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

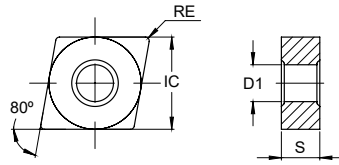
⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| CNMG 160612-MA | CNMG 543-MA    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 1,50 | 8,00  | 0,40        | 0,20 | 0,65 |
| CNMG 160616-MA | CNMG 544-MA    | 15,875  | 6,35 | 1,60 | 6,35 | 5,00   | 1,60 | 8,00  | 0,50        | 0,25 | 0,70 |
| CNMG 090304-SS | CNMG 321-SS    | 9,525   | 3,18 | 0,40 | 3,81 | 2,00   | 0,50 | 2,50  | 0,20        | 0,10 | 0,25 |
| CNMG 090308-SS | CNMG 322-SS    | 9,525   | 3,18 | 0,80 | 3,81 | 2,00   | 0,50 | 2,50  | 0,25        | 0,12 | 0,45 |
| CNMG 120404-SS | CNMG 431-SS    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,50 | 5,70  | 0,20        | 0,10 | 0,25 |
| CNMG 120408-SS | CNMG 432-SS    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 5,70  | 0,25        | 0,12 | 0,45 |
| CNMG 120412-SS | CNMG 433-SS    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,50 | 5,70  | 0,30        | 0,15 | 0,60 |
| CNMG 120416-SS | CNMG 434-SS    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,50 | 5,70  | 0,37        | 0,18 | 0,65 |
| CNMG 160608-SS | CNMG 542-SS    | 15,875  | 6,35 | 0,80 | 6,35 | 4,00   | 0,50 | 7,20  | 0,25        | 0,12 | 0,45 |
| CNMG 160612-SS | CNMG 543-SS    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 0,50 | 7,20  | 0,30        | 0,15 | 0,60 |
| CNMG 190612-SS | CNMG 643-SS    | 19,050  | 6,35 | 1,20 | 7,94 | 4,00   | 0,50 | 8,50  | 0,30        | 0,15 | 0,60 |
| CNMG 190616-SS | CNMG 644-SS    | 19,050  | 6,35 | 1,60 | 7,94 | 4,00   | 0,50 | 8,50  | 0,37        | 0,18 | 0,65 |
| CNMG 120408-HR | CNMG 432-HR    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 1,00 | 7,00  | 0,35        | 0,20 | 0,55 |
| CNMG 120412-HR | CNMG 433-HR    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 1,00 | 7,00  | 0,40        | 0,25 | 0,60 |
| CNMG 120416-HR | CNMG 434-HR    | 12,700  | 4,76 | 1,60 | 5,16 | 4,00   | 1,50 | 7,00  | 0,50        | 0,32 | 0,75 |
| CNMG 160608-HR | CNMG 542-HR    | 15,875  | 6,35 | 0,80 | 6,35 | 5,00   | 1,00 | 8,00  | 0,35        | 0,20 | 0,55 |
| CNMG 160612-HR | CNMG 543-HR    | 15,875  | 6,35 | 1,20 | 6,35 | 5,00   | 1,00 | 8,00  | 0,40        | 0,25 | 0,60 |
| CNMG 160616-HR | CNMG 544-HR    | 15,875  | 6,35 | 1,60 | 6,35 | 5,00   | 1,50 | 8,00  | 0,50        | 0,32 | 0,75 |
| CNMG 190612-HR | CNMG 643-HR    | 19,050  | 6,35 | 1,20 | 7,94 | 5,50   | 2,00 | 10,00 | 0,40        | 0,25 | 0,70 |
| CNMG 190616-HR | CNMG 644-HR    | 19,050  | 6,35 | 1,60 | 7,94 | 5,50   | 2,00 | 10,00 | 0,50        | 0,32 | 0,80 |
| CNMG 250924-HR | CNMG 866-HR    | 25,400  | 9,52 | 2,40 | 9,12 | 6,00   | 2,00 | 15,00 | 0,60        | 0,40 | 1,00 |

Negative inserts

Positive inserts

PCBN &amp; PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts





Technical Data



# CN - RHOMBIC 80° NEGATIVE

RÔMBICA 80° NEGATIVA | RÓMBICA 80° NEGATIVA

TURNING

|   |                   |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |   |
|---|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
|   |                   |                | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |   |
|   |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |   |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |   |
| <br>CNMM-RP<br>Roughing            | 1124054           | CNMM 160608-RP | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1124055           | CNMM 160612-RP | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1124056           | CNMM 160616-RP | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| CNMM-GR<br><br>Roughing            | 1124597           | CNMM 120408-GR |        |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1124596           | CNMM 120412-GR |        |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121608           | CNMM 190612-HY |        |        | ⊗       |        | ⊗       |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| CNMM-HY<br><br>Heavy to Roughing  | 1121252           | CNMM 190616-HY | ⊗      |        | ⊗       |        | ⊗       |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121434           | CNMM 190624-HY |        |        | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121248           | CNMM 250924-HY | ⊗      |        | ⊗       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| CNMM-HZ<br><br>Heavy to Roughing | 1121607           | CNMM 190612-HZ |        |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |   |
|   | 1121251           | CNMM 190616-HZ | ⊗      |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |   |
|   | 1121435           | CNMM 190624-HZ | ⊗      |        | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |   |
|   | 1121247           | CNMM 250924-HZ | ⊗      |        | ⊗       |        | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |   |

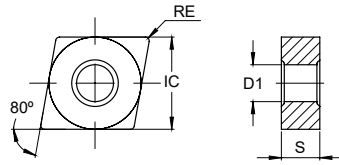
⊗ First choice | 1ª Escolha | 1ª Opción

⊙ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| CNMM 160608-RP | CNMM 542-RP    | 15,875  | 6,35 | 0,80 | 6,35 | 3,50   | 1,00 | 8,00  | 0,35        | 0,20 | 0,55 |
| CNMM 160612-RP | CNMM 543-RP    | 15,875  | 6,35 | 1,20 | 6,35 | 3,50   | 1,00 | 8,00  | 0,25        | 0,25 | 0,60 |
| CNMM 160616-RP | CNMM 544-RP    | 15,875  | 6,35 | 1,60 | 6,35 | 3,50   | 1,50 | 8,00  | 0,50        | 0,32 | 0,75 |
| CNMM 190612-RP | CNMM 643-RP    | 19,050  | 6,35 | 1,20 | 7,94 | 5,50   | 2,00 | 10,00 | 0,40        | 0,25 | 0,70 |
| CNMM 190616-RP | CNMM 644-RP    | 19,050  | 6,35 | 1,60 | 7,94 | 5,50   | 2,00 | 10,00 | 0,50        | 0,32 | 0,80 |
| CNMM 190624-RP | CNMM 646-RP    | 19,050  | 6,35 | 2,40 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 1,20 |
| CNMM 120408-GR | CNMM 432-GR    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 1,00 | 8,00  | 0,40        | 0,25 | 0,65 |
| CNMM 120412-GR | CNMM 433-GR    | 12,700  | 4,76 | 1,20 | 5,16 | 5,00   | 1,50 | 8,50  | 0,50        | 0,30 | 0,70 |
| CNMM 190612-HY | CNMM 643-HY    | 19,050  | 6,35 | 1,20 | 7,94 | 6,00   | 2,00 | 12,00 | 0,50        | 0,35 | 0,80 |
| CNMM 190616-HY | CNMM 644-HY    | 19,050  | 6,35 | 1,60 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 1,00 |
| CNMM 190624-HY | CNMM 646-HY    | 19,050  | 6,35 | 2,40 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 1,20 |
| CNMM 250924-HY | CNMM 866-HY    | 25,400  | 9,52 | 2,40 | 9,12 | 8,00   | 2,50 | 15,00 | 0,70        | 0,40 | 1,40 |
| CNMM 190612-HZ | CNMM 643-HZ    | 19,050  | 6,35 | 1,20 | 7,94 | 10,00  | 2,40 | 12,00 | 0,65        | 0,50 | 0,80 |
| CNMM 190616-HZ | CNMM 644-HZ    | 19,050  | 6,35 | 1,60 | 7,94 | 10,00  | 2,40 | 12,00 | 0,80        | 0,50 | 1,10 |
| CNMM 190624-HZ | CNMM 646-HZ    | 19,050  | 6,35 | 2,40 | 7,94 | 10,00  | 3,20 | 12,00 | 1,00        | 0,60 | 1,60 |
| CNMM 250924-HZ | CNMM 866-HZ    | 25,400  | 9,52 | 2,40 | 9,12 | 10,00  | 3,20 | 17,00 | 1,00        | 0,60 | 1,60 |

Negative inserts

Positive inserts

PCBN &amp; PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

# DN - RHOMBIC 55° NEGATIVE

RÔMBICA 55° NEGATIVA | RÓMBICA 55° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning





External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|   |                         |                 | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |
|---|-------------------------|-----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |                         |                 | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |  |
|   |                         | (2) Grade code  | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry<br>code | ISO Reference   | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>DNMA<br>Roughing                 | 1120975                 | DNMA 110404     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120312                 | DNMA 150404     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120313                 | DNMA 150408     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121178                 | DNMA 150412     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121496                 | DNMA 150416     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120314                 | DNMA 150604     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120315                 | DNMA 150608     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120316                 | DNMA 150612     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1120317   | DNMA 150616             |                 |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DNMG-MF<br>Finishing             | 1121497                 | DNMG 110404-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121499                 | DNMG 110408-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121502                 | DNMG 150404-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121504                 | DNMG 150408-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121507                 | DNMG 150412-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121515                 | DNMG 150604-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121516                 | DNMG 150608-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121517   | DNMG 150612-MF          |                 |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| DNMG-MF1<br>Finishing   | 1125073                 | DNMG 110412-MF1 |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DNMG-MS<br>Medium to Finishing | 1121503                 | DNMG 150404-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121505                 | DNMG 150408-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121509                 | DNMG 150412-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121513                 | DNMG 150416-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121927                 | DNMG 150604-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121928                 | DNMG 150608-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1122030                 | DNMG 150612-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DNMG-SF<br>Medium to Finishing | 1123749                 | DNMG 110404-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123750                 | DNMG 110408-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123751                 | DNMG 150404-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123752                 | DNMG 150408-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123753                 | DNMG 150412-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123754                 | DNMG 150604-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123755                 | DNMG 150608-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123756                 | DNMG 150612-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

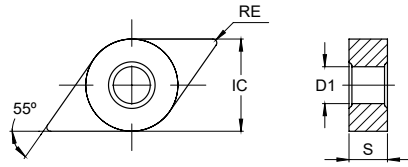
🔴 First choice | 1ª Escolha | 1ª Opción

⊖ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

🟡 Stock Items | Itens de stock

⚠️ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference   | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|-----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                 |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| DNMA 110404     | DNMA 331       | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,20 | 3,50 | 0,15        | 0,10 | 0,30 |
| DNMA 150404     | DNMA 431       | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,20 | 4,00 | 0,15        | 0,10 | 0,30 |
| DNMA 150408     | DNMA 432       | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,20 | 6,00 | 0,35        | 0,15 | 0,60 |
| DNMA 150412     | DNMA 433       | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,30 | 6,00 | 0,45        | 0,20 | 0,80 |
| DNMA 150416     | DNMA 434       | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,30 | 6,00 | 0,55        | 0,20 | 1,00 |
| DNMA 150604     | DNMA 441       | 12,700  | 6,35 | 0,40 | 5,16 | 3,00   | 0,20 | 4,00 | 0,15        | 0,10 | 0,30 |
| DNMA 150608     | DNMA 442       | 12,700  | 6,35 | 0,80 | 5,16 | 3,00   | 0,20 | 6,00 | 0,35        | 0,15 | 0,60 |
| DNMA 150612     | DNMA 443       | 12,700  | 6,35 | 1,20 | 5,16 | 3,00   | 0,30 | 6,00 | 0,45        | 0,20 | 0,80 |
| DNMA 150616     | DNMA 444       | 12,700  | 6,35 | 1,60 | 5,16 | 3,00   | 0,30 | 6,00 | 0,55        | 0,20 | 1,00 |
| DNMG 110404-MF  | DNMG 331-MF    | 9,525   | 4,76 | 0,40 | 3,81 | 0,40   | 0,10 | 1,50 | 0,15        | 0,05 | 0,25 |
| DNMG 110408-MF  | DNMG 332-MF    | 9,525   | 4,76 | 0,80 | 3,81 | 0,40   | 0,10 | 1,50 | 0,20        | 0,10 | 0,40 |
| DNMG 150404-MF  | DNMG 431-MF    | 12,700  | 4,76 | 0,40 | 5,16 | 0,40   | 0,15 | 1,50 | 0,15        | 0,05 | 0,25 |
| DNMG 150408-MF  | DNMG 432-MF    | 12,700  | 4,76 | 0,80 | 5,16 | 0,40   | 0,20 | 1,50 | 0,20        | 0,10 | 0,40 |
| DNMG 150412-MF  | DNMG 433-MF    | 12,700  | 4,76 | 1,20 | 5,16 | 0,80   | 0,25 | 2,50 | 0,25        | 0,15 | 0,50 |
| DNMG 150604-MF  | DNMG 441-MF    | 12,700  | 6,35 | 0,40 | 5,16 | 0,40   | 0,10 | 1,50 | 0,15        | 0,05 | 0,25 |
| DNMG 150608-MF  | DNMG 442-MF    | 12,700  | 6,35 | 0,80 | 5,16 | 0,40   | 0,10 | 1,50 | 0,20        | 0,10 | 0,40 |
| DNMG 150612-MF  | DNMG 443-MF    | 12,700  | 6,35 | 1,20 | 5,16 | 0,80   | 0,20 | 2,50 | 0,25        | 0,15 | 0,50 |
| DNMG 110412-MF1 | DNMG 333-MF1   | 9,525   | 4,76 | 1,20 | 3,81 | 0,80   | 0,30 | 2,50 | 0,20        | 0,10 | 0,30 |
| DNMG 150404-MS  | DNMG 431-MS    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,20 | 3,60 | 0,15        | 0,10 | 0,20 |
| DNMG 150408-MS  | DNMG 432-MS    | 12,700  | 4,76 | 0,80 | 5,16 | 2,00   | 0,30 | 3,80 | 0,25        | 0,10 | 0,40 |
| DNMG 150412-MS  | DNMG 433-MS    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,40 | 4,00 | 0,30        | 0,15 | 0,60 |
| DNMG 150416-MS  | DNMG 434-MS    | 12,700  | 4,76 | 1,60 | 5,16 | 2,80   | 0,40 | 4,50 | 0,40        | 0,15 | 0,80 |
| DNMG 150604-MS  | DNMG 441-MS    | 12,700  | 6,35 | 0,40 | 5,16 | 1,50   | 0,20 | 3,60 | 0,15        | 0,10 | 0,20 |
| DNMG 150608-MS  | DNMG 442-MS    | 12,700  | 6,35 | 0,80 | 5,16 | 2,00   | 0,30 | 4,00 | 0,25        | 0,10 | 0,40 |
| DNMG 150612-MS  | DNMG 443-MS    | 12,700  | 6,35 | 1,20 | 5,16 | 2,80   | 0,40 | 4,50 | 0,30        | 0,15 | 0,60 |
| DNMG 110404-SF  | DNMG 331-SF    | 9,525   | 4,76 | 0,40 | 3,81 | 1,50   | 0,60 | 3,00 | 0,15        | 0,10 | 0,23 |
| DNMG 110408-SF  | DNMG 332-SF    | 9,525   | 4,76 | 0,80 | 3,81 | 1,50   | 0,60 | 3,00 | 0,25        | 0,12 | 0,38 |
| DNMG 150404-SF  | DNMG 431-SF    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,60 | 3,00 | 0,15        | 0,10 | 0,23 |
| DNMG 150408-SF  | DNMG 432-SF    | 12,700  | 4,76 | 0,80 | 5,16 | 1,50   | 0,60 | 3,00 | 0,25        | 0,12 | 0,38 |
| DNMG 150412-SF  | DNMG 433-SF    | 12,700  | 4,76 | 1,20 | 5,16 | 1,50   | 0,60 | 3,00 | 0,35        | 0,15 | 0,55 |
| DNMG 150604-SF  | DNMG 441-SF    | 12,700  | 6,35 | 0,40 | 5,16 | 1,50   | 0,60 | 3,00 | 0,15        | 0,10 | 0,23 |
| DNMG 150608-SF  | DNMG 442-SF    | 12,700  | 6,35 | 0,80 | 5,16 | 1,50   | 0,60 | 3,00 | 0,25        | 0,12 | 0,38 |
| DNMG 150612-SF  | DNMG 443-SF    | 12,700  | 6,35 | 1,20 | 5,16 | 1,50   | 0,60 | 3,00 | 0,35        | 0,15 | 0,55 |

# DN - RHOMBIC 55° NEGATIVE

RÔMBICA 55° NEGATIVA | RÓMBICA 55° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|                                    |                   |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|------------------------------------|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                    |                   |                | CVD    |        |         |        |         |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |
|                                    |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas  | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>DNMG-LC<br>Medium to Finishing | 1123662           | DNMG 150404-LC | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123663           | DNMG 150408-LC | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123664           | DNMG 150412-LC | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1122020           | DNMG 150604-LC | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1122007           | DNMG 150608-LC | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123655           | DNMG 150612-LC | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>DNMG-GS<br>Medium to Finishing | 1124688           | DNMG 110404-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        | ⊗      |
|                                    | 1124689           | DNMG 110408-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        | ⊗      |
|                                    | 1124511           | DNMG 150404-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        | ⊗      |
|                                    | 1124512           | DNMG 150408-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        | ⊗      |
|                                    | 1124513           | DNMG 150412-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        | ⊗      |
|                                    | 1124682           | DNMG 150604-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        | ⊗      |
|                                    | 1124683           | DNMG 150608-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        | ⊗      |
|                                    | 1124684           | DNMG 150612-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        | ⊗      |
| <br>DNMG-MR<br>Medium              | 1121498           | DNMG 110404-MR | ⊗      | ⊗      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1121500           | DNMG 110408-MR |        | ⊗      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1121218           | DNMG 150404-MR |        | ⊗      |         | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |
|                                    | 1121219           | DNMG 150408-MR | ⊗      | ⊗      | ⊗       | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1121508           | DNMG 150412-MR |        |        | ⊗       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |
|                                    | 1121224           | DNMG 150604-MR | ⊗      | ⊗      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |
|                                    | 1121328           | DNMG 150608-MR |        |        | ⊗       | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1121518           | DNMG 150612-MR | ⊗      | ⊗      | ⊗       | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |
|                                    | 1121522           | DNMG 150616-MR |        |        |         |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>DNMG-PM<br>Medium              | 1123924           | DNMG 150404-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123916           | DNMG 150408-PM | ⊗      |        | ⊗       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123925           | DNMG 150412-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123926           | DNMG 150416-PM |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1124065           | DNMG 150604-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123777           | DNMG 150608-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1124066           | DNMG 150612-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1124082           | DNMG 150616-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

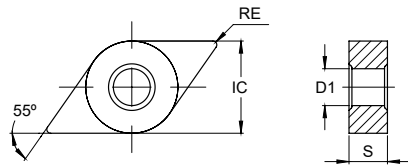
⊗ First choice | 1ª Escolha | 1ª Opción

⊖ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| DNMG 150404-LC | DNMG 431-LC    | 12,700  | 4,76 | 0,40 | 5,16 | 1,00   | 0,40 | 2,50 | 0,15        | 0,07 | 0,30 |
| DNMG 150408-LC | DNMG 432-LC    | 12,700  | 4,76 | 0,80 | 5,16 | 1,50   | 0,40 | 2,50 | 0,20        | 0,10 | 0,40 |
| DNMG 150412-LC | DNMG 433-LC    | 12,700  | 4,76 | 1,20 | 5,16 | 2,00   | 0,80 | 3,00 | 0,25        | 0,15 | 0,50 |
| DNMG 150604-LC | DNMG 441-LC    | 12,700  | 6,35 | 0,40 | 5,16 | 1,50   | 0,40 | 3,00 | 0,15        | 0,07 | 0,30 |
| DNMG 150608-LC | DNMG 442-LC    | 12,700  | 6,35 | 0,80 | 5,16 | 2,00   | 0,40 | 3,00 | 0,20        | 0,10 | 0,40 |
| DNMG 150612-LC | DNMG 443-LC    | 12,700  | 6,35 | 1,20 | 5,16 | 2,50   | 0,80 | 3,50 | 0,25        | 0,15 | 0,50 |
| DNMG 110404-GS | DNMG 331-GS    | 9,525   | 4,76 | 0,40 | 3,81 | 1,50   | 0,15 | 2,00 | 0,20        | 0,10 | 0,25 |
| DNMG 110408-GS | DNMG 332-GS    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,20 | 2,50 | 0,25        | 0,10 | 0,30 |
| DNMG 150404-GS | DNMG 431-GS    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,15 | 2,00 | 0,20        | 0,10 | 0,25 |
| DNMG 150408-GS | DNMG 432-GS    | 12,700  | 4,76 | 0,80 | 5,16 | 2,00   | 0,20 | 2,50 | 0,25        | 0,10 | 0,30 |
| DNMG 150412-GS | DNMG 433-GS    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,30 | 3,00 | 0,30        | 0,10 | 0,35 |
| DNMG 150604-GS | DNMG 441-GS    | 12,700  | 6,35 | 0,40 | 5,16 | 1,50   | 0,15 | 2,00 | 0,20        | 0,10 | 0,25 |
| DNMG 150608-GS | DNMG 442-GS    | 12,700  | 6,35 | 0,80 | 5,16 | 2,00   | 0,20 | 2,50 | 0,25        | 0,10 | 0,30 |
| DNMG 150612-GS | DNMG 443-GS    | 12,700  | 6,35 | 1,20 | 5,16 | 2,50   | 0,30 | 3,00 | 0,30        | 0,10 | 0,35 |
| DNMG 110404-MR | DNMG 331-MR    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,40 | 5,00 | 0,20        | 0,10 | 0,30 |
| DNMG 110408-MR | DNMG 332-MR    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,50 | 5,00 | 0,30        | 0,15 | 0,50 |
| DNMG 150404-MR | DNMG 431-MR    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,40 | 6,00 | 0,20        | 0,10 | 0,30 |
| DNMG 150408-MR | DNMG 432-MR    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 6,00 | 0,30        | 0,15 | 0,50 |
| DNMG 150412-MR | DNMG 433-MR    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,80 | 6,00 | 0,35        | 0,18 | 0,60 |
| DNMG 150604-MR | DNMG 441-MR    | 12,700  | 6,35 | 0,40 | 5,16 | 3,00   | 0,40 | 6,00 | 0,20        | 0,10 | 0,30 |
| DNMG 150608-MR | DNMG 442-MR    | 12,700  | 6,35 | 0,80 | 5,16 | 3,00   | 0,50 | 6,00 | 0,30        | 0,15 | 0,50 |
| DNMG 150612-MR | DNMG 443-MR    | 12,700  | 6,35 | 1,20 | 5,16 | 3,00   | 0,80 | 6,00 | 0,35        | 0,18 | 0,60 |
| DNMG 150616-MR | DNMG 444-MR    | 12,700  | 6,35 | 1,60 | 5,16 | 3,00   | 1,00 | 6,00 | 0,40        | 0,23 | 0,65 |
| DNMG 150404-PM | DNMG 431-PM    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,40 | 6,00 | 0,20        | 0,10 | 0,30 |
| DNMG 150408-PM | DNMG 432-PM    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 6,00 | 0,30        | 0,15 | 0,50 |
| DNMG 150412-PM | DNMG 433-PM    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,80 | 6,00 | 0,35        | 0,18 | 0,60 |
| DNMG 150416-PM | DNMG 434-PM    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 1,00 | 6,00 | 0,40        | 0,23 | 0,65 |
| DNMG 150604-PM | DNMG 441-PM    | 12,700  | 6,35 | 0,40 | 5,16 | 2,50   | 0,50 | 5,00 | 0,25        | 0,15 | 0,40 |
| DNMG 150608-PM | DNMG 442-PM    | 12,700  | 6,35 | 0,80 | 5,16 | 3,00   | 0,50 | 6,00 | 0,30        | 0,15 | 0,50 |
| DNMG 150612-PM | DNMG 443-PM    | 12,700  | 6,35 | 1,20 | 5,16 | 3,50   | 0,50 | 7,00 | 0,35        | 0,20 | 0,60 |
| DNMG 150616-PM | DNMG 444-PM    | 12,700  | 6,35 | 1,60 | 5,16 | 3,00   | 1,00 | 6,00 | 0,40        | 0,23 | 0,65 |

# DN - RHOMBIC 55° NEGATIVE

RÔMBICA 55° NEGATIVA | RÓMBICA 55° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|                                       |                   |                | P   |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |  |  |  |  |  |  |  |  |
|---------------------------------------|-------------------|----------------|---|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|--|--|--|--|--|--|--|
|                                       |                   |                | CVD   |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       |                   | (2) Grade code | T6  | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |  |  |  |  |  |  |  |  |
| Inserts<br>Pastilhas<br>Plaquitas     | (1) Geometry code | ISO Reference  | PHG105  | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5530 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |  |  |  |  |  |  |  |  |
| <p>DNMG-ST<br/>Medium</p>             | 1121346           | DNMG 110404-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121347           | DNMG 110408-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121255           | DNMG 150404-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121256           | DNMG 150408-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121512           | DNMG 150412-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121514           | DNMG 150416-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121257           | DNMG 150604-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121258           | DNMG 150608-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121521           | DNMG 150612-ST |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
| 1121523                               | DNMG 150616-ST    |                |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
| <p>DNMG-MW<br/>Medium Wiper</p>       | 1121374           | DNMG 150408-MW |   |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121510           | DNMG 150412-MW |   |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121375           | DNMG 150608-MW |   | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121519           | DNMG 150612-MW |   | ⊗      | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |  |  |  |  |  |  |  |  |  |
| <p>DNMG-SS<br/>Roughing to Medium</p> | 1121501           | DNMG 110408-SS |   |        |         |        |         |        |        |        | ⊗      |        | ⊗      |        | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121291           | DNMG 150404-SS |   |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |  |  |  |  |  |  |  |  |  |
|                                       | 1121292           | DNMG 150408-SS |   |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |  |  |  |  |  |  |  |  |  |
|                                       | 1121511           | DNMG 150412-SS |   |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ○      |  |  |  |  |  |  |  |  |  |
|                                       | 1121284           | DNMG 150604-SS |   |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |  |  |  |  |  |  |  |  |  |
|                                       | 1121285           | DNMG 150608-SS |   |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |  |  |  |  |  |  |  |  |  |
|                                       | 1121520           | DNMG 150612-SS |   |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |  |  |  |  |  |  |  |  |  |
|                                       | 1121287           | DNMG 150616-SS |   |        |         |        |         |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ○      |  |  |  |  |  |  |  |  |  |
| <p>DOMX-GS<br/>Roughing</p>           | 1124595           | DOMX 1506R1-GS | See our complete solution on pages C-478 to C-481 |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1124493           | DOMX 1506L1-GS |   |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
| <p>DNMG-HR<br/>Roughing</p>           | 1121253           | DNMG 150408-HR | ⊗   | ○      | ⊗       | ○      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121506           | DNMG 150412-HR | ⊗   | ○      | ⊗       | ○      |         | ○      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121254           | DNMG 150608-HR | ⊗   | ⊗      | ⊗       | ⊗      |         | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |  |  |  |  |  |  |  |  |  |
|                                       | 1121362           | DNMG 150612-HR | ⊗   | ○      | ⊗       | ⊗      |         | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |  |  |  |  |  |  |  |  |  |
| 1121340                               | DNMG 150616-HR    |                |   | ○      | ⊗       | ⊗      |         | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |  |  |  |  |  |  |  |  |  |
| <p>DNMM-RP<br/>Roughing</p>           | 1124205           | DNMM 150612-RP | ⊗   | ○      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |  |  |  |  |  |

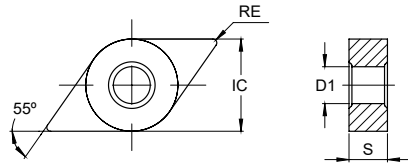
⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| DNMG 110404-ST | DNMG 331-ST    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,20 | 3,50 | 0,20        | 0,15 | 0,30 |
| DNMG 110408-ST | DNMG 332-ST    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,20 | 3,50 | 0,35        | 0,15 | 0,50 |
| DNMG 150404-ST | DNMG 431-ST    | 12,700  | 4,76 | 0,40 | 5,16 | 2,50   | 0,20 | 5,00 | 0,20        | 0,15 | 0,30 |
| DNMG 150408-ST | DNMG 432-ST    | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 0,50 | 5,00 | 0,35        | 0,15 | 0,50 |
| DNMG 150412-ST | DNMG 433-ST    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,50 | 6,00 | 0,50        | 0,25 | 0,70 |
| DNMG 150416-ST | DNMG 434-ST    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,30 | 6,00 | 0,60        | 0,25 | 1,00 |
| DNMG 150604-ST | DNMG 441-ST    | 12,700  | 6,35 | 0,40 | 5,16 | 2,50   | 0,20 | 5,00 | 0,20        | 0,15 | 0,30 |
| DNMG 150608-ST | DNMG 442-ST    | 12,700  | 6,35 | 0,80 | 5,16 | 2,50   | 0,20 | 5,00 | 0,35        | 0,15 | 0,50 |
| DNMG 150612-ST | DNMG 443-ST    | 12,700  | 6,35 | 1,20 | 5,16 | 3,00   | 0,30 | 6,00 | 0,50        | 0,15 | 0,70 |
| DNMG 150616-ST | DNMG 444-ST    | 12,700  | 6,35 | 1,60 | 5,16 | 3,00   | 0,30 | 6,00 | 0,60        | 0,25 | 1,00 |
| DNMG 150408-MW | DNMG 432-MW    | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 0,30 | 4,00 | 0,35        | 0,15 | 0,60 |
| DNMG 150412-MW | DNMG 433-MW    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,50 | 5,00 | 0,50        | 0,25 | 0,90 |
| DNMG 150608-MW | DNMG 442-MW    | 12,700  | 6,35 | 0,80 | 5,16 | 3,00   | 0,30 | 4,50 | 0,35        | 0,15 | 0,60 |
| DNMG 150612-MW | DNMG 443-MW    | 12,700  | 6,35 | 1,20 | 5,16 | 3,50   | 0,50 | 5,50 | 0,50        | 0,25 | 0,90 |
| DNMG 110408-SS | DNMG 332-SS    | 12,700  | 4,76 | 0,80 | 3,81 | 2,00   | 0,50 | 4,40 | 0,25        | 0,12 | 0,45 |
| DNMG 150404-SS | DNMG 431-SS    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,30 | 6,00 | 0,25        | 0,10 | 0,30 |
| DNMG 150408-SS | DNMG 432-SS    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 6,40 | 0,25        | 0,12 | 0,45 |
| DNMG 150412-SS | DNMG 433-SS    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,50 | 6,40 | 0,30        | 0,15 | 0,60 |
| DNMG 150604-SS | DNMG 441-SS    | 12,700  | 6,35 | 0,40 | 5,16 | 3,00   | 0,30 | 6,00 | 0,25        | 0,10 | 0,30 |
| DNMG 150608-SS | DNMG 442-SS    | 12,700  | 6,35 | 0,80 | 5,16 | 3,00   | 0,50 | 6,40 | 0,25        | 0,12 | 0,45 |
| DNMG 150612-SS | DNMG 443-SS    | 12,700  | 6,35 | 1,20 | 5,16 | 3,00   | 0,50 | 6,40 | 0,30        | 0,15 | 0,60 |
| DNMG 150616-SS | DNMG 444-SS    | 12,700  | 6,35 | 1,60 | 5,16 | 3,00   | 0,50 | 6,40 | 0,50        | 0,20 | 1,00 |
| DOMX 1506R1-GS | DOMX44R1-GS    | 12,70   | 6,35 | 0,80 | 5,16 | 1,50   | 0,30 | 1,50 | 0,30        | 0,20 | 0,50 |
| DOMX 1506L1-GS | DOMX 44L1-GS   | 12,70   | 6,35 | 0,80 | 5,16 | 1,50   | 0,30 | 1,50 | 0,30        | 0,20 | 0,50 |
| DNMG 150408-HR | DNMG 432-HR    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,80 | 6,00 | 0,35        | 0,20 | 0,55 |
| DNMG 150412-HR | DNMG 433-HR    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 1,00 | 6,00 | 0,40        | 0,25 | 0,70 |
| DNMG 150608-HR | DNMG 442-HR    | 12,700  | 6,35 | 0,80 | 5,16 | 4,00   | 0,80 | 6,00 | 0,35        | 0,20 | 0,55 |
| DNMG 150612-HR | DNMG 443-HR    | 12,700  | 6,35 | 1,20 | 5,16 | 4,00   | 1,00 | 6,00 | 0,40        | 0,25 | 0,70 |
| DNMG 150616-HR | DNMG 444-HR    | 12,700  | 6,35 | 1,60 | 5,16 | 4,00   | 1,50 | 6,00 | 0,50        | 0,30 | 0,80 |
| DNMM 150612-RP | DNMM 443-RP    | 12,700  | 6,35 | 1,20 | 5,16 | 4,00   | 1,00 | 6,00 | 0,40        | 0,25 | 0,70 |



# DN - RHOMBIC 55° NEGATIVE

RÔMBICA 55° NEGATIVA | RÓMBICA 55° NEGATIVA

TURNING

|                                    |                   |                 | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|------------------------------------|-------------------|-----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                    |                   |                 | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |
|                                    |                   | (2) Grade code  | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquetas  | (1) Geometry code | ISO Reference   | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>DNMX-02<br>Medium to Finishing | 1120351           | DNMX 150604-L02 |        |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1120353           | DNMX 150604-R02 |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1120355           | DNMX 150608-L02 |        | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1120357           | DNMX 150608-R02 |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>DNMX-03<br>Medium              | 1123983           | DNMX 150604-L03 |        | ⊗      | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123815           | DNMX 150604-R03 |        | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123796           | DNMX 150608-L03 |        |        | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1123795           | DNMX 150608-R03 |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>DNMX-01<br>Roughing to Medium  | 1120348           | DNMX 150408-L01 |        |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1120349           | DNMX 150408-R01 |        |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1120350           | DNMX 150604-L01 |        |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1120352           | DNMX 150604-R01 |        | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1120354           | DNMX 150608-L01 |        |        | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                    | 1120356           | DNMX 150608-R01 |        |        | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Heavy turning

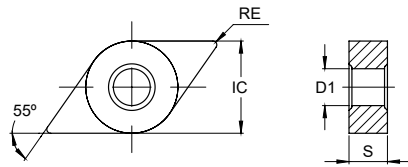
External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data



| ISO Reference   | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|-----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                 |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| DNMX 150604-L02 | DNMX 441-L02   | 12,700  | 6,35 | 0,40 | 5,16 | 2,50   | 0,70 | 5,00 | 0,20        | 0,14 | 0,25 |
| DNMX 150604-R02 | DNMX 441-R02   | 12,700  | 6,35 | 0,40 | 5,16 | 2,50   | 0,70 | 5,00 | 0,20        | 0,14 | 0,25 |
| DNMX 150608-L02 | DNMX 442-L02   | 12,700  | 6,35 | 0,80 | 5,16 | 3,00   | 0,80 | 5,00 | 0,35        | 0,14 | 0,50 |
| DNMX 150608-R02 | DNMX 442-R02   | 12,700  | 6,35 | 0,80 | 5,16 | 3,00   | 0,80 | 5,00 | 0,35        | 0,14 | 0,50 |
| DNMX 150604-L03 | DNMX 441-L03   | 12,700  | 6,35 | 0,40 | 5,16 | 2,70   | 0,80 | 5,50 | 0,20        | 0,15 | 0,25 |
| DNMX 150604-R03 | DNMX 441-R03   | 12,700  | 6,35 | 0,40 | 5,16 | 2,70   | 0,80 | 5,50 | 0,20        | 0,15 | 0,25 |
| DNMX 150608-L03 | DNMX 442-L03   | 12,700  | 6,35 | 0,80 | 5,16 | 3,20   | 1,00 | 6,00 | 0,35        | 0,16 | 0,50 |
| DNMX 150608-R03 | DNMX 442-R03   | 12,700  | 6,35 | 0,80 | 5,16 | 3,20   | 1,00 | 6,00 | 0,35        | 0,16 | 0,50 |
| DNMX 150408-L01 | DNMX 432-L01   | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 1,00 | 5,00 | 0,35        | 0,20 | 0,50 |
| DNMX 150408-R01 | DNMX 432-R01   | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 1,00 | 5,00 | 0,35        | 0,20 | 0,50 |
| DNMX 150604-L01 | DNMX 441-L01   | 12,700  | 6,35 | 0,40 | 5,16 | 3,00   | 1,50 | 6,00 | 0,25        | 0,15 | 0,30 |
| DNMX 150604-R01 | DNMX 441-R01   | 12,700  | 6,35 | 0,40 | 5,16 | 3,00   | 1,50 | 6,00 | 0,25        | 0,15 | 0,30 |
| DNMX 150608-L01 | DNMX 442-L01   | 12,700  | 6,35 | 0,80 | 5,16 | 3,50   | 2,00 | 6,50 | 0,35        | 0,20 | 0,50 |
| DNMX 150608-R01 | DNMX 442-R01   | 12,700  | 6,35 | 0,80 | 5,16 | 3,50   | 2,00 | 6,50 | 0,35        | 0,20 | 0,50 |

Negative inserts

Positive inserts

PCBN &amp; PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes



Spare Parts

Technical Data

# KN - PARALLELOGRAM 55° NEGATIVE

PARALELOGRAMA 55° NEGATIVA | PARALELOGRAMO 55° NEGATIVA

TURNING

|   |                         |                    | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|---|-------------------------|--------------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   |                         |                    | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |
|   |                         | (2) Grade code     | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry<br>code | ISO Reference      | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
|  | 1120368                 | KNUX 160405-L01-PD |        |        | ⊗       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1120371                 | KNUX 160405-R01-PD |        | ⊗      | ⊗       | ⊗      | ⊗       | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1120374                 | KNUX 160410-L02    |        | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1120376                 | KNUX 160410-R02    |        | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

⊗ First choice | 1ª Escolha | 1ª Opción      ○ Available under request | Disponível sob consulta | Disponible bajo consulta      Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code  
 ⊗ Stock Items | Itens de stock      ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Negative inserts

Positive inserts


PCBN & PCD inserts

Heavy turning

External Toolholders

# RN - ROUND NEGATIVE

REDONDA NEGATIVA | REDONDA NEGATIVA

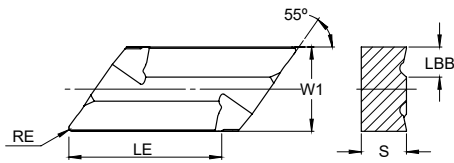
|   |                         |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|---|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   |                         |                | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |
|   |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
|  | 1120439                 | RNMG 090300-ST |        |        |         | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1120440                 | RNMG 120400-ST |        |        |         | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1120441                 | RNMG 150600-ST |        |        |         |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1120442                 | RNMG 190600-ST |        |        |         | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1120443                 | RNMG 250900-ST |        |        |         |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |

⊗ First choice | 1ª Escolha | 1ª Opción      ○ Available under request | Disponível sob consulta | Disponible bajo consulta      Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code  
 ⊗ Stock Items | Itens de stock      ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

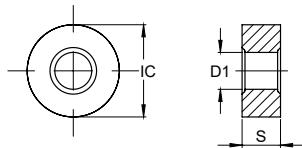
Automatic Lathes

Spare Parts

Technical Data



| ISO Reference   | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |       |     |      |     | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|-----------------|-----------------|---|-------|-----|------|-----|--|------|------|-------------|------|------|
|                 |                 | LE  | W1    | RE  | S    | LBB | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| KNUX 160405-L01 | KNUX 160405-L01 | 16,50   | 9,525 | 0,5 | 4,76 | 2,5 | 3,00   | 1,00 | 6,00 | 0,30        | 0,20 | 0,35 |
| KNUX 160405-R01 | KNUX 160405-R01 | 16,50   | 9,525 | 0,5 | 4,76 | 2,5 | 3,00   | 1,00 | 6,00 | 0,30        | 0,20 | 0,35 |
| KNUX 160410-L02 | KNUX 160410-L02 | 16,50   | 9,525 | 1,0 | 4,76 | 3,2 | 4,00   | 1,50 | 6,00 | 0,50        | 0,40 | 0,70 |
| KNUX 160410-R02 | KNUX 160410-R02 | 16,50   | 9,525 | 1,0 | 4,76 | 3,2 | 4,00   | 1,50 | 6,00 | 0,50        | 0,40 | 0,70 |



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |    |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|----|------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| RNMG 090300-ST | RNMG 320-ST    | 9,525   | 3,18 | -  | 3,81 | 2,30   | 0,90 | 4,50  | 0,30        | 0,10 | 0,90 |
| RNMG 120400-ST | RNMG 430-ST    | 12,700  | 4,76 | -  | 5,16 | 3,00   | 1,20 | 4,80  | 0,40        | 0,12 | 1,20 |
| RNMG 150600-ST | RNMG 540-ST    | 15,875  | 6,35 | -  | 6,35 | 3,80   | 1,50 | 7,50  | 0,50        | 0,15 | 1,50 |
| RNMG 190600-ST | RNMG 640-ST    | 19,050  | 6,35 | -  | 7,94 | 4,50   | 1,90 | 7,60  | 0,65        | 0,20 | 1,90 |
| RNMG 250900-ST | RNMG 860-ST    | 25,400  | 9,52 | -  | 9,12 | 6,30   | 2,50 | 10,00 | 0,80        | 0,25 | 2,50 |

# SN - SQUARE 90° NEGATIVE

QUADRADA 90° NEGATIVA | ESQUADRA 90° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts







Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

|   |                   |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|---|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   |                   |                | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |
|   |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquetas   | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>SNMA<br>Roughing                 | 1121070           | SNMA 090304    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1120474           | SNMA 090308    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1120475           | SNMA 120404    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1120476           | SNMA 120408    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1120478           | SNMA 120412    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1120479           | SNMA 120416    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1120481           | SNMA 150412    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1121525           | SNMA 150612    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1120482           | SNMA 190612    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1120483           | SNMA 190616    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
| 1120485   | SNMA 190624       |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |        |
| 1120486   | SNMA 250724       |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        | ○      | ⊗      | ⊗      |        |        |        |        |        |        |
| <br>SNMG-MF<br>Finishing            | 1121528           | SNMG 120404-MF | ⊗      | ○      | ⊗       | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121530           | SNMG 120408-MF | ⊗      | ○      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121531           | SNMG 120412-MF | ⊗      | ⊗      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>SNMG-SF<br>Medium to Finishing | 1123874           | SNMG 120404-SF |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        | ⊗      | ⊗      |        | ⊗      |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |
|   | 1123875           | SNMG 120408-SF |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |
|   | 1123876           | SNMG 120412-SF |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |
| <br>SNMG-GS<br>Medium to Finishing | 1124556           | SNMG 120408-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        | ⊗      |        |        |        |        |        | ⊗      | ⊗      |        |        |
|   | 1124557           | SNMG 120412-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        | ⊗      |        |        |        |        |        | ⊗      | ⊗      |        |        |
|   | 1124558           | SNMG 120416-GS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        | ⊗      |        |        |        |        |        | ⊗      | ⊗      |        |        |
| <br>SNMG-MR<br>Medium              | 1121529           | SNMG 120404-MR | ⊗      | ○      | ⊗       | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
|   | 1121179           | SNMG 120408-MR | ⊗      | ⊗      | ⊗       | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |
|   | 1121311           | SNMG 120412-MR | ⊗      | ⊗      | ⊗       | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121357           | SNMG 120416-MR |        |        | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |
|   | 1121533           | SNMG 150608-MR | ⊗      | ○      | ⊗       | ○      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Automatic Lathes  | 1121536           | SNMG 150612-MR | ⊗      | ⊗      | ⊗       | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121540           | SNMG 150616-MR |        |        |         |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121543           | SNMG 190612-MR |        |        | ○       | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |
|   | 1121546           | SNMG 190616-MR |        |        | ○       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>SNMG-PM<br>Medium              | 1124083           | SNMG 120404-PM | ⊗      |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1124084           | SNMG 120408-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1124085           | SNMG 120412-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

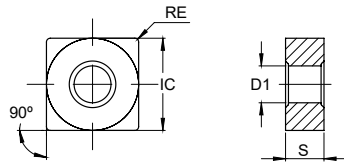
⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| SNMA 090304    | SNMA 321       | 9,525   | 3,18 | 0,40 | 3,81 | 2,50   | 0,20 | 4,50  | 0,20        | 0,15 | 0,30 |
| SNMA 090308    | SNMA 322       | 9,525   | 3,18 | 0,80 | 3,81 | 2,50   | 0,40 | 4,50  | 0,40        | 0,20 | 0,60 |
| SNMA 120404    | SNMA 431       | 12,700  | 4,76 | 0,40 | 5,16 | 4,00   | 0,20 | 8,00  | 0,20        | 0,15 | 0,30 |
| SNMA 120408    | SNMA 432       | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,20 | 8,00  | 0,40        | 0,20 | 0,60 |
| SNMA 120412    | SNMA 433       | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 0,30 | 8,00  | 0,45        | 0,20 | 0,80 |
| SNMA 120416    | SNMA 434       | 12,700  | 4,76 | 1,60 | 5,16 | 4,00   | 0,30 | 8,00  | 0,55        | 0,20 | 1,00 |
| SNMA 150412    | SNMA 533       | 15,875  | 4,76 | 1,20 | 6,35 | 5,00   | 0,30 | 9,00  | 0,45        | 0,20 | 0,80 |
| SNMA 150612    | SNMA 543       | 15,875  | 6,35 | 1,20 | 6,35 | 5,00   | 0,30 | 10,00 | 0,45        | 0,20 | 0,80 |
| SNMA 190612    | SNMA 643       | 19,050  | 6,35 | 1,20 | 7,94 | 6,00   | 0,30 | 12,00 | 0,45        | 0,20 | 0,80 |
| SNMA 190616    | SNMA 644       | 19,050  | 6,35 | 1,60 | 7,94 | 6,00   | 0,30 | 12,00 | 0,55        | 0,20 | 1,00 |
| SNMA 190624    | SNMA 646       | 19,050  | 6,35 | 2,40 | 7,94 | 6,00   | 0,30 | 12,00 | 0,60        | 0,20 | 1,20 |
| SNMA 250724    | SNMA 856       | 25,400  | 7,94 | 2,40 | 9,12 | 6,00   | 0,40 | 12,00 | 0,60        | 0,20 | 1,40 |
| SNMG 120404-MF | SNMG 431-MF    | 12,700  | 4,76 | 0,40 | 5,16 | 0,40   | 0,15 | 1,50  | 0,10        | 0,05 | 0,25 |
| SNMG 120408-MF | SNMG 432-MF    | 12,700  | 4,76 | 0,80 | 5,16 | 0,50   | 0,20 | 1,50  | 0,20        | 0,10 | 0,40 |
| SNMG 120412-MF | SNMG 433-MF    | 12,700  | 4,76 | 1,20 | 5,16 | 0,80   | 0,25 | 2,50  | 0,30        | 0,20 | 0,60 |
| SNMG 120404-SF | SNMG 431-SF    | 12,700  | 4,76 | 0,40 | 5,16 | 2,00   | 1,00 | 4,00  | 0,15        | 0,10 | 0,23 |
| SNMG 120408-SF | SNMG 432-SF    | 12,700  | 4,76 | 0,80 | 5,16 | 2,00   | 1,00 | 4,00  | 0,20        | 0,12 | 0,38 |
| SNMG 120412-SF | SNMG 433-SF    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 1,00 | 4,00  | 0,25        | 0,15 | 0,55 |
| SNMG 120408-GS | SNMG 432-GS    | 12,700  | 4,76 | 0,80 | 5,16 | 2,00   | 0,20 | 3,00  | 0,30        | 0,15 | 0,40 |
| SNMG 120412-GS | SNMG 433-GS    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,50 | 3,50  | 0,35        | 0,20 | 0,50 |
| SNMG 120416-GS | SNMG 434-GS    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,50 | 4,00  | 0,40        | 0,20 | 0,50 |
| SNMG 120404-MR | SNMG 431-MR    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,40 | 6,00  | 0,20        | 0,10 | 0,30 |
| SNMG 120408-MR | SNMG 432-MR    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 6,00  | 0,30        | 0,15 | 0,50 |
| SNMG 120412-MR | SNMG 433-MR    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,80 | 6,00  | 0,35        | 0,18 | 0,60 |
| SNMG 120416-MR | SNMG 434-MR    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 1,00 | 6,00  | 0,40        | 0,23 | 0,65 |
| SNMG 150608-MR | SNMG 542-MR    | 15,875  | 6,35 | 0,80 | 6,35 | 4,00   | 0,60 | 7,50  | 0,30        | 0,15 | 0,50 |
| SNMG 150612-MR | SNMG 543-MR    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 0,80 | 7,50  | 0,35        | 0,18 | 0,60 |
| SNMG 150616-MR | SNMG 534-MR    | 15,875  | 6,35 | 1,60 | 6,35 | 4,00   | 1,00 | 7,50  | 0,40        | 0,20 | 0,70 |
| SNMG 190612-MR | SNMG 643-MR    | 19,050  | 6,35 | 1,20 | 7,94 | 5,00   | 0,80 | 9,00  | 0,35        | 0,18 | 0,60 |
| SNMG 190616-MR | SNMG 644-MR    | 19,050  | 6,35 | 1,60 | 7,94 | 5,00   | 1,00 | 9,00  | 0,40        | 0,23 | 0,65 |
| SNMG 120404-PM | SNMG 431-PM    | 12,70   | 4,76 | 0,40 | 5,16 | 3,00   | 0,40 | 6,00  | 0,20        | 0,10 | 0,30 |
| SNMG 120408-PM | SNMG 432-PM    | 12,70   | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 6,00  | 0,30        | 0,15 | 0,50 |
| SNMG 120412-PM | SNMG 433-PM    | 12,70   | 4,76 | 1,20 | 5,16 | 3,00   | 0,80 | 6,00  | 0,35        | 0,18 | 0,60 |

# SN - SQUARE 90° NEGATIVE

QUADRADA 90° NEGATIVA | ESQUADRA 90° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning




External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|   |                         |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |   |
|---|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
|   |                         |                | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |   |
|   |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |   |
| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5520 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |   |
| <br>SNMG-ST<br>Medium              | 1121338                 | SNMG 090308-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |
|   | 1121241                 | SNMG 120404-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ○      | ⊗      |        |        |        |        |        |        |   |
|   | 1121181                 | SNMG 120408-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |
|   | 1121310                 | SNMG 120412-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ○      |        |        |        |        |        |   |
|   | 1121242                 | SNMG 120416-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |
|   | 1121538                 | SNMG 150612-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ○      | ○      |        |        |        |        |        |        |   |
|   | 1121541                 | SNMG 150616-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ○      | ⊗      |        |        |        |        |        |        |   |
|   | 1121544                 | SNMG 190612-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |
| 1121548   | SNMG 190616-ST          |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        | ○      | ⊗      | ⊗      |        |        |        |        |        |        |   |
| <br>SNMG-SS<br>Roughing to Medium | 1121526                 | SNMG 090304-SS |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |   |
|   | 1121527                 | SNMG 090308-SS |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121365                 | SNMG 120404-SS |        |        |         |        |         |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121315                 | SNMG 120408-SS |        |        |         |        |         |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121366                 | SNMG 120412-SS |        |        |         |        |         |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121532                 | SNMG 120416-SS |        |        |         |        |         |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121534                 | SNMG 150608-SS |        |        |         |        |         |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121537                 | SNMG 150612-SS |        |        |         |        |         |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| 1121547   | SNMG 190616-SS          |                |        |        |         |        |         |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| <br>SNMG-HR<br>Roughing          | 1121194                 | SNMG 120408-HR | ⊗      | ○      | ⊗       | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |   |
|   | 1121195                 | SNMG 120412-HR | ⊗      | ○      | ⊗       | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |   |
|   | 1121361                 | SNMG 120416-HR | ⊗      | ○      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |   |
|   | 1121535                 | SNMG 150612-HR |        |        |         | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |   |
|   | 1121539                 | SNMG 150616-HR |        |        |         | ⊗      | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |   |
|   | 1121542                 | SNMG 190612-HR | ⊗      | ⊗      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |   |
|   | 1121545                 | SNMG 190616-HR | ⊗      | ○      |         | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ○      |        |        |        |        |   |
|   | 1124184                 | SNMG 250724-HR |        |        |         | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| 1121638   | SNMG 250924-HR          |                |        |        | ⊗       | ○      |         | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ○      |        |        |        |        |        |   |

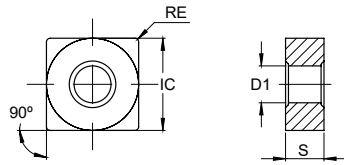
⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock






| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| SNMG 090308-ST | SNMG 322-ST    | 9,525   | 3,18 | 0,80 | 3,81 | 2,50   | 0,20 | 4,50  | 0,35        | 0,15 | 0,50 |
| SNMG 120404-ST | SNMG 431-ST    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,20 | 6,00  | 0,20        | 0,15 | 0,30 |
| SNMG 120408-ST | SNMG 432-ST    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,20 | 6,00  | 0,35        | 0,15 | 0,50 |
| SNMG 120412-ST | SNMG 433-ST    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,30 | 6,00  | 0,40        | 0,15 | 0,60 |
| SNMG 120416-ST | SNMG 434-ST    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,30 | 6,00  | 0,45        | 0,20 | 0,70 |
| SNMG 150612-ST | SNMG 543-ST    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 0,30 | 8,00  | 0,40        | 0,15 | 0,64 |
| SNMG 150616-ST | SNMG 544-ST    | 15,875  | 6,35 | 1,60 | 6,35 | 4,00   | 0,30 | 8,00  | 0,50        | 0,20 | 0,76 |
| SNMG 190612-ST | SNMG 643-ST    | 19,050  | 6,35 | 1,20 | 7,94 | 4,50   | 0,30 | 9,00  | 0,40        | 0,15 | 0,60 |
| SNMG 190616-ST | SNMG 644-ST    | 19,050  | 6,35 | 1,60 | 7,94 | 4,50   | 0,30 | 9,00  | 0,45        | 0,20 | 0,70 |
| SNMG 090304-SS | SNMG 321-SS    | 9,525   | 3,18 | 0,40 | 3,81 | 2,00   | 0,50 | 4,50  | 0,20        | 0,10 | 0,30 |
| SNMG 090308-SS | SNMG 322-SS    | 9,525   | 3,18 | 0,80 | 3,81 | 2,00   | 0,50 | 4,50  | 0,25        | 0,12 | 0,45 |
| SNMG 120404-SS | SNMG 431-SS    | 12,700  | 4,76 | 0,40 | 5,16 | 3,00   | 0,50 | 6,40  | 0,20        | 0,12 | 0,30 |
| SNMG 120408-SS | SNMG 432-SS    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 6,40  | 0,25        | 0,12 | 0,45 |
| SNMG 120412-SS | SNMG 433-SS    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,50 | 6,40  | 0,30        | 0,15 | 0,60 |
| SNMG 120416-SS | SNMG 434-SS    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,50 | 6,40  | 0,45        | 0,15 | 0,80 |
| SNMG 150608-SS | SNMG 542-SS    | 15,875  | 6,35 | 0,80 | 6,35 | 4,00   | 0,50 | 8,00  | 0,25        | 0,12 | 0,45 |
| SNMG 150612-SS | SNMG 543-SS    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 0,50 | 8,00  | 0,30        | 0,15 | 0,60 |
| SNMG 190616-SS | SNMG 644-SS    | 19,050  | 6,35 | 1,60 | 7,94 | 4,00   | 0,50 | 8,00  | 0,45        | 0,15 | 0,80 |
| SNMG 120408-HR | SNMG 432-HR    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,80 | 7,00  | 0,35        | 0,20 | 0,55 |
| SNMG 120412-HR | SNMG 433-HR    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 1,00 | 7,00  | 0,40        | 0,25 | 0,70 |
| SNMG 120416-HR | SNMG 434-HR    | 12,700  | 4,76 | 1,60 | 5,16 | 4,00   | 1,50 | 7,00  | 0,50        | 0,32 | 0,80 |
| SNMG 150612-HR | SNMG 543-HR    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 1,00 | 8,00  | 0,40        | 0,25 | 0,70 |
| SNMG 150616-HR | SNMG 544-HR    | 15,875  | 6,35 | 1,60 | 6,35 | 4,00   | 1,50 | 8,00  | 0,50        | 0,32 | 0,80 |
| SNMG 190612-HR | SNMG 643-HR    | 19,050  | 6,35 | 1,20 | 7,94 | 5,00   | 1,00 | 10,00 | 0,40        | 0,25 | 0,70 |
| SNMG 190616-HR | SNMG 644-HR    | 19,050  | 6,35 | 1,60 | 7,94 | 5,00   | 1,50 | 10,00 | 0,50        | 0,32 | 0,80 |
| SNMG 250724-HR | SNMG 856-HR    | 25,400  | 7,94 | 2,40 | 9,12 | 6,00   | 2,00 | 15,00 | 1,00        | 0,40 | 1,20 |
| SNMG 250924-HR | SNMG 866-HR    | 25,400  | 9,52 | 2,40 | 9,12 | 6,00   | 2,00 | 15,00 | 1,00        | 0,40 | 1,20 |



# SN - SQUARE 90° NEGATIVE

QUADRADA 90° NEGATIVA | ESQUADRA 90° NEGATIVA

TURNING

|  |                   |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|--|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|  |                   |                | CVD    |        |         |        |         |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |
|  |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquetas  | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <b>SNMM-RP</b><br>  | 1124057           | SNMM 150608-RP | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1124058           | SNMM 150612-RP | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1124059           | SNMM 150616-RP | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <b>Roughing</b>  | 1124001           | SNMM 190612-RP | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1124002           | SNMM 190616-RP | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1124003           | SNMM 190624-RP |        |        | ⊗       | ⊗      | ⊗       | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <b>SNMM-HY</b><br>  | 1121606           | SNMM 190612-HY | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |
|  | 1121250           | SNMM 190616-HY | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1121452           | SNMM 190624-HY |        |        | ⊗       | ⊗      | ⊗       |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <b>Heavy to Roughing</b>   | 1121160           | SNMM 250724-HY |        |        | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1121161           | SNMM 250924-HY |        |        | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <b>SNMM-HZ</b><br> | 1121605           | SNMM 190612-HZ | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |
|  | 1121249           | SNMM 190616-HZ |        | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |
|  | 1121440           | SNMM 190624-HZ |        | ⊗      | ⊗       | ⊗      | ⊗       | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |
|  | 1121158           | SNMM 250724-HZ | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |
|  | 1123786           | SNMM 250732-HZ |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |
| <b>Heavy to Roughing</b>   | 1121159           | SNMM 250924-HZ | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |

⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

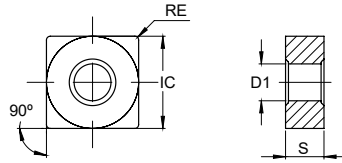
External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| SNMM 150608-RP | SNMG 542-RP    | 15,875  | 6,35 | 0,80 | 6,35 | 4,00   | 1,00 | 8,00  | 0,30        | 0,15 | 0,50 |
| SNMM 150612-RP | SNMG 543-RP    | 15,875  | 6,35 | 1,20 | 6,35 | 4,00   | 1,00 | 8,00  | 0,40        | 0,25 | 0,70 |
| SNMM 150616-RP | SNMG 544-RP    | 15,875  | 6,35 | 1,60 | 6,35 | 4,00   | 1,00 | 8,00  | 0,50        | 0,35 | 0,90 |
| SNMM 190612-RP | SNMM 643-RP    | 19,05   | 6,35 | 1,20 | 7,94 | 5,50   | 2,00 | 12,00 | 0,60        | 0,30 | 0,85 |
| SNMM 190616-RP | SNMM 644-RP    | 19,05   | 6,35 | 1,60 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 1,00 |
| SNMM 190624-RP | SNMM 646-RP    | 19,05   | 6,35 | 2,40 | 7,94 | 6,00   | 2,00 | 12,00 | 0,80        | 0,50 | 1,50 |
| SNMM 190612-HY | SNMM 643-HY    | 19,050  | 6,35 | 1,20 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 0,90 |
| SNMM 190616-HY | SNMM 644-HY    | 19,050  | 6,35 | 1,60 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 1,20 |
| SNMM 190624-HY | SNMM 646-HY    | 19,050  | 6,35 | 2,40 | 7,94 | 6,00   | 2,00 | 12,00 | 1,00        | 0,60 | 1,60 |
| SNMM 250724-HY | SNMM 856-HY    | 25,400  | 7,94 | 2,40 | 9,12 | 8,50   | 2,50 | 15,00 | 1,00        | 0,60 | 1,60 |
| SNMM 250924-HY | SNMM 866-HY    | 25,400  | 9,52 | 2,40 | 9,12 | 8,50   | 3,00 | 15,00 | 1,00        | 0,60 | 1,60 |
| SNMM 190612-HZ | SNMM 643-HZ    | 19,050  | 6,35 | 1,20 | 7,94 | 10,00  | 2,40 | 13,00 | 0,60        | 0,35 | 0,90 |
| SNMM 190616-HZ | SNMM 644-HZ    | 19,050  | 6,35 | 1,60 | 7,94 | 10,00  | 2,40 | 13,00 | 0,60        | 0,35 | 1,20 |
| SNMM 190624-HZ | SNMM 646-HZ    | 19,050  | 6,35 | 2,40 | 7,94 | 10,00  | 3,20 | 13,00 | 1,00        | 0,60 | 1,60 |
| SNMM 250724-HZ | SNMM 856-HZ    | 25,400  | 7,94 | 2,40 | 9,12 | 10,00  | 3,20 | 17,00 | 1,00        | 0,60 | 1,60 |
| SNMM 250732-HZ | SNMM 858-HZ    | 25,400  | 7,94 | 3,20 | 9,12 | 10,00  | 3,20 | 17,00 | 1,20        | 0,80 | 1,80 |
| SNMM 250924-HZ | SNMM 866-HZ    | 25,400  | 9,52 | 2,40 | 9,12 | 10,00  | 3,20 | 17,00 | 1,00        | 0,60 | 1,60 |

Negative inserts

Positive inserts

PCBN &amp; PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

# TN - TRIANGULAR 60° NEGATIVE

TRIANGULAR 60° NEGATIVA | TRIANGULAR 60° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning









External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|  |                   |                 | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |
|--|-------------------|-----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|  |                   |                 | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |  |
|  |                   | (2) Grade code  | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquetas  | (1) Geometry code | ISO Reference   | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
|  <p>TNMA</p>                              | 1120624           | TNMA 110304     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |
|  | 1120625           | TNMA 110308     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1120626           | TNMA 160304     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1120627           | TNMA 160308     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  <p>Roughing</p>                          | 1120629           | TNMA 160404     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |
|  | 1120630           | TNMA 160408     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1120632           | TNMA 160412     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1121921           | TNMA 160416     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|   | 1120634           | TNMA 220404     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |
|  | 1120635           | TNMA 220408     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1120636           | TNMA 220412     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1120637           | TNMA 220416     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1121554           | TNMA 270608     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1121555           | TNMA 270612     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1120639           | TNMA 270616     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  | 1120640           | TNMA 330724     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|  <p>NEW TNMG-GSF<br/>Fine Finishing</p> | 1124857           | TNMG 160402-GSF |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  |                   |                 |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  <p>TNMG-MF<br/>Finishing</p>           | 1121556           | TNMG 160404-MF  | ⊗      |        | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121558           | TNMG 160408-MF  | ⊗      |        | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121560           | TNMG 160412-MF  |        | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121369           | TNMG 220408-MF  |        |        | ○       |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  <p>TNMG-MS<br/>Medium to Finishing</p> | 1124856           | TNMG 160402-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121557           | TNMG 160404-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121559           | TNMG 160408-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121561           | TNMG 160412-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  <p>TNMG-SF<br/>Medium to Finishing</p> | 1123757           | TNMG 160404-SF  |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1123719           | TNMG 160408-SF  |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1123758           | TNMG 160412-SF  |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |  |
|  | 1124070           | TNMG 220404-SF  |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1123759           | TNMG 220408-SF  |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  <p>TNMG-LC<br/>Medium to Finishing</p> | 1123638           | TNMG 160404-LC  | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1122025           | TNMG 160408-LC  |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1123656           | TNMG 160412-LC  |        | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1123660           | TNMG 220408-LC  |        | ⊗      | ○       | ○      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1123657           | TNMG 220412-LC  |        |        | ○       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

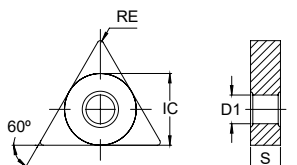
⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

⊗ Stock items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference   | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|-----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                 |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| TNMA 110304     | TNMA 221       | 6,350   | 3,18 | 0,40 | 2,26 | 2,00   | 0,15 | 4,00  | 0,20        | 0,10 | 0,30 |
| TNMA 110308     | TNMA 222       | 6,350   | 3,18 | 0,80 | 2,26 | 2,00   | 0,15 | 4,00  | 0,35        | 0,15 | 0,60 |
| TNMA 160304     | TNMA 321       | 9,525   | 3,18 | 0,40 | 3,81 | 2,50   | 0,20 | 5,00  | 0,20        | 0,10 | 0,30 |
| TNMA 160308     | TNMA 322       | 9,525   | 3,18 | 0,80 | 3,81 | 2,50   | 0,20 | 5,00  | 0,35        | 0,15 | 0,60 |
| TNMA 160404     | TNMA 331       | 9,525   | 4,76 | 0,40 | 3,81 | 2,50   | 0,20 | 5,00  | 0,20        | 0,10 | 0,30 |
| TNMA 160408     | TNMA 332       | 9,525   | 4,76 | 0,80 | 3,81 | 3,50   | 0,20 | 7,00  | 0,35        | 0,15 | 0,60 |
| TNMA 160412     | TNMA 333       | 9,525   | 4,76 | 1,20 | 3,81 | 3,50   | 0,30 | 7,00  | 0,45        | 0,20 | 0,80 |
| TNMA 160416     | TNMA 334       | 9,525   | 4,76 | 1,60 | 3,81 | 3,50   | 0,30 | 7,00  | 0,55        | 0,20 | 1,00 |
| TNMA 220404     | TNMA 431       | 12,700  | 4,76 | 0,40 | 5,16 | 4,00   | 0,20 | 10,00 | 0,20        | 0,10 | 0,30 |
| TNMA 220408     | TNMA 432       | 12,700  | 4,76 | 0,80 | 5,16 | 5,00   | 0,20 | 10,00 | 0,35        | 0,15 | 0,60 |
| TNMA 220412     | TNMA 433       | 12,700  | 4,76 | 1,20 | 5,16 | 5,00   | 0,30 | 10,00 | 0,45        | 0,20 | 0,80 |
| TNMA 220416     | TNMA 434       | 12,700  | 4,76 | 1,60 | 5,16 | 5,00   | 0,30 | 10,00 | 0,55        | 0,20 | 1,00 |
| TNMA 270608     | TNMA 542       | 15,875  | 6,35 | 0,80 | 6,35 | 5,00   | 0,30 | 12,00 | 0,35        | 0,15 | 0,60 |
| TNMA 270612     | TNMA 543       | 15,875  | 6,35 | 1,20 | 6,35 | 5,00   | 0,30 | 12,00 | 0,45        | 0,20 | 0,80 |
| TNMA 270616     | TNMA 544       | 15,875  | 6,35 | 1,60 | 6,35 | 5,00   | 0,30 | 12,00 | 0,55        | 0,20 | 1,00 |
| TNMA 330724     | TNMA 656       | 19,050  | 7,94 | 2,40 | 7,94 | 6,50   | 0,30 | 15,00 | 0,60        | 0,30 | 2,00 |
| TNMG 160402-GSF | TNMG 330.5-GSF | 9,525   | 4,76 | 0,20 | 3,81 | 1,55   | 0,10 | 3,00  | 0,19        | 0,08 | 0,30 |
| TNMG 160404-MF  | TNMG 331-MF    | 9,525   | 4,76 | 0,40 | 3,81 | 0,40   | 0,10 | 1,50  | 0,15        | 0,05 | 0,25 |
| TNMG 160408-MF  | TNMG 332-MF    | 9,525   | 4,76 | 0,80 | 3,81 | 0,40   | 0,10 | 1,50  | 0,20        | 0,10 | 0,40 |
| TNMG 160412-MF  | TNMG 333-MF    | 9,525   | 4,76 | 1,20 | 3,81 | 1,00   | 0,20 | 2,50  | 0,30        | 0,15 | 0,60 |
| TNMG 220408-MF  | TNMG 432-MF    | 12,700  | 4,76 | 0,80 | 5,16 | 1,50   | 0,25 | 2,50  | 0,20        | 0,10 | 0,40 |
| TNMG 160402-MS  | TNMG 330.5-MS  | 9,525   | 4,76 | 0,20 | 3,81 | 1,50   | 0,20 | 3,80  | 0,10        | 0,08 | 0,15 |
| TNMG 160404-MS  | TNMG 331-MS    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,30 | 3,80  | 0,15        | 0,10 | 0,20 |
| TNMG 160408-MS  | TNMG 332-MS    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,30 | 3,80  | 0,25        | 0,10 | 0,40 |
| TNMG 160412-MS  | TNMG 333-MS    | 9,525   | 4,76 | 1,20 | 3,81 | 2,00   | 0,40 | 3,80  | 0,30        | 0,15 | 0,60 |
| TNMG 160404-SF  | TNMG 331-SF    | 9,525   | 4,76 | 0,40 | 3,81 | 1,50   | 0,60 | 3,00  | 0,15        | 0,10 | 0,23 |
| TNMG 160408-SF  | TNMG 332-SF    | 9,525   | 4,76 | 0,80 | 3,81 | 1,50   | 0,60 | 3,00  | 0,25        | 0,12 | 0,38 |
| TNMG 160412-SF  | TNMG 333-SF    | 9,525   | 4,76 | 1,20 | 3,81 | 1,50   | 0,60 | 3,00  | 0,35        | 0,15 | 0,55 |
| TNMG 220404-SF  | TNMG 431-SF    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,60 | 3,00  | 0,20        | 0,10 | 0,35 |
| TNMG 220408-SF  | TNMG 432-SF    | 12,700  | 4,76 | 0,80 | 5,16 | 1,50   | 0,60 | 3,00  | 0,25        | 0,12 | 0,40 |
| TNMG 220412-SF  | TNMG 433-SF    | 12,700  | 4,76 | 1,20 | 5,16 | 1,50   | 0,60 | 3,00  | 0,35        | 0,15 | 0,55 |
| TNMG 160404-LC  | TNMG 331-LC    | 9,525   | 4,76 | 0,40 | 3,81 | 1,00   | 0,40 | 2,50  | 0,15        | 0,07 | 0,30 |
| TNMG 160408-LC  | TNMG 332-LC    | 9,525   | 4,76 | 0,80 | 3,81 | 1,50   | 0,40 | 2,50  | 0,20        | 0,10 | 0,40 |
| TNMG 160412-LC  | TNMG 333-LC    | 9,525   | 4,76 | 1,20 | 3,81 | 2,00   | 0,80 | 3,00  | 0,25        | 0,15 | 0,50 |
| TNMG 220408-LC  | TNMG 432-LC    | 12,700  | 4,76 | 0,80 | 5,16 | 2,00   | 0,40 | 3,00  | 0,20        | 0,10 | 0,40 |
| TNMG 220412-LC  | TNMG 433-LC    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,80 | 3,50  | 0,25        | 0,15 | 0,50 |

# TN - TRIANGULAR 60° NEGATIVE

TRIANGULAR 60° NEGATIVA | TRIANGULAR 60° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning







External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|   |                   |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |
|---|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |                   |                | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |  |
|   |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>TNMG-GS<br>Medium to Finishing | 1124508           | TNMG 160404-GS |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1124509           | TNMG 160408-GS |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1124510           | TNMG 160412-GS |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>TNMG-MR<br>Medium              | 1122000           | TNMG 160308-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121281           | TNMG 160404-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121269           | TNMG 160408-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121282           | TNMG 160412-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>TNMG-PM<br>Medium            | 1121562           | TNMG 160416-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121625           | TNMG 220404-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121305           | TNMG 220408-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121307           | TNMG 220412-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>TNMG-ST<br>Medium            | 1121564           | TNMG 220416-MR |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123991           | TNMG 160404-PM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123917           | TNMG 160408-PM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123992           | TNMG 160412-PM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>TNMG-ST<br>Medium            | 1123993           | TNMG 160416-PM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123922           | TNMG 220404-PM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123923           | TNMG 220408-PM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123994           | TNMG 220412-PM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>TNMG-ST<br>Medium            | 1123995           | TNMG 220416-PM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121210           | TNMG 110308-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121211           | TNMG 160304-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121212           | TNMG 160308-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121294           | TNMG 160404-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121268           | TNMG 160408-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121348           | TNMG 160412-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121563           | TNMG 160416-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121349   | TNMG 220404-ST    |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121350   | TNMG 220408-ST    |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121354   | TNMG 220412-ST    |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121351   | TNMG 220416-ST    |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

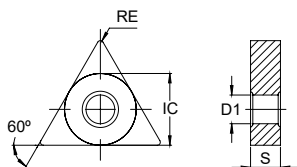
🔴 First choice | 1ª Escolha | 1ª Opción

⊖ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

🔵 Stock Items | Itens de stock

⚠️ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock







| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| TNMG 160404-GS | TNMG 331-GS    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,15 | 3,00 | 0,20        | 0,10 | 0,30 |
| TNMG 160408-GS | TNMG 332-GS    | 9,525   | 4,76 | 0,80 | 3,81 | 2,50   | 0,20 | 3,00 | 0,25        | 0,10 | 0,30 |
| TNMG 160412-GS | TNMG 333-GS    | 9,525   | 4,76 | 1,20 | 3,81 | 3,00   | 0,30 | 3,50 | 0,30        | 0,15 | 0,35 |
| TNMG 160308-MR | TNMG 322-MR    | 9,525   | 3,18 | 0,80 | 3,81 | 2,80   | 0,30 | 5,00 | 0,30        | 0,15 | 0,50 |
| TNMG 160404-MR | TNMG 331-MR    | 9,525   | 4,76 | 0,40 | 3,81 | 3,00   | 0,40 | 5,00 | 0,20        | 0,10 | 0,30 |
| TNMG 160408-MR | TNMG 332-MR    | 9,525   | 4,76 | 0,80 | 3,81 | 3,00   | 0,50 | 5,00 | 0,30        | 0,15 | 0,50 |
| TNMG 160412-MR | TNMG 333-MR    | 9,525   | 4,76 | 1,20 | 3,81 | 3,00   | 0,80 | 5,00 | 0,35        | 0,18 | 0,60 |
| TNMG 160416-MR | TNMG 334-MR    | 9,525   | 4,76 | 1,20 | 3,81 | 3,05   | 0,82 | 5,08 | 0,40        | 0,22 | 0,64 |
| TNMG 220404-MR | TNMG 431-MR    | 12,700  | 4,76 | 0,40 | 5,16 | 4,00   | 0,40 | 6,60 | 0,20        | 0,10 | 0,30 |
| TNMG 220408-MR | TNMG 432-MR    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,50 | 6,60 | 0,30        | 0,15 | 0,50 |
| TNMG 220412-MR | TNMG 433-MR    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 0,80 | 6,60 | 0,35        | 0,18 | 0,60 |
| TNMG 220416-MR | TNMG 434-MR    | 12,700  | 4,76 | 1,60 | 5,16 | 4,00   | 1,00 | 6,60 | 0,40        | 0,23 | 0,70 |
| TNMG 160404-PM | TNMG 331-PM    | 9,525   | 4,76 | 0,40 | 3,81 | 3,00   | 0,40 | 5,00 | 0,20        | 0,10 | 0,30 |
| TNMG 160408-PM | TNMG 332-PM    | 9,525   | 4,76 | 0,80 | 3,81 | 3,00   | 0,50 | 5,00 | 0,30        | 0,15 | 0,50 |
| TNMG 160412-PM | TNMG 333-PM    | 9,525   | 4,76 | 1,20 | 3,81 | 3,00   | 0,80 | 5,00 | 0,35        | 0,18 | 0,60 |
| TNMG 160416-PM | TNMG 334-PM    | 9,525   | 4,76 | 1,60 | 3,81 | 3,00   | 1,00 | 5,00 | 0,40        | 0,23 | 0,65 |
| TNMG 220404-PM | TNMG 431-PM    | 12,700  | 4,76 | 0,40 | 5,16 | 4,00   | 0,40 | 6,60 | 0,20        | 0,10 | 0,30 |
| TNMG 220408-PM | TNMG 432-PM    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,50 | 6,60 | 0,30        | 0,15 | 0,50 |
| TNMG 220412-PM | TNMG 433-PM    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 0,80 | 6,60 | 0,35        | 0,18 | 0,60 |
| TNMG 220416-PM | TNMG 434-PM    | 12,700  | 4,76 | 1,60 | 5,16 | 4,00   | 1,00 | 6,60 | 0,40        | 0,23 | 0,60 |
| TNMG 110308-ST | TNMG 222-ST    | 6,350   | 3,18 | 0,80 | 2,26 | 2,00   | 0,15 | 4,50 | 0,35        | 0,15 | 0,50 |
| TNMG 160304-ST | TNMG 321-ST    | 9,525   | 3,18 | 0,40 | 3,81 | 3,00   | 0,20 | 5,50 | 0,22        | 0,15 | 0,30 |
| TNMG 160308-ST | TNMG 322-ST    | 9,525   | 3,18 | 0,80 | 3,81 | 3,00   | 0,20 | 5,50 | 0,35        | 0,15 | 0,50 |
| TNMG 160404-ST | TNMG 331-ST    | 9,525   | 4,76 | 0,40 | 3,81 | 3,00   | 0,20 | 5,50 | 0,22        | 0,15 | 0,30 |
| TNMG 160408-ST | TNMG 332-ST    | 9,525   | 4,76 | 0,80 | 3,81 | 3,00   | 0,20 | 5,50 | 0,35        | 0,15 | 0,50 |
| TNMG 160412-ST | TNMG 333-ST    | 9,525   | 4,76 | 1,20 | 3,81 | 3,00   | 0,30 | 5,50 | 0,40        | 0,15 | 0,60 |
| TNMG 160416-ST | TNMG 334-ST    | 9,525   | 4,76 | 1,60 | 3,81 | 3,00   | 0,30 | 5,50 | 0,40        | 0,15 | 0,60 |
| TNMG 220404-ST | TNMG 431-ST    | 12,700  | 4,76 | 0,40 | 5,16 | 4,00   | 0,20 | 8,00 | 0,22        | 0,15 | 0,30 |
| TNMG 220408-ST | TNMG 432-ST    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,20 | 8,00 | 0,35        | 0,15 | 0,50 |
| TNMG 220412-ST | TNMG 433-ST    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 0,30 | 8,00 | 0,40        | 0,15 | 0,60 |
| TNMG 220416-ST | TNMG 434-ST    | 12,700  | 4,76 | 1,60 | 5,16 | 4,00   | 0,30 | 8,00 | 0,45        | 0,20 | 0,70 |

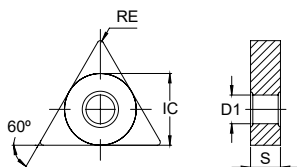
# TN - TRIANGULAR 60° NEGATIVE

TRIANGULAR 60° NEGATIVA | TRIANGULAR 60° NEGATIVA

TURNING

|   |                   |                 | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |
|---|-------------------|-----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   |                   |                 | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |
|   |                   | (2) Grade code  | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference   | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>TNMG-MW<br>Medium Wiper          | 1121376           | TNMG 160408-MW  |        | ⊗      | ⊗       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |
|   | 1121343           | TNMG 160412-MW  |        |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |
| <br>TNMG-SS<br>Roughing to Medium    | 1121289           | TNMG 160404-SS  |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |
|   | 1121271           | TNMG 160408-SS  |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |
|   | 1121290           | TNMG 160412-SS  |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |
|   | 1121330           | TNMG 220408-SS  |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |
|   | 1121368           | TNMG 220412-SS  |        |        |         |        |         |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |
| <br>TNMG-HR<br>Roughing              | 1121270           | TNMG 160408-HR  | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |
|   | 1121283           | TNMG 160412-HR  |        | ⊗      | ○       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |
|   | 1121306           | TNMG 220408-HR  | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        | ○      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |
|   | 1121308           | TNMG 220412-HR  | ⊗      | ○      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        | ⊗      |
|   | 1121309           | TNMG 220416-HR  | ⊗      | ○      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |
| Heavy turning   | 1121567           | TNMG 270612-HR  |        |        |         |        | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121570           | TNMG 270616-HR  |        |        |         |        | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121631           | TNMG 330924-HR  |        |        |         | ⊗      | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>TNMX-01<br>Medium to Finishing | 1121004           | TNMX 160404-L01 |        | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1120713           | TNMX 160404-R01 |        | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        | ○      |        |        |        |        |        |        |        | ○      |        |        |        |        |        |        |
|   | 1121005           | TNMX 160408-L01 |        |        | ⊗       | ⊗      | ⊗       | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121006           | TNMX 160408-R01 |        |        | ⊗       | ⊗      | ⊗       | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1123822           | TNMX 220404-R01 |        |        |         |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1123823           | TNMX 220404-L01 |        |        |         |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1123824           | TNMX 220408-R01 |        |        |         |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1123825           | TNMX 220408-L01 |        |        |         |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

⊗ First choice | 1ª Escolha | 1ª Opción     
 ○ Available under request | Disponível sob consulta | Disponible bajo consulta     
 Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code  
⊗ Stock Items | Itens de stock     
 ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock













| ISO Reference   | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|-----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                 |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| TNMG 160408-MW  | TNMG 332-MW    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,50 | 4,50  | 0,35        | 0,15 | 0,60 |
| TNMG 160412-MW  | TNMG 333-MW    | 9,525   | 4,76 | 1,20 | 3,81 | 2,50   | 0,50 | 5,00  | 0,50        | 0,25 | 0,90 |
| TNMG 160404-SS  | TNMG 331-SS    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,50 | 4,00  | 0,20        | 0,10 | 0,30 |
| TNMG 160408-SS  | TNMG 332-SS    | 9,525   | 4,76 | 0,80 | 3,81 | 3,00   | 0,50 | 4,80  | 0,25        | 0,12 | 0,45 |
| TNMG 160412-SS  | TNMG 333-SS    | 9,525   | 4,76 | 1,20 | 3,81 | 3,00   | 0,50 | 4,80  | 0,30        | 0,15 | 0,60 |
| TNMG 220408-SS  | TNMG 432-SS    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,50 | 6,60  | 0,25        | 0,12 | 0,45 |
| TNMG 220412-SS  | TNMG 433-SS    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 0,50 | 6,60  | 0,30        | 0,15 | 0,60 |
| TNMG 160408-HR  | TNMG 332-HR    | 9,525   | 4,76 | 0,80 | 3,81 | 3,00   | 0,80 | 6,00  | 0,35        | 0,20 | 0,55 |
| TNMG 160412-HR  | TNMG 333-HR    | 9,525   | 4,76 | 1,20 | 3,81 | 3,00   | 1,00 | 6,00  | 0,40        | 0,25 | 0,70 |
| TNMG 220408-HR  | TNMG 432-HR    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,80 | 6,50  | 0,35        | 0,20 | 0,55 |
| TNMG 220412-HR  | TNMG 433-HR    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 1,00 | 7,00  | 0,40        | 0,25 | 0,70 |
| TNMG 220416-HR  | TNMG 434-HR    | 12,700  | 4,76 | 1,60 | 5,16 | 4,00   | 1,50 | 7,00  | 0,60        | 0,25 | 0,90 |
| TNMG 270612-HR  | TNMG 543-HR    | 15,875  | 6,35 | 1,20 | 6,35 | 6,00   | 2,00 | 10,00 | 0,40        | 0,25 | 0,70 |
| TNMG 270616-HR  | TNMG 544-HR    | 15,875  | 6,35 | 1,60 | 6,35 | 6,00   | 2,00 | 10,00 | 0,60        | 0,35 | 0,90 |
| TNMG 330924-HR  | TNMG 666-HR    | 19,050  | 9,52 | 2,40 | 7,94 | 7,00   | 2,00 | 12,00 | 0,80        | 0,40 | 1,20 |
| TNMX 160404-L01 | TNMX 331-L01   | 9,525   | 4,76 | 0,40 | 3,81 | 2,50   | 1,00 | 3,50  | 0,15        | 0,12 | 0,30 |
| TNMX 160404-R01 | TNMX 331-R01   | 9,525   | 4,76 | 0,40 | 3,81 | 2,50   | 1,00 | 3,50  | 0,15        | 0,12 | 0,30 |
| TNMX 160408-L01 | TNMX 332-L01   | 9,525   | 4,76 | 0,80 | 3,81 | 2,50   | 1,30 | 3,50  | 0,30        | 0,15 | 0,50 |
| TNMX 160408-R01 | TNMX 332-R01   | 9,525   | 4,76 | 0,80 | 3,81 | 2,50   | 1,30 | 3,50  | 0,30        | 0,15 | 0,50 |
| TNMX 220404-R01 | TNMX 431-R01   | 12,700  | 4,76 | 0,40 | 5,16 | 4,00   | 1,50 | 7,00  | 0,20        | 0,15 | 0,30 |
| TNMX 220404-L01 | TNMX 431-L01   | 12,700  | 4,76 | 0,40 | 5,16 | 4,00   | 1,50 | 7,00  | 0,20        | 0,15 | 0,30 |
| TNMX 220408-R01 | TNMX 432-R01   | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 1,50 | 7,00  | 0,30        | 0,18 | 0,55 |
| TNMX 220408-L01 | TNMX 432-L01   | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 1,50 | 7,00  | 0,30        | 0,18 | 0,55 |







# VN - RHOMBIC 35° NEGATIVE

RÔMBICA 35° NEGATIVA | RÓMBICA 35° NEGATIVA

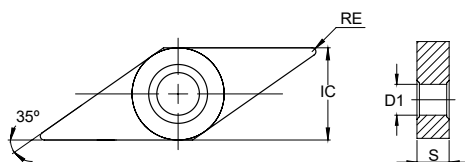
TURNING

|   |                   |                 | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|---|-------------------|-----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   |                   |                 | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |
|   |                   | (2) Grade code  | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference   | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>VNMA<br>Roughing                 | 1120819           | VNMA 160404     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121077           | VNMA 160408     |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>NEW VNMG-GSF<br>Fine Finishing   | 1124861           | VNMG 160402-GSF |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1123635           | VNMG 160404-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>VNMG-MF<br>Finishing             | 1123636           | VNMG 160408-MF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1124860           | VNMG 160402-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>VNMG-MS<br>Medium to Finishing   | 1121579           | VNMG 160404-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121580           | VNMG 160408-MS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1123760           | VNMG 160404-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>VNMG-SF<br>Medium to Finishing  | 1123761           | VNMG 160408-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1123762           | VNMG 160412-SF  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1123659           | VNMG 160408-LC  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>VNMG-GS<br>Medium to Finishing | 1124562           | VNMG 160404-GS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1124563           | VNMG 160408-GS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1124564           | VNMG 160412-GS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>VNMG-MR<br>Medium              | 1121278           | VNMG 160404-MR  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121279           | VNMG 160408-MR  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121581           | VNMG 220408-MR  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>VNMG-PM<br>Medium              | 1124086           | VNMG 160404-PM  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1124087           | VNMG 160408-PM  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1124600           | VNMG 160412-PM  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>VNMG-ST<br>Medium              | 1121276           | VNMG 160404-ST  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121277           | VNMG 160408-ST  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>VNMG-SS<br>Roughing to Medium  | 1121367           | VNMG 160404-SS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | 1121295           | VNMG 160408-SS  |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

 First choice | 1ª Escolha | 1ª Opción  
 Stock Items | Itens de stock

 Available under request | Disponível sob consulta | Disponible bajo consulta  
 Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code










| ISO Reference   | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|-----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                 |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| VNMA 160404     | VNMA 331       | 9,525   | 4,76 | 0,40 | 3,81 | 0,20   | 0,10 | 3,30 | 0,15        | 0,08 | 0,25 |
| VNMA 160408     | VNMA 332       | 9,525   | 4,76 | 0,80 | 3,81 | 0,20   | 0,10 | 3,30 | 0,30        | 0,10 | 0,50 |
| VNMG 160402-GSF | VNMG 330.5-GSF | 9,525   | 4,76 | 0,20 | 3,81 | 1,10   | 0,20 | 2,00 | 0,15        | 0,05 | 0,25 |
| VNMG 160404-MF  | VNMG 331-MF    | 9,525   | 4,76 | 0,40 | 3,81 | 0,50   | 0,15 | 1,50 | 0,15        | 0,05 | 0,25 |
| VNMG 160408-MF  | VNMG 332-MF    | 9,525   | 4,76 | 0,80 | 3,81 | 0,80   | 0,20 | 1,50 | 0,20        | 0,10 | 0,40 |
| VNMG 160404-MS  | VNMG 330.5-MS  | 9,525   | 4,76 | 0,20 | 3,81 | 1,50   | 0,20 | 4,00 | 0,10        | 0,08 | 0,15 |
| VNMG 160404-MS  | VNMG 331-MS    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,20 | 4,00 | 0,15        | 0,10 | 0,20 |
| VNMG 160408-MS  | VNMG 332-MS    | 9,525   | 4,76 | 0,80 | 3,81 | 2,50   | 0,20 | 4,00 | 0,25        | 0,15 | 0,40 |
| VNMG 160404-SF  | VNMG 331-SF    | 9,525   | 4,76 | 0,40 | 3,81 | 1,50   | 0,60 | 3,00 | 0,15        | 0,10 | 0,23 |
| VNMG 160408-SF  | VNMG 332-SF    | 9,525   | 4,76 | 0,80 | 3,81 | 1,50   | 0,60 | 3,00 | 0,25        | 0,12 | 0,38 |
| VNMG 160412-SF  | VNMG 333-SF    | 9,525   | 4,76 | 1,20 | 3,81 | 1,50   | 0,60 | 3,00 | 0,35        | 0,15 | 0,55 |
| VNMG 160408-LC  | VNMG 332-LC    | 9,525   | 4,76 | 0,80 | 3,81 | 1,00   | 0,35 | 2,00 | 0,12        | 0,08 | 0,35 |
| VNMG 160404-GS  | VNMG 331-GS    | 9,525   | 4,76 | 0,40 | 3,81 | 1,50   | 0,15 | 2,00 | 0,20        | 0,08 | 0,25 |
| VNMG 160408-GS  | VNMG 332-GS    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,20 | 2,50 | 0,25        | 0,10 | 0,30 |
| VNMG 160412-GS  | VNMG 333-GS    | 9,525   | 4,76 | 1,20 | 3,81 | 2,50   | 0,30 | 3,00 | 0,30        | 0,12 | 0,35 |
| VNMG 160404-MR  | VNMG 331-MR    | 9,525   | 4,76 | 0,40 | 3,81 | 3,00   | 1,00 | 4,00 | 0,25        | 0,10 | 0,30 |
| VNMG 160408-MR  | VNMG 332-MR    | 9,525   | 4,76 | 0,80 | 3,81 | 3,00   | 1,00 | 4,00 | 0,30        | 0,15 | 0,50 |
| VNMG 220408-MR  | VNMG 432-MR    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 1,50 | 5,00 | 0,35        | 0,15 | 0,50 |
| VNMG 160404-PM  | VNMG 331-PM    | 9,525   | 4,76 | 0,40 | 3,81 | 3,00   | 1,00 | 4,00 | 0,25        | 0,10 | 0,30 |
| VNMG 160408-PM  | VNMG 332-PM    | 9,525   | 4,76 | 0,80 | 3,81 | 3,00   | 1,00 | 4,00 | 0,30        | 0,15 | 0,50 |
| VNMG 160412-PM  | VNMG 333-PM    | 9,525   | 4,76 | 1,20 | 3,81 | 3,00   | 1,00 | 4,00 | 0,35        | 0,20 | 0,50 |
| VNMG 160404-ST  | VNMG 331-ST    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,20 | 3,50 | 0,30        | 0,15 | 0,40 |
| VNMG 160408-ST  | VNMG 332-ST    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,30 | 3,50 | 0,35        | 0,15 | 0,50 |
| VNMG 160404-SS  | VNMG 331-SS    | 9,525   | 4,76 | 0,40 | 3,81 | 1,50   | 0,50 | 4,00 | 0,20        | 0,10 | 0,30 |
| VNMG 160408-SS  | VNMG 332-SS    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,50 | 4,00 | 0,25        | 0,12 | 0,45 |

# WN - TRIGON 80° NEGATIVE

TRIGONAL 80° NEGATIVA | TRIGONA 80° NEGATIVA

TURNING

|   |                   |                  | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      |        | S      |        |        |        |   |  |  |
|---|-------------------|------------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|--|--|
|   |                   |                  | CVD    |        |         |        |         |        |        | PVD    |        | CVD    |        |        |        | PVD    |        | UNC    |        | CVD    |        |        |        | UNC    |        | PVD    |   |  |  |
|   |                   | (2) Grade code   | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |   |  |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference    | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |   |  |  |
| <br>WNMA<br>Roughing                 | 1122002           | WNMA 060408      |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |  |  |
|   | 1120834           | WNMA 080404      |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |  |  |
|   | 1120835           | WNMA 080408      |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |  |  |
|   | 1121076           | WNMA 080412      |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |  |  |
|   | 1121582           | WNMA 080416      |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |  |  |
| <br>NEW WNUMG-GSF<br>Fine Finishing  | 1124859           | WNUMG 080402-GSF |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        | ⊗      |        | ⊗      |   |  |  |
| <br>WNMG-MF<br>Finishing             | 1121205           | WNMG 06T304-MF   |        |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
|   | 1121206           | WNMG 06T308-MF   |        |        | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
|   | 1121586           | WNMG 06T312-MF   |        |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
|   | 1121207           | WNMG 060404-MF   |        | ⊗      | ⊗       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
|   | 1121208           | WNMG 060408-MF   |        |        | ⊗       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
|   | 1121583           | WNMG 060412-MF   |        | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
|   | 1121213           | WNMG 080404-MF   |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
|   | 1121214           | WNMG 080408-MF   | ⊗      |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
| 1121589   | WNMG 080412-MF    |                  | ⊗      | ○      | ⊗       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
| <br>WNMG-MS<br>Medium to Finishing | 1121910           | WNMG 060404-MS   |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        | ⊗ |  |  |
|   | 1121911           | WNMG 060408-MS   |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        | ⊗ |  |  |
|   | 1124858           | WNMG 080402-MS   |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        | ⊗      |        | ⊗      | ⊗ |  |  |
|   | 1124574           | WNMG 080404-MS   |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |        |        | ⊗      |        | ⊗      |        | ⊗      | ⊗ |  |  |
|   | 1121588           | WNMG 080408-MS   |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |        |        | ⊗      |        | ⊗      |        | ⊗      | ⊗ |  |  |
| 1121590   | WNMG 080412-MS    |                  |        |        |         |        |         |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        | ⊗      |        | ⊗      |        | ⊗      | ⊗      |   |  |  |
| <br>WNMG-SF<br>Medium to Finishing | 1123763           | WNMG 060404-SF   |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗ |  |  |
|   | 1123764           | WNMG 060408-SF   |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        | ⊗      | ○      | ⊗      | ⊗      |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗ |  |  |
|   | 1123765           | WNMG 060412-SF   |        |        |         |        |         |        |        |        |        |        |        |        | ○      |        | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗ |  |  |
|   | 1123766           | WNMG 080404-SF   |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗ |  |  |
|   | 1123721           | WNMG 080408-SF   |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗ |  |  |
|   | 1123767           | WNMG 080412-SF   |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗ |  |  |
| <br>WNMG-LC<br>Medium to Finishing | 1123658           | WNMG 080408-LC   | ⊗      | ⊗      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |  |  |
| <br>WNMG-GS<br>Medium to Finishing | 1124690           | WNMG 060404-GS   |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |  |  |
|   | 1124691           | WNMG 060408-GS   |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |  |  |
|   | 1124559           | WNMG 080404-GS   |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |  |  |
|   | 1124560           | WNMG 080408-GS   |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |  |  |
|   | 1124561           | WNMG 080412-GS   |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |  |  |

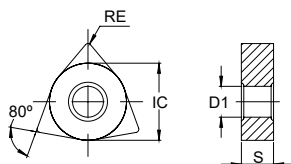
⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference   | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|-----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                 |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| WNMA 060408     | WNMA 332       | 9,525   | 4,76 | 0,80 | 3,81 | 2,50   | 0,20 | 4,00 | 0,35        | 0,15 | 0,60 |
| WNMA 080404     | WNMA 431       | 12,700  | 4,76 | 0,40 | 5,16 | 2,80   | 0,20 | 5,00 | 0,22        | 0,15 | 0,30 |
| WNMA 080408     | WNMA 432       | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,20 | 5,00 | 0,35        | 0,15 | 0,60 |
| WNMA 080412     | WNMA 433       | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,30 | 5,00 | 0,45        | 0,20 | 0,80 |
| WNMA 080416     | WNMA 434       | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,30 | 5,00 | 0,55        | 0,20 | 1,00 |
| WNMG 080402-GSF | WNMG 430.5-GSF | 12,700  | 4,76 | 0,20 | 5,16 | 1,30   | 0,10 | 2,50 | 0,17        | 0,08 | 0,25 |
| WNMG 06T304-MF  | WNMG 32.51-MF  | 9,525   | 3,97 | 0,40 | 3,81 | 0,40   | 0,10 | 1,50 | 0,15        | 0,05 | 0,30 |
| WNMG 06T308-MF  | WNMG 32.52-MF  | 9,525   | 3,97 | 0,80 | 3,81 | 0,40   | 0,10 | 1,50 | 0,20        | 0,10 | 0,40 |
| WNMG 06T312-MF  | WNMG 32.53-MF  | 9,525   | 3,97 | 1,20 | 3,81 | 0,40   | 0,15 | 1,50 | 0,30        | 0,15 | 0,60 |
| WNMG 060404-MF  | WNMG 331-MF    | 9,525   | 4,76 | 0,40 | 3,81 | 0,40   | 0,10 | 1,50 | 0,15        | 0,05 | 0,30 |
| WNMG 060408-MF  | WNMG 332-MF    | 9,525   | 4,76 | 0,80 | 3,81 | 0,40   | 0,10 | 1,50 | 0,20        | 0,10 | 0,40 |
| WNMG 060412-MF  | WNMG 333-MF    | 9,525   | 4,76 | 1,20 | 3,81 | 0,40   | 0,15 | 1,50 | 0,30        | 0,15 | 0,60 |
| WNMG 080404-MF  | WNMG 431-MF    | 12,700  | 4,76 | 0,40 | 5,16 | 0,60   | 0,10 | 2,00 | 0,15        | 0,05 | 0,30 |
| WNMG 080408-MF  | WNMG 432-MF    | 12,700  | 4,76 | 0,80 | 5,16 | 0,60   | 0,10 | 2,00 | 0,20        | 0,10 | 0,40 |
| WNMG 080412-MF  | WNMG 433-MF    | 12,700  | 4,76 | 1,20 | 5,16 | 0,60   | 0,15 | 2,00 | 0,30        | 0,15 | 0,60 |
| WNMG 060404-MS  | WNMG 331-MS    | 9,525   | 4,76 | 0,40 | 3,81 | 1,20   | 0,30 | 2,20 | 0,15        | 0,10 | 0,20 |
| WNMG 060408-MS  | WNMG 332-MS    | 9,525   | 4,76 | 0,80 | 3,81 | 1,20   | 0,30 | 2,20 | 0,25        | 0,20 | 0,40 |
| WNMG 080402-MS  | WNMG 430.5-MS  | 12,700  | 4,76 | 0,20 | 5,16 | 2,00   | 0,20 | 4,00 | 0,10        | 0,08 | 0,20 |
| WNMG 080404-MS  | WNMG 431-MS    | 12,700  | 4,76 | 0,40 | 5,16 | 2,50   | 0,70 | 4,00 | 0,15        | 0,10 | 0,30 |
| WNMG 080408-MS  | WNMG 432-MS    | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 0,70 | 4,00 | 0,25        | 0,20 | 0,40 |
| WNMG 080412-MS  | WNMG 433-MS    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 1,00 | 4,00 | 0,30        | 0,25 | 0,55 |
| WNMG 060404-SF  | WNMG 331-SF    | 9,525   | 4,76 | 0,40 | 3,81 | 1,50   | 0,60 | 3,00 | 0,15        | 0,10 | 0,23 |
| WNMG 060408-SF  | WNMG 332-SF    | 9,525   | 4,76 | 0,80 | 3,81 | 1,50   | 0,60 | 3,00 | 0,25        | 0,12 | 0,38 |
| WNMG 060412-SF  | WNMG 333-SF    | 9,525   | 4,76 | 1,20 | 3,81 | 1,50   | 0,60 | 3,00 | 0,35        | 0,15 | 0,55 |
| WNMG 080404-SF  | WNMG 431-SF    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,60 | 3,00 | 0,15        | 0,10 | 0,23 |
| WNMG 080408-SF  | WNMG 432-SF    | 12,700  | 4,76 | 0,80 | 5,16 | 1,50   | 0,60 | 3,00 | 0,25        | 0,12 | 0,38 |
| WNMG 080412-SF  | WNMG 433-SF    | 12,700  | 4,76 | 1,20 | 5,16 | 1,50   | 0,60 | 3,00 | 0,35        | 0,15 | 0,55 |
| WNMG 080408-LC  | WNMG 432-LC    | 12,700  | 4,76 | 0,40 | 5,16 | 1,50   | 0,40 | 2,50 | 0,15        | 0,10 | 0,35 |
| WNMG 060404-GS  | WNMG 331-GS    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,15 | 2,50 | 0,20        | 0,10 | 0,30 |
| WNMG 060408-GS  | WNMG 332-GS    | 9,525   | 4,76 | 0,80 | 3,81 | 2,50   | 0,25 | 3,00 | 0,25        | 0,10 | 0,35 |
| WNMG 080404-GS  | WNMG 431-GS    | 12,700  | 4,76 | 0,40 | 5,16 | 2,00   | 0,15 | 2,50 | 0,20        | 0,10 | 0,30 |
| WNMG 080408-GS  | WNMG 432-GS    | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 0,25 | 3,00 | 0,25        | 0,10 | 0,35 |
| WNMG 080412-GS  | WNMG 433-GS    | 12,700  | 4,76 | 1,20 | 5,16 | 3,00   | 0,30 | 3,50 | 0,30        | 0,15 | 0,40 |

# WN - TRIGON 80° NEGATIVE

TRIGONAL 80° NEGATIVA | TRIGONA 80° NEGATIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts









Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

|   |                         |                 | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      |        | S      |        |        |        |  |
|---|-------------------------|-----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |                         |                 | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |  |
|   |                         | (2) Grade code  | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry<br>code | ISO Reference   | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>WNNMG-MR<br>Medium               | 1121262                 | WNNMG 06T304-MR |        |        | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121167                 | WNNMG 06T308-MR |        |        | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121587                 | WNNMG 06T312-MR |        |        | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121240                 | WNNMG 060404-MR |        |        | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121168                 | WNNMG 060408-MR |        | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121584                 | WNNMG 060412-MR |        | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>WNNMG-PM<br>Medium               | 1121356                 | WNNMG 080404-MR |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |  |
|   | 1121327                 | WNNMG 080408-MR |        | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |
|   | 1121261                 | WNNMG 080412-MR |        | ⊗      | ○       | ⊗      | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121592                 | WNNMG 080416-MR |        | ⊗      | ○       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |  |
|   | 1124088                 | WNNMG 060404-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>WNNMG-ST<br>Medium             | 1124089                 | WNNMG 060408-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123988                 | WNNMG 080404-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123918                 | WNNMG 080408-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123989                 | WNNMG 080412-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123990                 | WNNMG 080416-PM | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>WNNMG-MW<br>Medium Wiper       | 1121162                 | WNNMG 080404-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |
|   | 1121163                 | WNNMG 080408-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|   | 1121164                 | WNNMG 080412-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|   | 1121593                 | WNNMG 080416-ST |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
| <br>WNNMG-SS<br>Medium             | 1121370                 | WNNMG 060408-MW |        | ○      |         | ⊗      |         |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ○      |        |        |        |        |        |  |
|   | 1121585                 | WNNMG 060412-MW |        | ○      |         | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |  |
|   | 1121372                 | WNNMG 080408-MW |        | ⊗      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |  |
|   | 1121371                 | WNNMG 080412-MW |        | ⊗      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |  |
| <br>WNNMG-SS<br>Roughing to Medium | 1121321                 | WNNMG 06T304-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      |        |        |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |  |
|   | 1121324                 | WNNMG 06T308-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      |        |        |        | ⊗      |        |        |        |        |        |        |        | ⊗      |        |  |
|   | 1121322                 | WNNMG 060404-SS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        | ⊗      |        |        |        |        |        | ⊗      |        | ⊗      |        |  |
|   | 1121325                 | WNNMG 060408-SS |        |        |         |        |         |        |        |        |        |        |        | ⊗      |        |        | ⊗      |        |        |        |        |        | ⊗      |        | ⊗      |        |  |
|   | 1121323                 | WNNMG 080404-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        | ⊗      |        |        |        |        |        | ⊗      |        | ⊗      |        |  |
|   | 1121326                 | WNNMG 080408-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        | ⊗      |        |        |        |        |        | ⊗      |        | ⊗      |        |  |
| <br>WNNMG-PR<br>Roughing           | 1121591                 | WNNMG 080412-SS |        |        |         |        |         |        |        |        | ⊗      | ⊗      | ⊗      |        |        | ⊗      |        |        |        |        |        |        |        | ⊗      |        |        |  |
|   | 1124741                 | WNNMG 080416-PR |        | ○      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>WNNMG-HR<br>Roughing           | 1121127                 | WNNMG 080408-HR | ⊗      | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |
|   | 1121128                 | WNNMG 080412-HR |        | ⊗      | ⊗       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |

⊗ First choice | 1ª Escolha | 1ª Opción

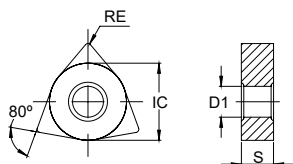
○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

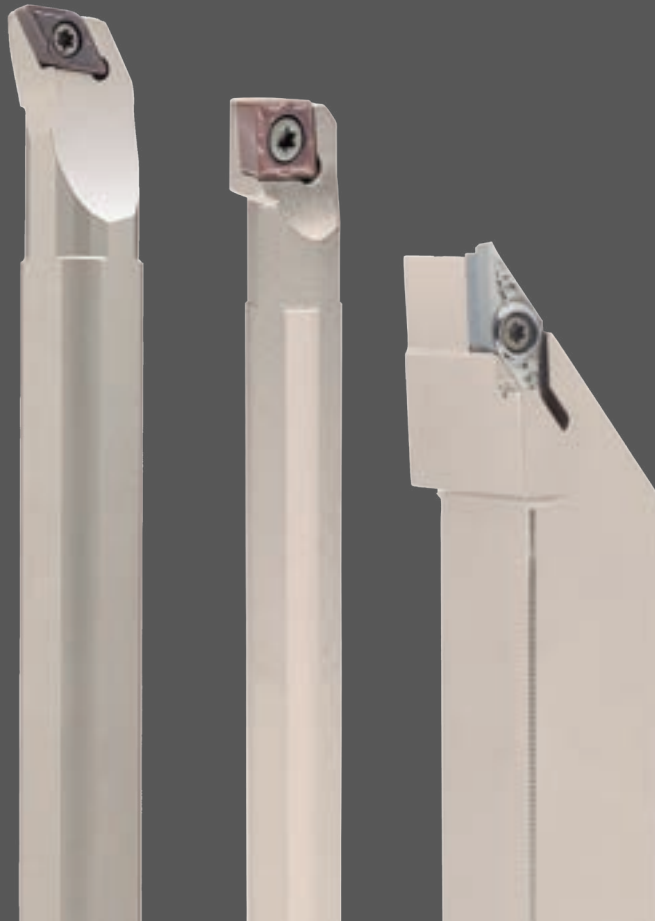
Technical Data



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| WNMG 06T304-MR | WNMG 32.51-MR  | 9,525   | 3,97 | 0,40 | 3,81 | 2,00   | 0,50 | 3,00 | 0,22        | 0,10 | 0,30 |
| WNMG 06T308-MR | WNMG 32.52-MR  | 9,525   | 3,97 | 0,80 | 3,81 | 2,00   | 0,50 | 3,00 | 0,30        | 0,15 | 0,50 |
| WNMG 06T312-MR | WNMG 32.53-MR  | 9,525   | 3,97 | 1,20 | 3,81 | 2,00   | 0,80 | 3,00 | 0,35        | 0,18 | 0,60 |
| WNMG 060404-MR | WNMG 331-MR    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,50 | 3,00 | 0,22        | 0,10 | 0,30 |
| WNMG 060408-MR | WNMG 332-MR    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,50 | 3,00 | 0,30        | 0,15 | 0,50 |
| WNMG 060412-MR | WNMG 333-MR    | 9,525   | 4,76 | 1,20 | 3,81 | 2,00   | 0,80 | 3,00 | 0,35        | 0,18 | 0,60 |
| WNMG 080404-MR | WNMG 431-MR    | 12,700  | 4,76 | 0,40 | 5,16 | 2,50   | 0,50 | 4,00 | 0,22        | 0,10 | 0,30 |
| WNMG 080408-MR | WNMG 432-MR    | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 0,50 | 4,00 | 0,30        | 0,15 | 0,50 |
| WNMG 080412-MR | WNMG 433-MR    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,80 | 4,00 | 0,35        | 0,18 | 0,60 |
| WNMG 080416-MR | WNMG 434-MR    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 1,00 | 4,00 | 0,40        | 0,23 | 0,65 |
| WNMG 060404-PM | WNMG 331-PM    | 9,525   | 4,76 | 0,40 | 3,81 | 2,50   | 0,50 | 3,00 | 0,22        | 0,10 | 0,30 |
| WNMG 060408-PM | WNMG 332-PM    | 9,525   | 4,76 | 0,80 | 3,81 | 2,50   | 0,50 | 3,00 | 0,30        | 0,15 | 0,50 |
| WNMG 080404-PM | WNMG 431-PM    | 12,700  | 4,76 | 0,40 | 5,16 | 2,50   | 0,50 | 4,00 | 0,22        | 0,10 | 0,30 |
| WNMG 080408-PM | WNMG 432-PM    | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 0,50 | 4,00 | 0,30        | 0,15 | 0,50 |
| WNMG 080412-PM | WNMG 433-PM    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,80 | 4,00 | 0,35        | 0,18 | 0,60 |
| WNMG 080416-PM | WNMG 434-PM    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 1,00 | 4,50 | 0,35        | 0,20 | 0,65 |
| WNMG 080404-ST | WNMG 431-ST    | 12,700  | 4,76 | 0,40 | 5,16 | 2,50   | 0,20 | 5,00 | 0,22        | 0,15 | 0,30 |
| WNMG 080408-ST | WNMG 432-ST    | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 0,20 | 5,00 | 0,35        | 0,15 | 0,50 |
| WNMG 080412-ST | WNMG 433-ST    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,30 | 5,00 | 0,40        | 0,15 | 0,60 |
| WNMG 080416-ST | WNMG 434-ST    | 12,700  | 4,76 | 1,60 | 5,16 | 2,50   | 0,30 | 5,00 | 0,45        | 0,20 | 0,70 |
| WNMG 060408-MW | WNMG 332-MW    | 9,525   | 4,76 | 0,80 | 3,81 | 1,50   | 0,50 | 3,50 | 0,30        | 0,15 | 0,60 |
| WNMG 060412-MW | WNMG 333-MW    | 9,525   | 4,76 | 1,20 | 3,81 | 1,50   | 0,80 | 3,50 | 0,50        | 0,20 | 0,90 |
| WNMG 080408-MW | WNMG 432-MW    | 12,700  | 4,76 | 0,80 | 5,16 | 3,00   | 0,50 | 5,00 | 0,30        | 0,15 | 0,60 |
| WNMG 080412-MW | WNMG 433-MW    | 12,700  | 4,76 | 1,20 | 5,16 | 3,50   | 0,80 | 6,00 | 0,50        | 0,20 | 0,90 |
| WNMG 06T304-SS | WNMG 32.51-SS  | 9,525   | 3,97 | 0,40 | 3,81 | 2,00   | 0,50 | 3,00 | 0,20        | 0,12 | 0,30 |
| WNMG 06T308-SS | WNMG 32.52-SS  | 9,525   | 3,97 | 0,80 | 3,81 | 2,00   | 0,50 | 3,00 | 0,25        | 0,12 | 0,45 |
| WNMG 060404-SS | WNMG 331-SS    | 9,525   | 4,76 | 0,40 | 3,81 | 2,00   | 0,50 | 3,00 | 0,20        | 0,12 | 0,30 |
| WNMG 060408-SS | WNMG 332-SS    | 9,525   | 4,76 | 0,80 | 3,81 | 2,00   | 0,50 | 3,00 | 0,25        | 0,12 | 0,45 |
| WNMG 080404-SS | WNMG 431-SS    | 12,700  | 4,76 | 0,40 | 5,16 | 2,00   | 0,50 | 3,00 | 0,20        | 0,12 | 0,30 |
| WNMG 080408-SS | WNMG 432-SS    | 12,700  | 4,76 | 0,80 | 5,16 | 2,50   | 0,50 | 4,00 | 0,25        | 0,12 | 0,45 |
| WNMG 080412-SS | WNMG 433-SS    | 12,700  | 4,76 | 1,20 | 5,16 | 2,50   | 0,50 | 4,00 | 0,30        | 0,15 | 0,60 |
| WNMG 080416-PR | WNMG 434-PR    | 12,700  | 4,76 | 1,60 | 5,16 | 3,00   | 0,50 | 4,00 | 0,35        | 0,12 | 0,50 |
| WNMG 080408-HR | WNMG 432-HR    | 12,700  | 4,76 | 0,80 | 5,16 | 4,00   | 0,80 | 5,00 | 0,35        | 0,20 | 0,55 |
| WNMG 080412-HR | WNMG 433-HR    | 12,700  | 4,76 | 1,20 | 5,16 | 4,00   | 1,50 | 5,00 | 0,40        | 0,25 | 0,70 |

INSERTS

# POSITIVE



Positive inserts feature positive clearance angles. Their significant advantage lies in the lower cutting forces they generate, consequently reducing vibration compared to negative inserts. This makes them ideal for internal turning, external turning of slender parts, and general finishing operations.

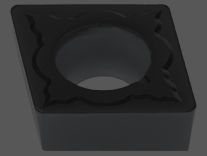
As pastilhas positivas possuem ângulos de alívio positivos. A sua vantagem significativa reside nas menores forças de corte que geram, reduzindo conseqüentemente a vibração em comparação com as pastilhas negativas. Isso torna-as ideais para torneamento interno, torneamento externo de peças delgadas e operações gerais de acabamento.

Las plaquitas positivas cuentan con ángulos de despeje positivos. Su ventaja significativa radica en las menores fuerzas de corte que generan, reduciendo así la vibración en comparación con las plaquitas negativas. Esto las hace ideales para el torneado interno, torneado externo de piezas delgadas y operaciones generales de acabado.

## CC.. > page 544

- > Rhombic 80° inserts are very popular thanks to their versatility

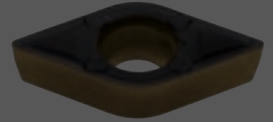
Rhombic 80° inserts são muito populares devido à sua versatilidade | Las plaquitas de 80° róbicas son muy populares gracias a su versatilidad



## DC.. > page 550

- > Rhombic 55° inserts offer balanced roughing and finishing capabilities

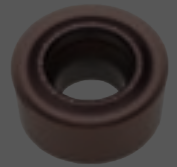
Pastilhas rômbricas de 55° oferecem capacidades equilibradas de desbaste e acabamento | Las plaquitas rômbricas de 55° ofrecen capacidades equilibradas para desbaste y acabado



## RC.. > page 554

- > Round inserts are extremely tough, and well suited for high feed turning

Pastilhas redondas são extremamente resistentes e adequadas para torneiar em alto avanço | Las plaquitas redondas son extremadamente resistentes y adecuadas para el torneado de alto avance



## SC.. | SP.. > page 556 | 558

- > Square inserts excel in roughing, especially at a shallow angle

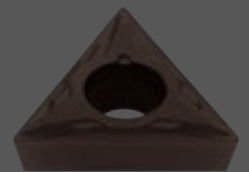
Pastilhas quadradas destacam-se no desbaste, especialmente a um ângulo raso | Plaquitas cuadradas destacan en el desbaste, especialmente a un ángulo bajo



## TC.. | TP.. > page 560 | 568

- > Triangular inserts are versatile, suitable for both finishing and roughing

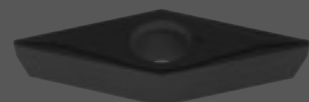
As pastilhas triangulares são versáteis, adequadas tanto para acabamento quanto para desbaste | Las plaquitas triangulares son versátiles, adecuadas tanto para acabado como para desbaste



## VB.. | VC.. > page 570 | 572

- > Rhombic 35° inserts are best suited for finishing operations

Pastilhas rômbricas de 35° são mais adequadas para operações de acabamento | Las plaquitas rômbricas de 35° son más adecuadas para operaciones de acabado







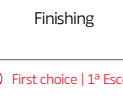




# CC - RHOMBIC 80° POSITIVE

RÔMBICA 80° POSITIVA | RÓMBICA 80° POSITIVA

TURNING

|  |                         |                | P      |        |         |        |         |        |        |        |       |        |       | M      |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |
|--|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|  |                         |                | CVD    |        |         |        |         |        |        | PVD    |       |        |       | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |  |
|  |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas  | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>CCMW<br>Finishing             | 1120206                 | CCMW 060204    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1120212                 | CCMW 09T304    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1120214                 | CCMW 120404    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>NEW CCMT-FF<br>Fine Finishing | 1124850                 | CCMT 09T302-FF |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1124669                 | CCMT 09T304-FF |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1124851                 | CCMT 09T308-FF |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>CCMT-FP<br>Finishing          | 1121655                 | CCMT 060202-FP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121658                 | CCMT 060204-FP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121690                 | CCMT 09T302-FP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121666                 | CCMT 09T304-FP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121652                 | CCMT 09T308-FP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>CCMT-BO<br>Finishing        | 1121620                 | CCMT 060202-BO |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121621                 | CCMT 060204-BO |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1124090                 | CCMT 060208-BO |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1124091                 | CCMT 09T302-BO |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121601                 | CCMT 09T304-BO |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121622                 | CCMT 09T308-BO |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121624                 | CCMT 120404-BO |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>CCMT-FM<br>Finishing        | 1121654                 | CCMT 060202-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121657                 | CCMT 060204-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121689                 | CCMT 09T302-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121692                 | CCMT 09T304-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121651                 | CCMT 09T308-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>CCMT-FK<br>Finishing        | 1121664                 | CCMT 120404-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121653                 | CCMT 060202-FK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121656                 | CCMT 060204-FK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121688                 | CCMT 09T302-FK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>CCMT-FK<br>Finishing        | 1121691                 | CCMT 09T304-FK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1121663                 | CCMT 120404-FK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

🔴 First choice | 1ª Escolha | 1ª Opción

⊖ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

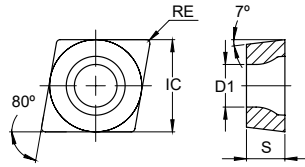
📦 Stock Items | Itens de stock

📦 Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Spare Parts

Technical Data

RELIEF ANGLE 7°





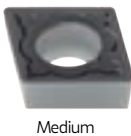
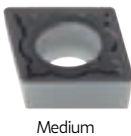




| ISO Reference  | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                 | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| CCMW 060204    | CCMW 21.51      | 6,350   | 2,38 | 0,40 | 2,80 | 1,50   | 0,05 | 3,00 | 0,20        | 0,08 | 0,26 |
| CCMW 09T304    | CCMW 32.51      | 9,525   | 3,97 | 0,40 | 4,40 | 2,30   | 0,05 | 4,50 | 0,20        | 0,08 | 0,26 |
| CCMW 120404    | CCMW 431        | 12,700  | 4,76 | 0,40 | 5,50 | 3,10   | 0,05 | 6,00 | 0,20        | 0,08 | 0,26 |
| CCMT 09T302-FF | CCMT 32.50.5-FF | 9,525   | 3,97 | 0,20 | 4,40 | 1,00   | 0,08 | 2,00 | 0,09        | 0,04 | 0,13 |
| CCMT 09T304-FF | CCMT 32.51-FF   | 9,525   | 3,97 | 0,40 | 4,40 | 1,25   | 0,08 | 2,00 | 0,13        | 0,02 | 0,23 |
| CCMT 09T308-FF | CCMT 32.52-FF   | 9,525   | 3,97 | 0,80 | 4,40 | 1,50   | 0,15 | 2,00 | 0,27        | 0,08 | 0,45 |
| CCMT 060202-FP | CCMT 21.50.5-FP | 6,350   | 2,38 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,11 |
| CCMT 060204-FP | CCMT 21.51-FP   | 6,350   | 2,38 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,08        | 0,05 | 0,17 |
| CCMT 09T302-FP | CCMT 32.50.5-FP | 9,525   | 3,97 | 0,20 | 4,40 | 0,35   | 0,08 | 2,00 | 0,08        | 0,04 | 0,13 |
| CCMT 09T304-FP | CCMT 32.51-FP   | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| CCMT 09T308-FP | CCMT 32.52-FP   | 9,525   | 3,97 | 0,80 | 4,40 | 0,35   | 0,15 | 2,00 | 0,20        | 0,08 | 0,45 |
| CCMT 120404-FP | CCMT 431-FP     | 12,700  | 4,76 | 0,40 | 5,50 | 0,42   | 0,14 | 2,40 | 0,14        | 0,07 | 0,27 |
| CCMT 060202-BO | CCMT 21.50.5-BO | 6,350   | 2,38 | 0,20 | 2,80 | 0,50   | 0,30 | 1,00 | 0,08        | 0,05 | 0,13 |
| CCMT 060204-BO | CCMT 21.51-BO   | 6,350   | 2,38 | 0,40 | 2,80 | 0,50   | 0,30 | 1,00 | 0,13        | 0,08 | 0,20 |
| CCMT 060208-BO | CCMT 21.52-BO   | 6,350   | 2,38 | 0,80 | 2,80 | 0,50   | 0,30 | 1,00 | 0,20        | 0,10 | 0,30 |
| CCMT 09T302-BO | CCMT 21.50.5-BO | 9,525   | 3,97 | 0,20 | 4,40 | 0,80   | 0,40 | 1,20 | 0,12        | 0,07 | 0,20 |
| CCMT 09T304-BO | CCMT 32.51-BO   | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,50 | 1,20 | 0,13        | 0,08 | 0,20 |
| CCMT 09T308-BO | CCMT 32.52-BO   | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 1,20 | 0,20        | 0,10 | 0,30 |
| CCMT 120404-BO | CCMT 431-BO     | 12,700  | 4,76 | 0,40 | 5,50 | 1,00   | 0,50 | 1,50 | 0,13        | 0,08 | 0,20 |
| CCMT 120408-BO | CCMT 432-BO     | 12,700  | 4,76 | 0,80 | 5,50 | 1,00   | 0,50 | 1,50 | 0,20        | 0,10 | 0,30 |
| CCMT 060202-FM | CCMT 21.50.5-FM | 6,350   | 2,38 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,11 |
| CCMT 060204-FM | CCMT 21.51-FM   | 6,350   | 2,38 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,08        | 0,05 | 0,17 |
| CCMT 09T302-FM | CCMT 32.50.5-FM | 9,525   | 3,97 | 0,20 | 4,40 | 0,35   | 0,08 | 2,00 | 0,08        | 0,04 | 0,13 |
| CCMT 09T304-FM | CCMT 32.51-FM   | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| CCMT 09T308-FM | CCMT 32.52-FM   | 9,525   | 3,97 | 0,80 | 4,40 | 0,35   | 0,15 | 2,00 | 0,20        | 0,08 | 0,45 |
| CCMT 120404-FM | CCMT 431-FM     | 12,700  | 4,76 | 0,40 | 5,50 | 0,42   | 0,14 | 2,40 | 0,14        | 0,07 | 0,27 |
| CCMT 060202-FK | CCMT 21.50.5-FK | 6,350   | 2,38 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,11 |
| CCMT 060204-FK | CCMT 21.51-FK   | 6,350   | 2,38 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,08        | 0,05 | 0,17 |
| CCMT 09T302-FK | CCMT 32.50.5-FK | 9,525   | 3,97 | 0,20 | 4,40 | 0,35   | 0,08 | 2,00 | 0,08        | 0,04 | 0,13 |
| CCMT 09T304-FK | CCMT 32.51-FK   | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| CCMT 120404-FK | CCMT 431-FK     | 12,700  | 4,76 | 0,40 | 5,50 | 0,42   | 0,14 | 2,40 | 0,14        | 0,07 | 0,27 |

# CC - RHOMBIC 80° POSITIVE

RÔMBICA 80° POSITIVA | RÓMBICA 80° POSITIVA

TURNING

|  |                   |                | P      |        |         |        |         |        |        |        |       |        |       | M      |        |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |   |
|--|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
|  |                   |                | CVD    |        |         |        |         |        |        | PVD    |       |        |       | CVD    |        | PVD    |        |        | UNC    | CVD    |        | UNC    | PVD    |        |        |        |        |        |   |
|  |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |   |
| Inserts<br>Pastilhas<br>Plaquitas  | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |   |
|  <p>CCMT-FW<br/>Finishing Wiper</p>           | 1121398           | CCMT 060204-FW |        |        | ⊗       | ○      |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121743           | CCMT 060208-FW |        |        | ⊗       | ○      |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121399           | CCMT 09T304-FW |        |        |         | ○      |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121744           | CCMT 09T308-FW |        |        |         | ○      |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  <p>CCMT-LM<br/>Medium to Finishing</p>       | 1123801           | CCMT 060204-LM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1123773           | CCMT 09T304-LM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1123804           | CCMT 120404-LM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  <p>CCMT-MW<br/>Medium to Finishing Wiper</p> | 1121462           | CCMT 060208-MW |        |        |         | ○      |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121400           | CCMT 09T304-MW |        |        |         | ○      |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121411           | CCMT 09T308-MW |        |        |         | ○      |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121412           | CCMT 120404-MW |        |        |         | ○      |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  <p>CCMT-MP<br/>Medium</p>                  | 1121697           | CCMT 060204-MP |        |        | ⊗       | ○      | ⊗       | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121661           | CCMT 060208-MP |        |        |         | ⊗      | ⊗       | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121700           | CCMT 09T304-MP |        |        | ⊗       | ⊗      | ⊗       | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121687           | CCMT 09T308-MP |        |        | ⊗       | ⊗      | ⊗       | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  <p>CCMT-MM<br/>Medium</p>                  | 1121719           | CCMT 120404-MP |        |        |         | ⊗      |         | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121722           | CCMT 120408-MP |        |        | ⊗       | ⊗      | ⊗       | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121724           | CCMT 120412-MP |        |        | ⊗       | ○      | ⊗       | ○      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  <p>CCMT-MM<br/>Medium</p>                  | 1121696           | CCMT 060204-MM |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗ |
|  | 1121660           | CCMT 060208-MM |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗ |
|  | 1121699           | CCMT 09T304-MM |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗ |
|  | 1121686           | CCMT 09T308-MM |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗ |
|  | 1121718           | CCMT 120404-MM |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗ |
|  | 1121721           | CCMT 120408-MM |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗ |
|  <p>CCMT-MK<br/>Medium</p>                  | 1121723           | CCMT 120412-MM |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |   |
|  | 1121695           | CCMT 060204-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121659           | CCMT 060208-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121698           | CCMT 09T304-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121685           | CCMT 09T308-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  <p>CCMT-MK<br/>Medium</p>                  | 1121717           | CCMT 120404-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121720           | CCMT 120408-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |

⊗ First choice | 1ª Escolha | 1ª Opción

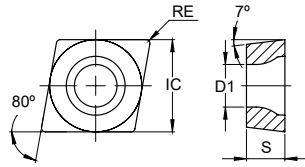
○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°


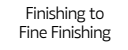



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| CCMT 060204-FW | CCMT 21.51-FW  | 6,350   | 2,38 | 0,40 | 2,80 | 0,80   | 0,30 | 2,00 | 0,12        | 0,05 | 0,30 |
| CCMT 060208-FW | CCMT 21.52-FW  | 6,350   | 2,38 | 0,80 | 2,80 | 0,80   | 0,30 | 2,00 | 0,15        | 0,09 | 0,35 |
| CCMT 09T304-FW | CCMT 32.51-FW  | 9,525   | 3,97 | 0,40 | 4,40 | 1,00   | 0,30 | 3,00 | 0,20        | 0,07 | 0,30 |
| CCMT 09T308-FW | CCMT 32.52-FW  | 9,525   | 3,97 | 0,80 | 4,40 | 1,00   | 0,30 | 3,00 | 0,25        | 0,12 | 0,50 |
| CCMT 060204-LM | CCMT 21.51-LM  | 6,350   | 2,38 | 0,40 | 2,80 | 0,50   | 0,20 | 2,00 | 0,10        | 0,08 | 0,20 |
| CCMT 09T304-LM | CCMT 32.51-LM  | 9,525   | 3,97 | 0,40 | 4,40 | 0,50   | 0,25 | 2,50 | 0,15        | 0,10 | 0,30 |
| CCMT 120404-LM | CCMT 431-LM    | 12,700  | 4,76 | 0,40 | 5,50 | 0,80   | 0,30 | 3,00 | 0,18        | 0,12 | 0,35 |
| CCMT 060208-MW | CCMT 21.52-MW  | 6,350   | 2,38 | 0,80 | 2,80 | 1,20   | 0,50 | 2,50 | 0,20        | 0,10 | 0,40 |
| CCMT 09T304-MW | CCMT 32.51-MW  | 9,525   | 3,97 | 0,40 | 4,40 | 1,50   | 0,50 | 4,00 | 0,25        | 0,12 | 0,40 |
| CCMT 09T308-MW | CCMT 32.52-MW  | 9,525   | 3,97 | 0,80 | 4,40 | 1,50   | 0,70 | 4,00 | 0,30        | 0,15 | 0,50 |
| CCMT 120404-MW | CCMT 431-MW    | 12,700  | 4,76 | 0,40 | 5,50 | 2,00   | 0,50 | 4,00 | 0,25        | 0,15 | 0,40 |
| CCMT 120408-MW | CCMT 432-MW    | 12,700  | 4,76 | 0,80 | 5,50 | 2,00   | 0,70 | 4,00 | 0,30        | 0,15 | 0,50 |
| CCMT 060204-MP | CCMT 21.51-MP  | 6,350   | 2,38 | 0,40 | 2,80 | 0,64   | 0,20 | 2,40 | 0,11        | 0,06 | 0,17 |
| CCMT 060208-MP | CCMT 21.52-MP  | 6,350   | 2,38 | 0,80 | 2,80 | 0,64   | 0,40 | 2,40 | 0,18        | 0,08 | 0,35 |
| CCMT 09T304-MP | CCMT 32.51-MP  | 9,525   | 3,97 | 0,40 | 4,40 | 0,64   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| CCMT 09T308-MP | CCMT 32.52-MP  | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,20        | 0,10 | 0,40 |
| CCMT 120404-MP | CCMT 431-MP    | 12,700  | 4,76 | 0,40 | 5,50 | 0,96   | 0,30 | 3,60 | 0,18        | 0,09 | 0,27 |
| CCMT 120408-MP | CCMT 432-MP    | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,24        | 0,12 | 0,45 |
| CCMT 120412-MP | CCMT 433-MP    | 12,700  | 4,76 | 1,20 | 5,50 | 0,96   | 0,72 | 3,60 | 0,35        | 0,14 | 0,60 |
| CCMT 060204-MM | CCMT 21.51-MM  | 6,350   | 2,38 | 0,40 | 2,80 | 0,64   | 0,20 | 2,40 | 0,11        | 0,06 | 0,17 |
| CCMT 060208-MM | CCMT 21.52-MM  | 6,350   | 2,38 | 0,80 | 2,80 | 0,64   | 0,40 | 2,40 | 0,18        | 0,08 | 0,35 |
| CCMT 09T304-MM | CCMT 32.51-MM  | 9,525   | 3,97 | 0,40 | 4,40 | 0,64   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| CCMT 09T308-MM | CCMT 32.52-MM  | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,20        | 0,10 | 0,40 |
| CCMT 120404-MM | CCMT 431-MM    | 12,700  | 4,76 | 0,40 | 5,50 | 0,96   | 0,30 | 3,60 | 0,18        | 0,09 | 0,27 |
| CCMT 120408-MM | CCMT 432-MM    | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,24        | 0,12 | 0,45 |
| CCMT 120412-MM | CCMT 433-MM    | 12,700  | 4,76 | 1,20 | 5,50 | 0,96   | 0,72 | 3,60 | 0,35        | 0,14 | 0,60 |
| CCMT 060204-MK | CCMT 21.51-MK  | 6,350   | 2,38 | 0,40 | 2,80 | 0,64   | 0,20 | 2,40 | 0,11        | 0,06 | 0,17 |
| CCMT 060208-MK | CCMT 21.52-MK  | 6,350   | 2,38 | 0,80 | 2,80 | 0,64   | 0,40 | 2,40 | 0,18        | 0,08 | 0,35 |
| CCMT 09T304-MK | CCMT 32.51-MK  | 9,525   | 3,97 | 0,40 | 4,40 | 0,64   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| CCMT 09T308-MK | CCMT 32.52-MK  | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,20        | 0,10 | 0,40 |
| CCMT 120404-MK | CCMT 431-MK    | 12,700  | 4,76 | 0,40 | 5,50 | 0,96   | 0,30 | 3,60 | 0,18        | 0,09 | 0,27 |
| CCMT 120408-MK | CCMT 432-MK    | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,24        | 0,12 | 0,45 |

# CC - RHOMBIC 80° POSITIVE

RÔMBICA 80° POSITIVA | RÓMBICA 80° POSITIVA

TURNING

|   |                                |                | P              |        |         |        |         |        |        |        |        |        |        | M      |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |        |  |
|---|--------------------------------|----------------|----------------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |                                |                | CVD            |        |         |        |         |        | PVD    |        |        |        |        | CVD    |        | PVD    |        | UNC    | CVD    |        | UNC    | PVD    |        |        |        |        |        |        |  |
|   |                                | (2) Grade code | T6             | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry<br>code        | ISO Reference  | PHG105         | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH9910 | PH7920 | PH9920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
|  | CCGT-FS                        | 1121725        | CCGT 060201-FS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1121726        | CCGT 060202-FS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1121727        | CCGT 060204-FS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | Finishing to<br>Fine Finishing | 1121455        | CCGT 09T301-FS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1121456        | CCGT 09T302-FS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1121457        | CCGT 09T304-FS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | CCGT-LN                        | 1121884        | CCGT 060202-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1121885        | CCGT 060204-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1121886        | CCGT 09T302-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | Medium to Finishing            | 1121887        | CCGT 09T304-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1121888        | CCGT 09T308-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1123679        | CCGT 120402-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1123681        | CCGT 120404-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                                | 1123682        | CCGT 120408-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

⊕ First choice | 1ª Escolha | 1ª Opción  
 ⊕ Stock Items | Itens de stock

○ Available under request | Disponível sob consulta | Disponible bajo consulta  
 ⊕ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

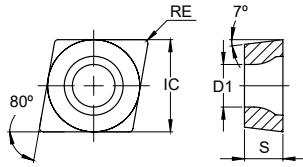
Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

RELIEF ANGLE 7°



| ISO Reference  | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                 | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| CCGT 060201-FS | CCGT 21.50.2-FS | 6,350   | 2,38 | 0,10 | 2,80 | 0,30   | 0,10 | 1,00 | 0,03        | 0,01 | 0,06 |
| CCGT 060202-FS | CCGT 21.50.5-FS | 6,350   | 2,38 | 0,20 | 2,80 | 0,50   | 0,10 | 1,50 | 0,07        | 0,02 | 0,12 |
| CCGT 060204-FS | CCGT 21.51-FS   | 6,350   | 2,38 | 0,40 | 2,80 | 0,80   | 0,15 | 1,50 | 0,20        | 0,08 | 0,25 |
| CCGT 09T301-FS | CCGT 32.50.2-FS | 9,525   | 3,97 | 0,10 | 4,40 | 0,50   | 0,10 | 1,50 | 0,03        | 0,01 | 0,06 |
| CCGT 09T302-FS | CCGT 32.50.5-FS | 9,525   | 3,97 | 0,20 | 4,40 | 1,00   | 0,10 | 2,00 | 0,07        | 0,02 | 0,12 |
| CCGT 09T304-FS | CCGT 32.51-FS   | 9,525   | 3,97 | 0,40 | 4,40 | 1,25   | 0,15 | 2,50 | 0,15        | 0,08 | 0,25 |
| CCGT 060202-LN | CCGT 21.50.5-LN | 6,350   | 2,38 | 0,20 | 2,80 | 1,00   | 0,05 | 3,00 | 0,07        | 0,05 | 0,12 |
| CCGT 060204-LN | CCGT 21.51-LN   | 6,350   | 2,38 | 0,40 | 2,80 | 1,55   | 0,10 | 3,00 | 0,15        | 0,10 | 0,20 |
| CCGT 09T302-LN | CCGT 32.50.5-LN | 9,525   | 3,97 | 0,20 | 4,40 | 1,53   | 0,05 | 3,00 | 0,07        | 0,05 | 0,12 |
| CCGT 09T304-LN | CCGT 32.51-LN   | 9,525   | 3,97 | 0,40 | 4,40 | 2,55   | 0,10 | 5,00 | 0,16        | 0,10 | 0,22 |
| CCGT 09T308-LN | CCGT 32.52-LN   | 9,525   | 3,97 | 0,80 | 4,40 | 2,55   | 0,10 | 5,00 | 0,22        | 0,15 | 0,45 |
| CCGT 120402-LN | CCGT 430.5-LN   | 12,700  | 4,76 | 0,20 | 5,50 | 2,03   | 0,05 | 4,00 | 0,07        | 0,05 | 0,12 |
| CCGT 120404-LN | CCGT 431-LN     | 12,700  | 4,76 | 0,40 | 5,50 | 2,55   | 0,10 | 5,00 | 0,17        | 0,10 | 0,26 |
| CCGT 120408-LN | CCGT 432-LN     | 12,700  | 4,76 | 0,80 | 5,50 | 2,80   | 0,10 | 5,50 | 0,25        | 0,15 | 0,50 |

# DC - RHOMBIC 55° POSITIVE

RÔMBICA 55° POSITIVA | RÓMBICA 55° POSITIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning









External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|   |                   |                | P      |        |         |        |         |        |        |        |        |        |        | M      |        |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |  |
|---|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |                   |                | CVD    |        |         |        |         |        |        | PVD    |        |        |        | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |  |
|   |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH9910 | PH7920 | PH9920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>DCMW<br>Finishing                      | 1120302           | DCMW 070202    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120303           | DCMW 070204    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121422           | DCMW 070208    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120304           | DCMW 11T302    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120305           | DCMW 11T304    |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>NEW DCMT-FF<br>Fine Finishing          | 1121389           | DCMT 11T302-FF |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121390           | DCMT 11T304-FF |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121391           | DCMT 11T308-FF |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DCMT-FP<br>Finishing                   | 1121675           | DCMT 070202-FP |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121678           | DCMT 070204-FP |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121668           | DCMT 11T302-FP |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121711           | DCMT 11T304-FP |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DCMT-FM<br>Finishing                 | 1121674           | DCMT 070202-FM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121677           | DCMT 070204-FM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121667           | DCMT 11T302-FM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121710           | DCMT 11T304-FM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121712           | DCMT 11T308-FM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DCMT-FK<br>Finishing                 | 1121673           | DCMT 070202-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121676           | DCMT 070204-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121714           | DCMT 11T302-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DCMT-FW<br>Finishing Wiper           | 1121749           | DCMT 070204-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121750           | DCMT 070208-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121745           | DCMT 11T304-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121755           | DCMT 11T308-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DCMT-LM<br>Medium to Finishing       | 1123802           | DCMT 11T304-LM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1123803           | DCMT 11T308-LM |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>DCMT-MW<br>Medium to Finishing Wiper | 1121414           | DCMT 11T304-MW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121756           | DCMT 11T308-MW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

⊕ First choice | 1ª Escolha | 1ª Opción

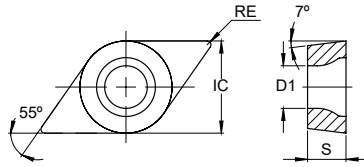
○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

⊗ Stock Items | Itens de stock

⊕ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°








| ISO Reference  | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                 | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| DCMW 070202    | DCMW 21.50.5    | 6,350   | 2,38 | 0,20 | 2,80 | 1,60   | 0,05 | 3,20 | 0,10        | 0,04 | 0,13 |
| DCMW 070204    | DCMW 21.51      | 6,350   | 2,38 | 0,40 | 2,80 | 1,60   | 0,05 | 3,20 | 0,20        | 0,08 | 0,26 |
| DCMW 070208    | DCMW 21.52      | 6,350   | 2,38 | 0,80 | 2,80 | 1,60   | 0,05 | 3,20 | 0,40        | 0,16 | 0,53 |
| DCMW 11T302    | DCMW 32.50.5    | 9,525   | 3,97 | 0,20 | 4,40 | 2,40   | 0,05 | 4,80 | 0,10        | 0,04 | 0,13 |
| DCMW 11T304    | DCMW 32.51      | 9,525   | 3,97 | 0,40 | 4,40 | 2,40   | 0,05 | 4,80 | 0,20        | 0,08 | 0,26 |
| DCMW 11T308    | DCMW 32.52      | 9,525   | 3,97 | 0,80 | 4,40 | 2,40   | 0,05 | 4,80 | 0,40        | 0,16 | 0,53 |
| DCMW 150404    | DCMW 431        | 12,700  | 4,76 | 0,40 | 5,50 | 2,80   | 0,10 | 5,50 | 0,20        | 0,10 | 0,26 |
| DCMT 11T302-FF | DCMT 32.50.5-FF | 9,525   | 3,97 | 0,20 | 4,40 | 0,30   | 0,08 | 2,00 | 0,08        | 0,04 | 0,15 |
| DCMT 11T304-FF | DCMT 32.51-FF   | 9,525   | 3,97 | 0,40 | 4,40 | 0,50   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| DCMT 11T308-FF | DCMT 32.52-FF   | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,15 | 2,00 | 0,15        | 0,08 | 0,30 |
| DCMT 070202-FP | DCMT 21.50.5-FP | 6,350   | 2,38 | 0,20 | 2,80 | 0,26   | 0,06 | 1,50 | 0,06        | 0,03 | 0,11 |
| DCMT 070204-FP | DCMT 21.51-FP   | 6,350   | 2,38 | 0,40 | 2,80 | 0,26   | 0,08 | 1,50 | 0,08        | 0,05 | 0,17 |
| DCMT 11T302-FP | DCMT 32.50.5-FP | 9,525   | 3,97 | 0,20 | 4,40 | 0,35   | 0,08 | 2,00 | 0,08        | 0,04 | 0,15 |
| DCMT 11T304-FP | DCMT 32.51-FP   | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| DCMT 11T308-FP | DCMT 32.52-FP   | 9,525   | 3,97 | 0,80 | 4,40 | 0,35   | 0,15 | 2,00 | 0,15        | 0,08 | 0,30 |
| DCMT 070202-FM | DCMT 21.50.5-FM | 6,350   | 2,38 | 0,20 | 2,80 | 0,26   | 0,06 | 1,50 | 0,06        | 0,03 | 0,11 |
| DCMT 070204-FM | DCMT 21.51-FM   | 6,350   | 2,38 | 0,40 | 2,80 | 0,26   | 0,08 | 1,50 | 0,08        | 0,05 | 0,17 |
| DCMT 11T302-FM | DCMT 32.50.5-FM | 9,525   | 3,97 | 0,20 | 4,40 | 0,35   | 0,08 | 2,00 | 0,08        | 0,04 | 0,15 |
| DCMT 11T304-FM | DCMT 32.51-FM   | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| DCMT 11T308-FM | DCMT 32.52-FM   | 9,525   | 3,97 | 0,80 | 4,40 | 0,35   | 0,15 | 2,00 | 0,15        | 0,08 | 0,30 |
| DCMT 070202-FK | DCMT 21.50.5-FK | 6,350   | 2,38 | 0,20 | 2,80 | 0,26   | 0,06 | 1,50 | 0,06        | 0,03 | 0,11 |
| DCMT 070204-FK | DCMT 21.51-FK   | 6,350   | 2,38 | 0,40 | 2,80 | 0,26   | 0,08 | 1,50 | 0,08        | 0,05 | 0,17 |
| DCMT 11T302-FK | DCMT 32.50.5-FK | 9,525   | 3,97 | 0,20 | 4,40 | 0,35   | 0,08 | 2,00 | 0,08        | 0,04 | 0,15 |
| DCMT 11T304-FK | DCMT 32.51-FK   | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| DCMT 070204-FW | DCMT 21.51-FW   | 6,350   | 2,38 | 0,40 | 2,80 | 0,70   | 0,30 | 2,00 | 0,12        | 0,05 | 0,25 |
| DCMT 070208-FW | DCMT 21.52-FW   | 6,350   | 2,38 | 0,80 | 2,80 | 0,70   | 0,30 | 2,00 | 0,15        | 0,09 | 0,35 |
| DCMT 11T304-FW | DCMT 32.51-FW   | 9,525   | 3,97 | 0,40 | 4,40 | 1,00   | 0,30 | 3,00 | 0,20        | 0,07 | 0,30 |
| DCMT 11T308-FW | DCMT 32.52-FW   | 9,525   | 3,97 | 0,80 | 4,40 | 1,00   | 0,30 | 3,00 | 0,25        | 0,12 | 0,40 |
| DCMT 11T304-LM | DCMT 32.51-LM   | 9,525   | 3,97 | 0,40 | 4,40 | 0,50   | 0,15 | 2,50 | 0,15        | 0,08 | 0,25 |
| DCMT 11T308-LM | DCMT 32.52-LM   | 9,525   | 3,97 | 0,80 | 4,40 | 0,50   | 0,20 | 2,50 | 0,20        | 0,10 | 0,35 |
| DCMT 11T304-MW | DCMT 32.51-MW   | 9,525   | 3,97 | 0,40 | 4,40 | 1,50   | 0,50 | 4,00 | 0,25        | 0,12 | 0,40 |
| DCMT 11T308-MW | DCMT 32.52-MW   | 9,525   | 3,97 | 0,80 | 4,40 | 1,50   | 0,50 | 4,00 | 0,30        | 0,15 | 0,50 |



# DC - RHOMBIC 55° POSITIVE

RÔMBICA 55° POSITIVA | RÓMBICA 55° POSITIVA

TURNING

|  |                         |                 | P      |        |         |        |         |        |        |        |       |        |       | M      |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |   |
|--|-------------------------|-----------------|--------|--------|---------|--------|---------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
|  |                         |                 | CVD    |        |         |        |         |        |        | PVD    |       |        |       | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |   |
|  |                         | (2) Grade code  | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |   |
| Inserts<br>Pastilhas<br>Plaquitas  | (1)<br>Geometry<br>code | ISO Reference   | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |   |
| <br>DCMT-MP<br>Medium                           | 1121681                 | DCMT 070204-MP  |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |       | ⊗      |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121684                 | DCMT 070208-MP  |        |        | ⊗       | ⊗      | ⊗       |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121648                 | DCMT 11T304-MP  |        |        | ⊗       |        | ⊗       |        |        |        |       | ⊗      |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121706                 | DCMT 11T308-MP  |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |       | ⊗      |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1121708                 | DCMT 11T312-MP  |        | ⊗      | ○       |        | ⊗       |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|  | 1124783                 | DCMT 11T312-MP1 |        |        | ○       |        | ⊗       |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| <br>DCMT-MM<br>Medium                           | 1121680                 | DCMT 070204-MM  |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |   |
|  | 1121683                 | DCMT 070208-MM  |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |   |
|  | 1121647                 | DCMT 11T304-MM  |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |   |
|  | 1121705                 | DCMT 11T308-MM  |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |   |
|  | 1121707                 | DCMT 11T312-MM  |        |        |         |        |         |        |        |        |       |        |       | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      |   |
| <br>DCMT-MK<br>Medium                          | 1121679                 | DCMT 070204-MK  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |   |
|  | 1121682                 | DCMT 070208-MK  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |   |
|  | 1121646                 | DCMT 11T304-MK  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |   |
|  | 1121704                 | DCMT 11T308-MK  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |   |
|  | 1121955                 | DCMT 11T312-MK  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |   |
| <br>DCGT-FS<br>Finishing to<br>Fine Finishing | 1121747                 | DCGT 070201-FS  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |
|  | 1121748                 | DCGT 070202-FS  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗ |
|  | 1121872                 | DCGT 070204-FS  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗ |
|  | 1121873                 | DCGT 11T301-FS  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗ |
|  | 1121874                 | DCGT 11T302-FS  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗ |
|  | 1121875                 | DCGT 11T304-FS  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗ |
|  | 1124101                 | DCGT 11T308-FS  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗ |
| <br>DCGT-LN<br>Medium to Finishing            | 1121900                 | DCGT 070202-LN  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |        |   |
|  | 1121901                 | DCGT 070204-LN  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |
|  | 1111540                 | DCGT 11T302-LN  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |
|  | 1111534                 | DCGT 11T304-LN  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |
|  | 1121904                 | DCGT 11T308-LN  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |
|  | 1124004                 | DCGT 11T312-LN  |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |        | ⊗      |   |

⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

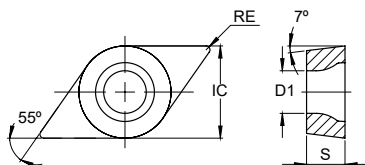
⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Spare Parts

Technical Data

RELIEF ANGLE 7°



| ISO Reference   | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|-----------------|-----------------|---|------|------|------|--|------|------|-------------|------|------|
|                 |                 | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| DCMT 070204-MP  | DCMT 21.51-MP   | 6,350   | 2,38 | 0,40 | 2,80 | 0,60   | 0,19 | 2,25 | 0,11        | 0,06 | 0,17 |
| DCMT 070208-MP  | DCMT 21.52-MP   | 6,350   | 2,38 | 0,80 | 2,80 | 0,60   | 0,38 | 2,25 | 0,20        | 0,08 | 0,35 |
| DCMT 11T304-MP  | DCMT 32.51-MP   | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| DCMT 11T308-MP  | DCMT 32.52-MP   | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,25        | 0,10 | 0,40 |
| DCMT 11T312-MP  | DCMT 32.53-MP   | 9,525   | 3,97 | 1,20 | 4,40 | 0,80   | 0,60 | 3,00 | 0,35        | 0,12 | 0,60 |
| DCMT 11T312-MP1 | DCMT 32.53-MP1  | 9,525   | 3,97 | 1,20 | 4,40 | 0,80   | 0,60 | 3,00 | 0,35        | 0,12 | 0,60 |
| DCMT 070204-MM  | DCMT 21.51-MM   | 6,350   | 2,38 | 0,40 | 2,80 | 0,60   | 0,19 | 2,25 | 0,11        | 0,06 | 0,17 |
| DCMT 070208-MM  | DCMT 21.52-MM   | 6,350   | 2,38 | 0,80 | 2,80 | 0,60   | 0,38 | 2,25 | 0,20        | 0,08 | 0,35 |
| DCMT 11T304-MM  | DCMT 32.51-MM   | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| DCMT 11T308-MM  | DCMT 32.52-MM   | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,25        | 0,10 | 0,40 |
| DCMT 11T312-MM  | DCMT 32.53-MM   | 9,525   | 3,97 | 1,20 | 4,40 | 0,80   | 0,60 | 3,00 | 0,35        | 0,12 | 0,60 |
| DCMT 070204-MK  | DCMT 21.51-MK   | 6,350   | 2,38 | 0,40 | 2,80 | 0,60   | 0,19 | 2,25 | 0,11        | 0,06 | 0,17 |
| DCMT 070208-MK  | DCMT 21.52-MK   | 6,350   | 2,38 | 0,80 | 2,80 | 0,60   | 0,38 | 2,25 | 0,20        | 0,08 | 0,35 |
| DCMT 11T304-MK  | DCMT 32.51-MK   | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| DCMT 11T308-MK  | DCMT 32.52-MK   | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,25        | 0,10 | 0,40 |
| DCMT 11T312-MK  | DCMT 32.53-MK   | 9,525   | 3,97 | 1,20 | 4,40 | 0,80   | 0,50 | 3,00 | 0,35        | 0,12 | 0,60 |
| DCGT 070201-FS  | DCGT 21.50.2-FS | 6,350   | 2,38 | 0,10 | 2,80 | 0,30   | 0,10 | 1,00 | 0,03        | 0,01 | 0,06 |
| DCGT 070202-FS  | DCGT 21.50.5-FS | 6,350   | 2,38 | 0,20 | 2,80 | 0,50   | 0,10 | 1,50 | 0,07        | 0,02 | 0,12 |
| DCGT 070204-FS  | DCGT 21.51-FS   | 6,350   | 2,38 | 0,40 | 2,80 | 0,80   | 0,15 | 1,50 | 0,15        | 0,08 | 0,25 |
| DCGT 11T301-FS  | DCGT 32.50.2-FS | 9,525   | 3,97 | 0,10 | 4,40 | 0,50   | 0,10 | 1,50 | 0,03        | 0,01 | 0,06 |
| DCGT 11T302-FS  | DCGT 32.50.5-FS | 9,525   | 3,97 | 0,20 | 4,40 | 1,00   | 0,10 | 2,00 | 0,07        | 0,02 | 0,12 |
| DCGT 11T304-FS  | DCGT 32.51-FS   | 9,525   | 3,97 | 0,40 | 4,40 | 1,50   | 0,15 | 3,00 | 0,15        | 0,08 | 0,25 |
| DCGT 11T308-FS  | DCGT 32.52-FS   | 9,525   | 3,97 | 0,80 | 4,40 | 2,00   | 0,20 | 3,50 | 0,18        | 0,10 | 0,30 |
| DCGT 070202-LN  | DCGT 21.50.5-LN | 6,350   | 2,38 | 0,20 | 2,80 | 1,00   | 0,05 | 3,00 | 0,07        | 0,05 | 0,12 |
| DCGT 070204-LN  | DCGT 21.51-LN   | 6,350   | 2,38 | 0,40 | 2,80 | 2,05   | 0,10 | 4,00 | 0,15        | 0,10 | 0,20 |
| DCGT 11T302-LN  | DCGT 32.50.5-LN | 9,525   | 3,97 | 0,20 | 4,40 | 2,03   | 0,05 | 4,00 | 0,07        | 0,05 | 0,12 |
| DCGT 11T304-LN  | DCGT 32.51-LN   | 9,525   | 3,97 | 0,40 | 4,40 | 2,55   | 0,10 | 5,00 | 0,16        | 0,10 | 0,22 |
| DCGT 11T308-LN  | DCGT 32.52-LN   | 9,525   | 3,97 | 0,80 | 4,40 | 2,55   | 0,10 | 5,00 | 0,22        | 0,15 | 0,50 |
| DCGT 11T312-LN  | DCGT 32.53-LN   | 9,525   | 3,97 | 1,20 | 4,40 | 2,70   | 0,15 | 5,00 | 0,35        | 0,15 | 0,70 |

# RC - ROUND R° POSITIVE

REDONDA R° POSITIVA | REDONDA R° POSITIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|                                   |                                |                | P              |        |         |        |         |        |        |        |        |        |        | M      |        |        |        |        | K      |        |        |        | N      |        | S      |        |        |        |  |
|-----------------------------------|--------------------------------|----------------|----------------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|                                   |                                |                | CVD            |        |         |        |         |        |        | PVD    |        |        |        | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |  |
|                                   |                                | (2) Grade code | T6             | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquetas | (1)<br>Geometry<br>code        | ISO Reference  | PHG105         | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH9910 | PH7920 | PH9920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
|                                   | RCGT-LN                        | 1124005        | RCGT 0602M0-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1124006        | RCGT 0803M0-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1124007        | RCGT 1003M0-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Finishing to<br>Fine Finishing | 1123684        | RCGT 1204M0-LN |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | RCMT-GS                        | 1125011        | RCMT 0602M0-GS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1124495        | RCMT 0803M0-GS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1124496        | RCMT 1003M0-GS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Medium to Finishing            | 1125010        | RCMT 1204M0-GS |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | RCMT-CP                        | 1120384        | RCMT 0602M0-CP | ⊗      | ○       | ⊗      | ⊗       | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Medium                         |                |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | RCMT-ST                        | 1120385        | RCMT 0803M0-ST | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1120386        | RCMT 1003M0-ST | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1120387        | RCMT 10T3M0-ST | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Roughing to Medium             | 1120388        | RCMT 1204M0-ST | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1120389        | RCMT 1606M0-ST |        | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | 1120390                        | RCMT 2006M0-ST | ○              | ○      |         | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | RCMT-RF                        | 1123848        | RCMT 2507M0-RF | ⊗      | ○       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Roughing to Medium             |                |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | RCMT-RM                        | 1123856        | RCMT 2006M0-RM | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Roughing to Medium             |                |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | RCMX-ST                        | 1121425        | RCMX 1003M0-ST |        |         |        | ○       | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1121426        | RCMX 1204M0-ST |        |         |        |         | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1121427        | RCMX 1606M0-ST |        |         |        |         | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Roughing to Medium             | 1121428        | RCMX 2006M0-ST | ⊗      | ○       | ⊗      | ○       | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   |                                | 1121429        | RCMX 2507M0-ST |        | ⊗       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | 1123910                        | RCMX 3009M0-ST |                |        | ○       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | 1121430                        | RCMX 3209M0-ST |                |        | ○       | ⊗      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | RCMX-RM                        | 1123678        | RCMX 3209M0-RM | ⊗      | ○       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Roughing to Medium             |                |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | RCMX-RR                        | 1123667        | RCMX 2507M0-RR | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|                                   | Roughing to Medium             | 1123666        | RCMX 3209M0-RR |        |         | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

⊗ First choice | 1ª Escolha | 1ª Opción

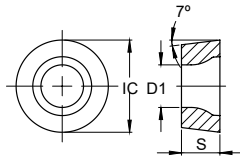
○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

⊗ Stock items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |    |       | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|----|-------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE | D1    | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| RCGT 0602M0-LN | RCGT 0602M0-LN | 6,00  | 2,38 | -  | 2,80  | 1,25   | 0,50 | 2,00  | 0,13        | 0,05 | 0,20 |
| RCGT 0803M0-LN | RCGT 0803M0-LN | 8,00  | 3,18 | -  | 3,40  | 1,50   | 0,50 | 2,50  | 0,15        | 0,05 | 0,25 |
| RCGT 1003M0-LN | RCGT 1003M0-LN | 10,00   | 3,18 | -  | 4,40  | 2,00   | 1,00 | 3,00  | 0,20        | 0,10 | 0,30 |
| RCGT 1204M0-LN | RCGT 1204M0-LN | 12,00   | 4,76 | -  | 4,40  | 2,25   | 1,00 | 3,50  | 0,23        | 0,10 | 0,35 |
| RCMT 0602M0-GS | RCMT 0602M0-GS | 6,00  | 2,38 | -  | 2,80  | 0,90   | 0,30 | 1,50  | 0,25        | 0,15 | 0,40 |
| RCMT 0803M0-GS | RCMT 0803M0-GS | 8,00  | 3,18 | -  | 3,40  | 1,20   | 0,40 | 2,00  | 0,28        | 0,15 | 0,40 |
| RCMT 1003M0-GS | RCMT 1003M0-GS | 10,00   | 3,18 | -  | 4,40  | 1,50   | 0,50 | 2,50  | 0,3         | 0,15 | 0,45 |
| RCMT 1204M0-GS | RCMT 1204M0-GS | 12,00   | 4,76 | -  | 4,40  | 1,80   | 0,60 | 3,00  | 0,35        | 0,15 | 0,50 |
| RCMT 0602M0-CP | RCMT 0602M0-CP | 6,00  | 2,38 | -  | 2,80  | 1,50   | 0,50 | 2,40  | 0,15        | 0,04 | 0,17 |
| RCMT 0803M0-ST | RCMT 0803M0-ST | 8,00  | 3,18 | -  | 3,40  | 2,00   | 0,80 | 3,20  | 0,20        | 0,10 | 0,80 |
| RCMT 1003M0-ST | RCMT 1003M0-ST | 10,00   | 3,18 | -  | 3,40  | 2,50   | 1,00 | 4,00  | 0,25        | 0,12 | 1,00 |
| RCMT 10T3M0-ST | RCMT 10T3M0-ST | 10,00   | 3,97 | -  | 4,40  | 2,50   | 1,00 | 4,00  | 0,25        | 0,16 | 1,40 |
| RCMT 1204M0-ST | RCMT 1204M0-ST | 12,00   | 4,76 | -  | 4,40  | 3,00   | 1,20 | 4,80  | 0,30        | 0,20 | 1,80 |
| RCMT 1606M0-ST | RCMT 1606M0-ST | 16,00   | 6,35 | -  | 5,50  | 3,50   | 1,60 | 6,40  | 0,37        | 0,25 | 2,30 |
| RCMT 2006M0-ST | RCMT 2006M0-ST | 20,00   | 6,35 | -  | 6,50  | 4,00   | 2,00 | 8,00  | 0,45        | 0,30 | 3,00 |
| RCMT 2507M0-RF | RCMT 2507M0-RF | 25,00   | 7,94 | -  | 7,20  | 6,30   | 2,50 | 10,00 | 0,79        | 0,25 | 2,50 |
| RCMT 2006M0-RM | RCMT 2006M0-RM | 20,00   | 6,35 | -  | 6,50  | 4,00   | 2,00 | 8,00  | 0,45        | 0,13 | 0,63 |
| RCMX 1003M0-ST | RCMX 1003M0-ST | 10,00   | 3,18 | -  | 3,60  | 2,50   | 1,00 | 4,00  | 0,32        | 0,10 | 1,00 |
| RCMX 1204M0-ST | RCMX 1204M0-ST | 12,00   | 4,76 | -  | 4,20  | 3,00   | 1,20 | 4,80  | 0,38        | 0,12 | 1,20 |
| RCMX 1606M0-ST | RCMX 1606M0-ST | 16,00   | 6,35 | -  | 5,20  | 4,00   | 1,60 | 6,40  | 0,51        | 0,16 | 1,60 |
| RCMX 2006M0-ST | RCMX 2006M0-ST | 20,00   | 6,35 | -  | 6,50  | 5,00   | 2,00 | 8,00  | 0,63        | 0,20 | 2,00 |
| RCMX 2507M0-ST | RCMX 2507M0-ST | 25,00   | 7,94 | -  | 7,20  | 6,30   | 2,50 | 10,00 | 0,79        | 0,25 | 2,50 |
| RCMX 3209M0-ST | RCMX 3209M0-ST | 30,00   | 9,55 | -  | 10,00 | 7,00   | 3,00 | 11,00 | 0,85        | 0,30 | 2,80 |
| RCMX 3209M0-ST | RCMX 3209M0-ST | 32,00   | 9,52 | -  | 9,50  | 8,00   | 3,20 | 12,80 | 1,01        | 0,32 | 3,20 |
| RCMX 3209M0-RM | RCMX 3209M0-RM | 32,00   | 9,52 | -  | 9,50  | 6,50   | 3,20 | 13,00 | 1,80        | 0,80 | 2,50 |
| RCMX 2507M0-RR | RCMX 2507M0-RR | 25,00   | 7,94 | -  | 7,20  | 5,00   | 3,20 | 8,00  | 1,80        | 0,80 | 2,50 |
| RCMX 3209M0-RR | RCMX 3209M0-RR | 32,00   | 9,52 | -  | 9,50  | 6,50   | 3,20 | 13,00 | 1,80        | 0,80 | 2,50 |

# SC - SQUARE 90° POSITIVE

QUADRADA 90° POSITIVA | ESCUADRA 90° POSITIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning









External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|   |                         |                | P      |        |         |        |         |        |        |        |       |        |       | M      |        |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |   |
|---|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
|   |                         |                | CVD    |        |         |        |         |        |        | PVD    |       |        |       | CVD    |        | PVD    |        |        | UNC    | CVD    |        | UNC    | PVD    |        |        |        |        |        |   |
|   |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |   |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |   |
| <br>SCMW<br>Finishing                | 1120469                 | SCMW 09T304    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1120470                 | SCMW 09T308    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1120472                 | SCMW 120408    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| <br>SCMT-FP<br>Finishing             | 1121759                 | SCMT 09T304-FP |        |        | ⊗       |        | ⊗       |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121765                 | SCMT 09T308-FP |        |        | ⊗       |        | ⊗       |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| <br>SCMT-FM<br>Finishing             | 1121758                 | SCMT 09T304-FM |        |        |         |        |         |        |        |        |       |        |       |        | ⊗      |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        | ⊗ |
|   | 1121764                 | SCMT 09T308-FM |        |        |         |        |         |        |        |        |       |        |       |        | ⊗      |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        | ⊗ |
| <br>SCMT-FK<br>Finishing            | 1121757                 | SCMT 09T304-FK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121763                 | SCMT 09T308-FK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| <br>SCMT-MP<br>Medium              | 1121762                 | SCMT 09T304-MP |        |        | ⊗       |        | ⊗       | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121768                 | SCMT 09T308-MP |        |        | ⊗       |        | ⊗       | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121770                 | SCMT 120404-MP |        |        | ⊗       |        | ⊗       |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121783                 | SCMT 120408-MP |        |        | ⊗       |        | ⊗       |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| <br>SCMT-MM<br>Medium              | 1121785                 | SCMT 120412-MP |        |        | ⊗       |        | ⊗       |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
|   | 1121761                 | SCMT 09T304-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121767                 | SCMT 09T308-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121769                 | SCMT 120404-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121782                 | SCMT 120408-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
| <br>SCMT-MK<br>Medium              | 1121784                 | SCMT 120412-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121760                 | SCMT 09T304-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121766                 | SCMT 09T308-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1121781                 | SCMT 120408-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
| <br>SCGT-LN<br>Medium to Finishing | 1124008                 | SCGT 09T304-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1124009                 | SCGT 09T308-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
|   | 1124743                 | SCGT 120402-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ○ |
|   | 1124010                 | SCGT 120404-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗ |
| 1123685   | SCGT 120408-LN          |                |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      |   |

⊗ First choice | 1ª Escolha | 1ª Opción

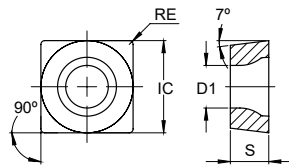
○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°






| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| SCMW 09T304    | SCMW 32.51     | 9,525   | 3,97 | 0,40 | 4,40 | 2,40   | 0,05 | 4,70 | 0,20        | 0,08 | 0,26 |
| SCMW 09T308    | SCMW 32.52     | 9,525   | 3,97 | 0,80 | 4,40 | 2,40   | 0,05 | 4,70 | 0,40        | 0,16 | 0,53 |
| SCMW 120408    | SCMW 432       | 12,700  | 4,76 | 0,80 | 5,50 | 3,20   | 0,05 | 6,30 | 0,40        | 0,16 | 0,53 |
| SCMT 09T304-FP | SCMT 32.51-FP  | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| SCMT 09T308-FP | SCMT 32.52-FP  | 9,525   | 3,97 | 0,80 | 4,40 | 0,35   | 0,15 | 2,00 | 0,15        | 0,08 | 0,30 |
| SCMT 09T304-FM | SCMT 32.51-FM  | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| SCMT 09T308-FM | SCMT 32.52-FM  | 9,525   | 3,97 | 0,80 | 4,40 | 0,35   | 0,15 | 2,00 | 0,15        | 0,08 | 0,30 |
| SCMT 09T304-FK | SCMT 32.51-FK  | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| SCMT 09T308-FK | SCMT 32.52-FK  | 9,525   | 3,97 | 0,80 | 4,40 | 0,35   | 0,15 | 2,00 | 0,15        | 0,08 | 0,30 |
| SCMT 09T304-MP | SCMT 32.51-MP  | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| SCMT 09T308-MP | SCMT 32.52-MP  | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,25        | 0,10 | 0,40 |
| SCMT 120404-MP | SCMT 431-MP    | 12,700  | 4,76 | 0,40 | 5,50 | 0,96   | 0,30 | 3,60 | 0,18        | 0,09 | 0,27 |
| SCMT 120408-MP | SCMT 432-MP    | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,25        | 0,12 | 0,45 |
| SCMT 120412-MP | SCMT 433-MP    | 12,700  | 4,76 | 1,20 | 5,50 | 0,96   | 0,72 | 3,60 | 0,35        | 0,14 | 0,60 |
| SCMT 09T304-MM | SCMT 32.51-MM  | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| SCMT 09T308-MM | SCMT 32.52-MM  | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,25        | 0,10 | 0,40 |
| SCMT 120404-MM | SCMT 431-MM    | 12,700  | 4,76 | 0,40 | 5,50 | 0,96   | 0,30 | 3,60 | 0,18        | 0,09 | 0,27 |
| SCMT 120408-MM | SCMT 432-MM    | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,25        | 0,12 | 0,45 |
| SCMT 120412-MM | SCMT 433-MM    | 12,700  | 4,76 | 1,20 | 5,50 | 0,96   | 0,72 | 3,60 | 0,35        | 0,14 | 0,60 |
| SCMT 09T304-MK | SCMT 32.51-MK  | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| SCMT 09T308-MK | SCMT 32.52-MK  | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,25        | 0,10 | 0,40 |
| SCMT 120408-MK | SCMT 432-MK    | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,25        | 0,12 | 0,45 |
| SCGT 09T304-LN | SCGT 32.51-LN  | 9,525   | 3,97 | 0,40 | 4,40 | 2,05   | 0,10 | 4,00 | 0,16        | 0,10 | 0,26 |
| SCGT 09T308-LN | SCGT 32.52-LN  | 9,525   | 3,97 | 0,80 | 4,40 | 2,55   | 0,10 | 5,00 | 0,22        | 0,15 | 0,40 |
| SCGT 120402-LN | SCGT 430.5-LN  | 12,700  | 4,76 | 0,20 | 5,50 | 2,50   | 0,10 | 4,50 | 0,15        | 0,08 | 0,25 |
| SCGT 120404-LN | SCGT 431-LN    | 12,700  | 4,76 | 0,40 | 5,50 | 2,55   | 0,10 | 5,00 | 0,20        | 0,10 | 0,26 |
| SCGT 120408-LN | SCGT 432-LN    | 12,700  | 4,76 | 0,80 | 5,50 | 2,55   | 0,10 | 5,00 | 0,30        | 0,15 | 0,50 |

# SP - SQUARE 90° POSITIVE

QUADRADA 90° POSITIVA | ESCUADRA 90° POSITIVA

TURNING

|  |                         |                | P      |        |        |        |        |       |        | M     |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |        |
|--|-------------------------|----------------|--------|--------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|  |                         |                | CVD    |        |        |        | PVD    |       |        | CVD   |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |        |
|  |                         | (2) Grade code | L7     | R2     | L8     | R3     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas  | (1)<br>Geometry<br>code | ISO Reference  | PH5115 | PHG115 | PH5125 | PHG125 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>SPUN<br>Medium to Finishing               | 1120580                 | SPUN 120304    |        |        | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1120581                 | SPUN 120308    | ⊗      |        | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1120583                 | SPUN 120312    |        |        | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>SPMR-12<br>Finishing to<br>Fine Finishing | 1120561                 | SPMR 090308-12 | ⊗      |        | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1120563                 | SPMR 120304-12 | ⊗      |        |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1120565                 | SPMR 120308-12 | ⊗      |        |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <br>SPMR-13<br>Medium                         | 1120562                 | SPMR 090308-13 | ⊗      |        |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1120564                 | SPMR 120304-13 | ⊗      |        | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1120566                 | SPMR 120308-13 | ⊗      |        | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|  | 1120567                 | SPMR 120312-13 | ⊗      |        | ⊗      |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Heavy turning

External Toolholders

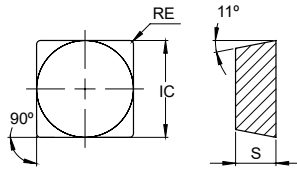
Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

RELIEF ANGLE 11°



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |    | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|----|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1 | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| SPUN 120304    | SPUN 421       | 12,700  | 3,18 | 0,40 | -  | 3,00   | 1,00 | 5,00 | 0,20        | 0,10 | 0,30 |
| SPUN 120308    | SPUN 422       | 12,700  | 3,18 | 0,80 | -  | 3,00   | 1,00 | 5,00 | 0,25        | 0,15 | 0,40 |
| SPUN 120312    | SPUN 423       | 12,700  | 3,18 | 1,20 | -  | 3,00   | 1,00 | 5,00 | 0,35        | 0,20 | 0,50 |
| SPMR 090308-12 | SPMR 322-12    | 9,525   | 3,18 | 0,80 | -  | 1,00   | 0,30 | 2,00 | 0,20        | 0,10 | 0,30 |
| SPMR 120304-12 | SPMR 421-12    | 12,700  | 3,18 | 0,40 | -  | 1,30   | 0,50 | 2,00 | 0,15        | 0,08 | 0,25 |
| SPMR 120308-12 | SPMR 422-12    | 12,700  | 3,18 | 0,80 | -  | 1,30   | 0,50 | 2,00 | 0,22        | 0,10 | 0,30 |
| SPMR 090308-13 | SPMR 322-13    | 9,525   | 3,18 | 0,80 | -  | 2,20   | 1,00 | 3,50 | 0,25        | 0,10 | 0,40 |
| SPMR 120304-13 | SPMR 421-13    | 12,700  | 3,18 | 0,40 | -  | 2,60   | 1,50 | 4,00 | 0,10        | 0,07 | 0,20 |
| SPMR 120308-13 | SPMR 422-13    | 12,700  | 3,18 | 0,80 | -  | 2,60   | 1,50 | 4,00 | 0,30        | 0,20 | 0,40 |
| SPMR 120312-13 | SPMR-423-13    | 12,700  | 3,18 | 1,20 | -  | 2,60   | 1,50 | 4,00 | 0,40        | 0,25 | 0,55 |



# TC - TRIANGULAR 60° POSITIVE

TRIANGULAR 60° POSITIVA | TRIANGULAR 60° POSITIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning



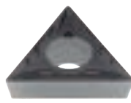
External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|   |                   |                | P      |        |         |        |         |        |        |        |       |        | M     |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |        |  |  |  |  |
|---|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|--|--|
|   |                   |                | CVD    |        |         |        |         |        |        | PVD    |       |        | CVD   |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |        |  |  |  |  |
|   |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |  |  |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |  |  |  |
|  <p>TCMW</p> <p>Finishing</p>      | 1120620           | TCMW 112024    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1120622           | TCMW 16T304    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1120623           | TCMW 16T308    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121846           | TCMT 220408    |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|  <p>TCMT-PP</p> <p>Finishing</p>   | 1121788           | TCMT 06T102-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121798           | TCMT 06T104-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121801           | TCMT 06T108-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121804           | TCMT 090202-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121807           | TCMT 090204-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121961           | TCMT 110202-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121962           | TCMT 110204-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121963           | TCMT 110208-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121669           | TCMT 110302-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121816           | TCMT 110304-PP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
| 1121823   | TCMT 110308-PP    |                |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
| 1121832   | TCMT 16T304-PP    |                |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|  <p>TCMT-FM</p> <p>Finishing</p> | 1121787           | TCMT 06T102-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121797           | TCMT 06T104-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1123637           | TCMT 06T108-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121803           | TCMT 090202-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121806           | TCMT 090204-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121960           | TCMT 110202-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121958           | TCMT 110204-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121959           | TCMT 110208-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121881           | TCMT 110302-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
|   | 1121815           | TCMT 110304-FM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
| 1121822   | TCMT 110308-FM    |                |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |
| 1121831   | TCMT 16T304-FM    |                |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |  |

🔴 First choice | 1ª Escolha | 1ª Opción

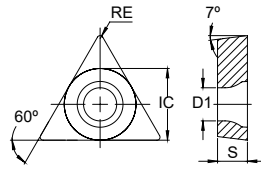
⊖ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code




🟡 Stock Items | Itens de stock

🟡 Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°



| ISO Reference  | ANSI Reference    | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-------------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                   | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| TCMW 110204    | TCMW 21.51        | 6,350   | 2,38 | 0,40 | 2,80 | 1,50   | 0,05 | 3,10 | 0,20        | 0,08 | 0,26 |
| TCMW 16T304    | TCMW 32.51        | 9,525   | 3,97 | 0,40 | 4,40 | 2,30   | 0,05 | 4,70 | 0,20        | 0,08 | 0,26 |
| TCMW 16T308    | TCMW 32.52        | 9,525   | 3,97 | 0,80 | 4,40 | 2,30   | 0,05 | 4,70 | 0,40        | 0,16 | 0,53 |
| TCMT 220408    | TCMT 432          | 12,700  | 4,76 | 0,80 | 5,50 | 2,30   | 0,05 | 6,30 | 0,33        | 0,15 | 0,53 |
| TCMT 06T102-FP | TCMT 1.21.20.5-FP | 3,970   | 1,98 | 0,20 | 2,15 | 0,26   | 0,06 | 1,50 | 0,06        | 0,03 | 0,11 |
| TCMT 06T104-FP | TCMT 1.21.21-FP   | 3,970   | 1,98 | 0,40 | 2,15 | 0,26   | 0,08 | 1,50 | 0,08        | 0,05 | 0,17 |
| TCMT 06T108-FP | TCMT 1.21.22-FP   | 3,970   | 1,98 | 0,80 | 2,15 | 0,26   | 0,11 | 1,50 | 0,11        | 0,06 | 0,23 |
| TCMT 090202-FP | TCMT 1.81.50.5-FP | 5,560   | 2,38 | 0,20 | 2,50 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 090204-FP | TCMT 1.81.51-FP   | 5,560   | 2,38 | 0,40 | 2,50 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 110202-FP | TCMT 21.50.5-FP   | 6,350   | 2,38 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 110204-FP | TCMT 21.51-FP     | 6,350   | 2,38 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 110208-FP | TCMT 21.52-FP     | 6,350   | 2,38 | 0,80 | 2,80 | 0,30   | 0,13 | 1,70 | 0,13        | 0,07 | 0,26 |
| TCMT 110302-FP | TCMT 220.5-FP     | 6,350   | 3,18 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 110304-FP | TCMT 221-FP       | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 110308-FP | TCMT 222-FP       | 6,350   | 3,18 | 0,80 | 2,80 | 0,30   | 0,13 | 1,70 | 0,13        | 0,07 | 0,26 |
| TCMT 16T304-FP | TCMT 32.51-FP     | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| TCMT 06T102-FM | TCMT 1.21.20.5-FM | 3,970   | 1,98 | 0,20 | 2,15 | 0,26   | 0,06 | 1,50 | 0,06        | 0,03 | 0,11 |
| TCMT 06T104-FM | TCMT 1.21.21-FM   | 3,970   | 1,98 | 0,40 | 2,15 | 0,26   | 0,08 | 1,50 | 0,08        | 0,05 | 0,17 |
| TCMT 06T108-FM | TCMT 1.21.22-FM   | 3,970   | 1,98 | 0,80 | 2,15 | 0,26   | 0,11 | 1,50 | 0,11        | 0,06 | 0,23 |
| TCMT 090202-FM | TCMT 1.81.50.5-FM | 5,560   | 2,38 | 0,20 | 2,50 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 090204-FM | TCMT 1.81.51-FM   | 5,560   | 2,38 | 0,40 | 2,50 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 110202-FM | TCMT 21.50.5-FM   | 6,350   | 2,38 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 110204-FM | TCMT 21.51-FM     | 6,350   | 2,38 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 110208-FM | TCMT 21.52-FM     | 6,350   | 2,38 | 0,80 | 2,80 | 0,30   | 0,13 | 1,70 | 0,13        | 0,07 | 0,26 |
| TCMT 110302-FM | TCMT 220.5-FM     | 6,350   | 3,18 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 110304-FM | TCMT 221-FM       | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 110308-FM | TCMT 222-FM       | 6,350   | 3,18 | 0,80 | 2,80 | 0,30   | 0,13 | 1,70 | 0,13        | 0,07 | 0,26 |
| TCMT 16T304-FM | TCMT 32.51-FM     | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |

|   |                         |                | P      |        |         |        |         |        |        |        |        |        |        | M      |        |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |  |  |
|---|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|
|   |                         |                | CVD    |        |         |        |         |        | PVD    |        |        |        |        | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |  |  |
|   |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHP910 | PH7920 | PHP920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |  |
|  <p>TCMT-FK</p> <p>Finishing</p>                   | 1121786                 | TCMT 06T102-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121789                 | TCMT 06T104-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121800                 | TCMT 06T108-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1123668                 | TCMT 090202-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121805                 | TCMT 090204-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121956                 | TCMT 110202-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121957                 | TCMT 110204-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121813                 | TCMT 110302-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121814                 | TCMT 110304-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
| 1121830   | TCMT 16T304-FK          |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|  <p>TCMT-FW</p> <p>Finishing Wiper</p>            | 1121808                 | TCMT 090204-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121809                 | TCMT 090208-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121964                 | TCMT 110204-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121965                 | TCMT 110208-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121817                 | TCMT 110304-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121824                 | TCMT 110308-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121833                 | TCMT 16T304-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121837                 | TCMT 16T308-FW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|  <p>TCMT-MW</p> <p>Medium to Finishing Wiper</p> | 1121974                 | TCMT 110208-MW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121828                 | TCMT 110308-MW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121841                 | TCMT 16T308-MW |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |

🔴 First choice | 1ª Escolha | 1ª Opción

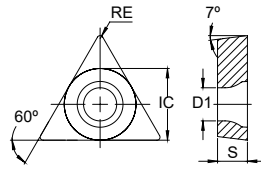
○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

🟡 Stock items | Itens de stock

🟢 Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°



| ISO Reference  | ANSI Reference    | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-------------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                   | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| TCMT 06T102-FK | TCMT 1.21.20.5-FK | 3,970   | 1,98 | 0,20 | 2,15 | 0,26   | 0,06 | 1,50 | 0,06        | 0,03 | 0,11 |
| TCMT 06T104-FK | TCMT 1.21.21-FK   | 3,970   | 1,98 | 0,40 | 2,15 | 0,26   | 0,08 | 1,50 | 0,08        | 0,05 | 0,17 |
| TCMT 06T108-FK | TCMT 1.21.22-FK   | 3,970   | 1,98 | 0,80 | 2,15 | 0,26   | 0,11 | 1,50 | 0,11        | 0,06 | 0,23 |
| TCMT 090202-FK | TCMT 1.81.50.5-FK | 5,560   | 2,38 | 0,20 | 2,50 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 090204-FK | TCMT 1.81.51-FK   | 5,560   | 2,38 | 0,40 | 2,50 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 110202-FK | TCMT 21.50.5-FK   | 6,350   | 2,38 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 110204-FK | TCMT 21.51-FK     | 6,350   | 2,38 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 110302-FK | TCMT 220.5-FK     | 6,350   | 3,18 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| TCMT 110304-FK | TCMT 221-FK       | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| TCMT 16T304-FK | TCMT 32.51-FK     | 9,525   | 3,97 | 0,40 | 4,40 | 0,35   | 0,11 | 2,00 | 0,11        | 0,06 | 0,23 |
| TCMT 090204-FW | TCMT 1.81.51-FW   | 5,560   | 2,38 | 0,40 | 2,50 | 0,70   | 0,30 | 2,00 | 0,12        | 0,05 | 0,30 |
| TCMT 090208-FW | TCMT 1.81.52-FW   | 5,560   | 2,38 | 0,80 | 2,50 | 0,70   | 0,30 | 2,00 | 0,25        | 0,10 | 0,35 |
| TCMT 110204-FW | TCMT 21.51-FW     | 6,350   | 2,38 | 0,40 | 2,80 | 1,00   | 0,30 | 2,50 | 0,20        | 0,07 | 0,30 |
| TCMT 110208-FW | TCMT 21.52-FW     | 6,350   | 2,38 | 0,80 | 2,80 | 1,00   | 0,30 | 2,50 | 0,25        | 0,12 | 0,40 |
| TCMT 110304-FW | TCMT 221-FW       | 6,350   | 3,18 | 0,40 | 2,80 | 1,00   | 0,30 | 2,50 | 0,20        | 0,07 | 0,30 |
| TCMT 110308-FW | TCMT 222-FW       | 6,350   | 3,18 | 0,80 | 2,80 | 1,00   | 0,30 | 2,50 | 0,25        | 0,12 | 0,40 |
| TCMT 16T304-FW | TCMT 32.51-FW     | 9,525   | 3,97 | 0,40 | 4,40 | 1,20   | 0,30 | 3,50 | 0,20        | 0,07 | 0,35 |
| TCMT 16T308-FW | TCMT 32.52-FW     | 9,525   | 3,97 | 0,80 | 4,40 | 1,20   | 0,30 | 3,50 | 0,25        | 0,12 | 0,50 |
| TCMT 110208-MW | TCMT 21.52-MW     | 6,350   | 2,38 | 0,80 | 2,80 | 1,20   | 0,50 | 3,00 | 0,30        | 0,15 | 0,50 |
| TCMT 110308-MW | TCMT 222-MW       | 6,350   | 3,18 | 0,80 | 2,80 | 1,20   | 0,50 | 3,00 | 0,30        | 0,15 | 0,50 |
| TCMT 16T308-MW | TCMT 32.52-MW     | 9,525   | 3,97 | 0,80 | 4,40 | 1,50   | 0,50 | 4,00 | 0,30        | 0,15 | 0,50 |

# TC - TRIANGULAR 60° POSITIVE

TRIANGULAR 60° POSITIVA | TRIANGULAR 60° POSITIVA

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning


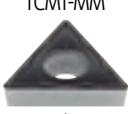

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|   |                         |                | P      |        |         |        |         |        |        |        |       |        |       | M      |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |  |
|---|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|
|   |                         |                | CVD    |        |         |        |         |        | PVD    |        |       |        |       | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |  |  |
|   |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |  |
|  <p>TCMT-MP<br/>Medium</p>   | 1121703                 | TCMT 090204-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121812                 | TCMT 090208-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121970                 | TCMT 110204-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121971                 | TCMT 110208-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121972                 | TCMT 110212-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121820                 | TCMT 110304-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121827                 | TCMT 110308-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121829                 | TCMT 110312-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121836                 | TCMT 16T304-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121840                 | TCMT 16T308-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121844                 | TCMT 16T312-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121849                 | TCMT 220408-MP |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|  <p>TCMT-MM<br/>Medium</p> | 1121702                 | TCMT 090204-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121811                 | TCMT 090208-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121968                 | TCMT 110204-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121969                 | TCMT 110208-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121819                 | TCMT 110304-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121826                 | TCMT 110308-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121835                 | TCMT 16T304-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121839                 | TCMT 16T308-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121843                 | TCMT 16T312-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121848                 | TCMT 220408-MM |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|  <p>TCMT-MK<br/>Medium</p> | 1121701                 | TCMT 090204-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121810                 | TCMT 090208-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121966                 | TCMT 110204-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121967                 | TCMT 110208-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121818                 | TCMT 110304-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121825                 | TCMT 110308-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121834                 | TCMT 16T304-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121838                 | TCMT 16T308-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121842                 | TCMT 16T312-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|   | 1121847                 | TCMT 220408-MK |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |

🔴 First choice | 1ª Escolha | 1ª Opción

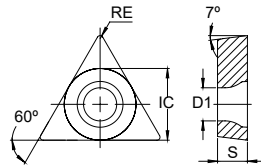
⊖ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code

🟡 Stock Items | Itens de stock

⚠️ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°





| ISO Reference  | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                 | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| TCMT 090204-MP | TCMT 1.81.51-MP | 5,560   | 2,38 | 0,40 | 2,50 | 0,60   | 0,19 | 2,25 | 0,11        | 0,06 | 0,17 |
| TCMT 090208-MP | TCMT 1.81.52-MP | 5,560   | 2,38 | 0,80 | 2,50 | 0,60   | 0,38 | 2,25 | 0,15        | 0,08 | 0,23 |
| TCMT 110204-MP | TCMT 21.51-MP   | 6,350   | 2,38 | 0,40 | 2,80 | 0,67   | 0,21 | 2,50 | 0,13        | 0,06 | 0,19 |
| TCMT 110208-MP | TCMT 21.52-MP   | 6,350   | 2,38 | 0,80 | 2,80 | 0,67   | 0,42 | 2,50 | 0,17        | 0,09 | 0,26 |
| TCMT 110212-MP | TCMT 21.53-MP   | 6,350   | 2,38 | 1,20 | 2,80 | 0,67   | 0,50 | 2,50 | 0,20        | 0,10 | 0,40 |
| TCMT 110304-MP | TCMT 221-MP     | 6,350   | 3,18 | 0,40 | 2,80 | 0,67   | 0,21 | 2,50 | 0,13        | 0,06 | 0,19 |
| TCMT 110308-MP | TCMT 222-MP     | 6,350   | 3,18 | 0,80 | 2,80 | 0,67   | 0,42 | 2,50 | 0,20        | 0,09 | 0,40 |
| TCMT 110312-MP | TCMT 223-MP     | 6,350   | 3,18 | 1,20 | 2,80 | 0,67   | 0,50 | 2,50 | 0,30        | 0,10 | 0,50 |
| TCMT 16T304-MP | TCMT 32.51-MP   | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,25 |
| TCMT 16T308-MP | TCMT 32.52-MP   | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,22        | 0,10 | 0,45 |
| TCMT 16T312-MP | TCMT 32.53-MP   | 9,525   | 3,97 | 1,20 | 4,40 | 0,80   | 0,60 | 3,00 | 0,35        | 0,12 | 0,60 |
| TCMT 220408-MP | TCMT 432-MP     | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,25        | 0,12 | 0,45 |
| TCMT 090204-MM | TCMT 1.81.51-MM | 5,560   | 2,38 | 0,40 | 2,50 | 0,60   | 0,19 | 2,25 | 0,11        | 0,06 | 0,17 |
| TCMT 090208-MM | TCMT 1.81.52-MM | 5,560   | 2,38 | 0,80 | 2,50 | 0,60   | 0,38 | 2,25 | 0,15        | 0,08 | 0,23 |
| TCMT 110204-MM | TCMT 21.51-MM   | 6,350   | 2,38 | 0,40 | 2,80 | 0,67   | 0,21 | 2,50 | 0,13        | 0,06 | 0,19 |
| TCMT 110208-MM | TCMT 21.52-MM   | 6,350   | 2,38 | 0,80 | 2,80 | 0,67   | 0,42 | 2,50 | 0,17        | 0,09 | 0,26 |
| TCMT 110304-MM | TCMT 221-MM     | 6,350   | 3,18 | 0,40 | 2,80 | 0,67   | 0,21 | 2,50 | 0,13        | 0,06 | 0,19 |
| TCMT 110308-MM | TCMT 222-MM     | 6,350   | 3,18 | 0,80 | 2,80 | 0,67   | 0,42 | 2,50 | 0,20        | 0,09 | 0,40 |
| TCMT 16T304-MM | TCMT 32.51-MM   | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| TCMT 16T308-MM | TCMT 32.52-MM   | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,22        | 0,10 | 0,45 |
| TCMT 16T312-MM | TCMT 32.53-MM   | 9,525   | 3,97 | 1,20 | 4,40 | 0,80   | 0,60 | 3,00 | 0,35        | 0,12 | 0,60 |
| TCMT 220408-MM | TCMT 432-MM     | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,25        | 0,12 | 0,45 |
| TCMT 090204-MK | TCMT 1.81.51-MK | 5,560   | 2,38 | 0,40 | 2,50 | 0,60   | 0,19 | 2,25 | 0,11        | 0,06 | 0,17 |
| TCMT 090208-MK | TCMT 1.81.52-MK | 5,560   | 2,38 | 0,80 | 2,50 | 0,60   | 0,38 | 2,25 | 0,15        | 0,08 | 0,23 |
| TCMT 110204-MK | TCMT 21.51-MK   | 6,350   | 2,38 | 0,40 | 2,80 | 0,67   | 0,21 | 2,50 | 0,13        | 0,06 | 0,19 |
| TCMT 110208-MK | TCMT 21.52-MK   | 6,350   | 2,38 | 0,80 | 2,80 | 0,67   | 0,42 | 2,50 | 0,17        | 0,09 | 0,26 |
| TCMT 110304-MK | TCMT 221-MK     | 6,350   | 3,18 | 0,40 | 2,80 | 0,67   | 0,21 | 2,50 | 0,13        | 0,06 | 0,19 |
| TCMT 110308-MK | TCMT 222-MK     | 6,350   | 3,18 | 0,80 | 2,80 | 0,67   | 0,42 | 2,50 | 0,20        | 0,09 | 0,40 |
| TCMT 16T304-MK | TCMT 32.51-MK   | 9,525   | 3,97 | 0,40 | 4,40 | 0,80   | 0,25 | 3,00 | 0,15        | 0,08 | 0,23 |
| TCMT 16T308-MK | TCMT 32.52-MK   | 9,525   | 3,97 | 0,80 | 4,40 | 0,80   | 0,50 | 3,00 | 0,22        | 0,10 | 0,45 |
| TCMT 16T312-MK | TCMT 32.53-MK   | 9,525   | 3,97 | 1,20 | 4,40 | 0,80   | 0,60 | 3,00 | 0,35        | 0,12 | 0,60 |
| TCMT 220408-MK | TCMT 432-MK     | 12,700  | 4,76 | 0,80 | 5,50 | 0,96   | 0,60 | 3,60 | 0,25        | 0,12 | 0,45 |

# TC - TRIANGULAR 60° POSITIVE

TRIANGULAR 60° POSITIVA | TRIANGULAR 60° POSITIVA

TURNING

|   |                         |                | P      |        |         |        |         |        |        |        |       |        |       | M      |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |   |
|---|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
|   |                         |                | CVD    |        |         |        |         |        | PVD    |        |       |        |       | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |   |
|   |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |   |
| Inserts<br>Pastilhas<br>Plaquitais  | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |   |
|  <p>TCGT-FS</p> <p>Finishing to<br/>Fine Finishing</p> | 1123865                 | TCGT 090202-FS |        |        |         |        |         |        |        |        |       |        |       |        |        | △      | △      |        | △      |        |        |        |        |        | △      | △      |        | △      |   |
|   | 1123866                 | TCGT 090204-FS |        |        |         |        |         |        |        |        |       |        |       |        |        | △      | △      |        | △      |        |        |        |        |        | △      | △      |        | △      |   |
|   | 1123867                 | TCGT 110201-FS |        |        |         |        |         |        |        |        |       |        |       |        |        | △      | △      | △      | △      |        |        |        |        |        | △      | △      | △      | △      |   |
|   | 1123868                 | TCGT 110202-FS |        |        |         |        |         |        |        |        |       |        |       |        |        | △      | △      | △      | △      |        |        |        |        |        | △      | △      | △      | △      |   |
|   | 1123869                 | TCGT 110204-FS |        |        |         |        |         |        |        |        |       |        |       |        |        |        | △      | △      | △      | △      |        |        |        |        |        | △      | △      | △      |   |
|   | 1123870                 | TCGT 110301-FS |        |        |         |        |         |        |        |        |       |        |       |        |        |        | △      |        | △      | △      |        |        |        |        |        | △      | △      |        | △ |
|   | 1123871                 | TCGT 110302-FS |        |        |         |        |         |        |        |        |       |        |       |        |        |        | △      |        | △      | △      |        |        |        |        |        | △      | △      |        | △ |
|   | 1123872                 | TCGT 110304-FS |        |        |         |        |         |        |        |        |       |        |       |        |        |        | △      | △      | △      | △      |        |        |        |        |        | △      | △      | △      | △ |
|  <p>TCGT-LN</p> <p>Medium to Finishing</p>             | 1124011                 | TCGT 090202-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | △      |        |        |        |        |   |
|   | 1123683                 | TCGT 090204-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        | △      |        |        |        |   |
|   | 1121895                 | TCGT 110202-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        | △      |        |        |        |   |
|   | 1121896                 | TCGT 110204-LN |        |        |         |        |         |        |        |        |       |        |       |        |        | △      | ○      |        |        |        |        |        |        |        | △      | ○      |        |        |   |
|   | 1124012                 | TCGT 110208-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        | △      |        |        |        |   |
|   | 1121897                 | TCGT 16T302-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        | △      |        |        |        |   |
|   | 1121898                 | TCGT 16T304-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        | △      |        |        |        |        |        |        | △      |        | △      |        |   |
|   | 1121899                 | TCGT 16T308-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        | △      |        |        |        |   |
| <p>1124013</p> <p>1124014</p>   | TCGT 16T312-LN          |                |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | △      |        |        |        |        |   |
|   | TCGT 16T316-LN          |                |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        |        | △      |        |        |        |   |

△ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

△ Stock Items | Itens de stock

△ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

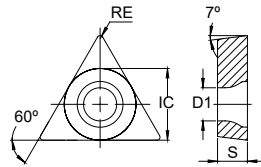
Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

RELIEF ANGLE 7°






| ISO Reference  | ANSI Reference    | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-------------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                   | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| TCGT 090202-FS | TCGT 1.81.50.5-FS | 5,560   | 2,38 | 0,20 | 2,50 | 0,50   | 0,10 | 1,50 | 0,07        | 0,02 | 0,12 |
| TCGT 090204-FS | TCGT 1.81.51-FS   | 5,560   | 2,38 | 0,40 | 2,50 | 1,00   | 0,50 | 2,00 | 0,15        | 0,08 | 0,25 |
| TCGT 110201-FS | TCGT 21.50.2-FS   | 6,350   | 2,38 | 0,10 | 2,80 | 0,30   | 0,10 | 1,00 | 0,03        | 0,01 | 0,08 |
| TCGT 110202-FS | TCGT 21.50.5-FS   | 6,350   | 2,38 | 0,20 | 2,80 | 0,50   | 0,10 | 1,50 | 0,07        | 0,02 | 0,12 |
| TCGT 110204-FS | TCGT 21.51-FS     | 6,350   | 2,38 | 0,40 | 2,80 | 1,30   | 0,30 | 2,50 | 0,15        | 0,08 | 0,25 |
| TCGT 110301-FS | TCGT 220.2-FS     | 9,525   | 3,18 | 0,10 | 2,80 | 0,30   | 0,10 | 1,00 | 0,03        | 0,01 | 0,08 |
| TCGT 110302-FS | TCGT 220.5-FS     | 9,525   | 3,18 | 0,20 | 2,80 | 0,50   | 0,10 | 1,50 | 0,07        | 0,02 | 0,12 |
| TCGT 110304-FS | TCGT 221-FS       | 9,525   | 3,18 | 0,40 | 2,80 | 1,30   | 0,50 | 2,50 | 0,15        | 0,08 | 0,25 |
| TCGT 090202-LN | TCGT 1.81.50.5-LN | 5,560   | 2,38 | 0,20 | 2,50 | 1,00   | 0,05 | 2,50 | 0,10        | 0,07 | 0,15 |
| TCGT 090204-LN | TCGT 1.81.51-LN   | 5,560   | 2,38 | 0,40 | 2,50 | 1,00   | 0,05 | 2,50 | 0,15        | 0,10 | 0,20 |
| TCGT 110202-LN | TCGT 21.50.5-LN   | 6,350   | 2,38 | 0,20 | 2,80 | 2,03   | 0,05 | 4,00 | 0,12        | 0,07 | 0,15 |
| TCGT 110204-LN | TCGT 21.51-LN     | 6,350   | 2,38 | 0,40 | 2,80 | 2,05   | 0,10 | 4,00 | 0,15        | 0,10 | 0,20 |
| TCGT 110208-LN | TCGT 21.52-LN     | 6,350   | 2,38 | 0,80 | 2,80 | 2,05   | 0,10 | 4,00 | 0,25        | 0,15 | 0,50 |
| TCGT 16T302-LN | TCGT 32.50.5-LN   | 9,525   | 3,97 | 0,20 | 4,40 | 2,53   | 0,05 | 5,00 | 0,10        | 0,07 | 0,15 |
| TCGT 16T304-LN | TCGT 32.51-LN     | 9,525   | 3,97 | 0,40 | 4,40 | 2,80   | 0,10 | 5,50 | 0,15        | 0,10 | 0,20 |
| TCGT 16T308-LN | TCGT 32.52-LN     | 9,525   | 3,97 | 0,80 | 4,40 | 2,80   | 0,10 | 5,50 | 0,25        | 0,15 | 0,50 |
| TCGT 16T312-LN | TCGT 32.53-LN     | 9,525   | 3,97 | 1,20 | 4,40 | 3,00   | 0,15 | 5,50 | 0,45        | 0,15 | 0,70 |
| TCGT 16T316-LN | TCGT 32.54-LN     | 9,525   | 3,97 | 1,60 | 4,40 | 3,00   | 0,15 | 5,50 | 0,65        | 0,20 | 0,90 |



# TP - TRIANGULAR 60° POSITIVE

TRIANGULAR 60° POSITIVA | TRIANGULAR 60° POSITIVA

TURNING

|   |                   |                | P      |        |        |        |        |        |        |        |        |        |        | M      |        |        |        |        |        | K      |        |        |        | N      |        | S      |  |  |  |
|---|-------------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|--|
|   |                   |                | CVD    |        |        |        |        | PVD    |        |        |        |        |        | CVD    |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |  |  |  |
|   |                   | (2) Grade code | L7     | R2     | L8     | R3     | L9     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |  |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference  | PH5115 | PHG115 | PH5125 | PHG125 | PH5740 | PH7910 | PHP910 | PH7920 | PHP920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |  |  |
| <br>TPUN<br>Medium to Finishing            | 1120765           | TPUN 160304    |        |        | ⊗      |        | ⊗      |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120766           | TPUN 160308    |        |        | ⊗      |        | ⊗      |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120770           | TPUN 160312    |        |        | ⊗      |        | ⊗      |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120777           | TPUN 220404    |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120779           | TPUN 220408    |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120783           | TPUN 220412    |        |        | ⊗      |        | ⊗      |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
| <br>TPMR-12<br>Finishing to Fine Finishing | 1120740           | TPMR 110304-12 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120743           | TPMR 110308-12 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120745           | TPMR 160304-12 | ⊗      |        | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120748           | TPMR 160308-12 | ⊗      |        | ⊗      | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
| <br>TPMR-13<br>Medium                    | 1120734           | TPMR 090204-13 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120741           | TPMR 110304-13 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120744           | TPMR 110308-13 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120746           | TPMR 160304-13 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120749           | TPMR 160308-13 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ○      |        |        |        |        |  |  |  |
|   | 1120752           | TPMR 160312-13 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1120753           | TPMR 220408-13 | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ○      |        |        |        |        |  |  |  |

⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

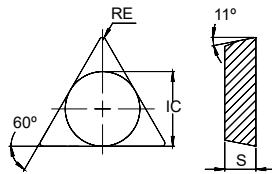
Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

RELIEF ANGLE 11°











| ISO Reference  | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |    | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-----------------|---|------|------|----|--|------|------|-------------|------|------|
|                |                 | IC  | S    | RE   | D1 | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| TPUN 160304    | TPUN 321        | 9,525   | 3,18 | 0,40 | -  | 3,50   | 1,00 | 5,00 | 0,15        | 0,10 | 0,30 |
| TPUN 160308    | TPUN 322        | 9,525   | 3,18 | 0,80 | -  | 3,50   | 1,00 | 5,00 | 0,30        | 0,15 | 0,40 |
| TPUN 160312    | TPUN 323        | 9,525   | 3,18 | 1,20 | -  | 3,50   | 1,50 | 5,00 | 0,35        | 0,20 | 0,50 |
| TPUN 220404    | TPUN 431        | 12,700  | 4,76 | 0,40 | -  | 4,50   | 1,50 | 7,00 | 0,15        | 0,10 | 0,30 |
| TPUN 220408    | TPUN 432        | 12,700  | 4,76 | 0,80 | -  | 4,50   | 1,50 | 7,00 | 0,30        | 0,15 | 0,40 |
| TPUN 220412    | TPUN 433        | 12,700  | 4,76 | 1,20 | -  | 4,50   | 1,50 | 7,00 | 0,35        | 0,20 | 0,50 |
| TPMR 110304-12 | TPMR 221-12     | 6,350   | 3,18 | 0,40 | -  | 0,90   | 0,30 | 1,50 | 0,10        | 0,05 | 0,20 |
| TPMR 110308-12 | TPMR 222-12     | 6,350   | 3,18 | 0,80 | -  | 0,90   | 0,30 | 1,50 | 0,20        | 0,05 | 0,35 |
| TPMR 160304-12 | TPMR 321-12     | 9,525   | 3,18 | 0,40 | -  | 1,30   | 0,50 | 2,00 | 0,12        | 0,08 | 0,20 |
| TPMR 160308-12 | TPMR 322-12     | 9,525   | 3,18 | 0,80 | -  | 1,50   | 0,50 | 3,00 | 0,22        | 0,08 | 0,35 |
| TPMR 090204-13 | TPMR 1.81.51-13 | 5,560   | 2,38 | 0,40 | -  | 1,00   | 0,20 | 1,50 | 0,10        | 0,08 | 0,20 |
| TPMR 110304-13 | TPMR 221-13     | 6,350   | 3,18 | 0,40 | -  | 2,00   | 1,00 | 3,00 | 0,12        | 0,10 | 0,20 |
| TPMR 110308-13 | TPMR 222-13     | 6,350   | 3,18 | 0,80 | -  | 2,00   | 1,00 | 3,00 | 0,25        | 0,13 | 0,40 |
| TPMR 160304-13 | TPMR 321-13     | 9,525   | 3,18 | 0,40 | -  | 3,00   | 1,00 | 5,00 | 0,15        | 0,10 | 0,20 |
| TPMR 160308-13 | TPMR 322-13     | 9,525   | 3,18 | 0,80 | -  | 3,00   | 1,00 | 5,00 | 0,30        | 0,13 | 0,40 |
| TPMR 160312-13 | TPMR 323-13     | 9,525   | 3,18 | 1,20 | -  | 3,00   | 1,00 | 5,00 | 0,40        | 0,15 | 0,55 |
| TPMR 220408-13 | TPMR 432-13     | 12,700  | 4,76 | 0,80 | -  | 5,00   | 1,50 | 7,00 | 0,30        | 0,15 | 0,40 |

# VB - RHOMBIC 35° POSITIVE

RÔMBICA 35° POSITIVA | RÓMBICA 35° POSITIVA


TURNING


|   |   |                | P              |        |         |        |         |        |        |        |        |        |        | M      |        |        |        |        | K      |        |        | N      | S      |        |        |        |        |        |  |
|---|---|----------------|----------------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |   |                | CVD            |        |         |        |         |        |        | PVD    |        |        |        | CVD    |        | PVD    |        |        | UNC    | CVD    |        | UNC    | PVD    |        |        |        |        |        |  |
|   |   | (2) Grade code | T6             | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code   | ISO Reference  | PHG105         | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH9910 | PH7920 | PH9920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>Negative inserts<br>Finishing                    | 1120804   | VBMT 160404    |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1120805   | VBMT 160408    |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <b>NEW</b><br><br>Positive inserts<br>Fine Finishing | 1124852   | VBMT 160402-FF |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1124672   | VBMT 160404-FF |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1124853   | VBMT 160408-FF |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Positive inserts<br>Finishing                    | 1121852   | VBMT 110302-FP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121855   | VBMT 110304-FP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121858   | VBMT 110308-FP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121859   | VBMT 110312-FP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| PCBN & PCD inserts<br>1121862<br>1121865<br>1121670<br>1121793  | 1121862   | VBMT 160402-FP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121865   | VBMT 160404-FP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121670   | VBMT 160408-FP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121793   | VBMT 160412-FP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | <br>Heavy turning<br>Finishing | 1121851        | VBMT 110302-FM |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121854   |   | VBMT 110304-FM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121857   |   | VBMT 110308-FM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121861   |   | VBMT 160402-FM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121864   |   | VBMT 160404-FM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121870   |   | VBMT 160408-FM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121792   |   | VBMT 160412-FM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>External Toolholders<br>Finishing              | 1121850   | VBMT 110302-FK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121853   | VBMT 110304-FK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121856   | VBMT 110308-FK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121860   | VBMT 160402-FK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121863   | VBMT 160404-FK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| Internal Toolholders<br>1121869<br>1121868<br>1121791<br>1121796  | 1121869   | VBMT 160408-FK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121868   | VBMT 160404-MP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121791   | VBMT 160408-MP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Automatic Lathes<br>Medium                     | 1121796   | VBMT 160412-MP |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121867   | VBMT 160404-MM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121790   | VBMT 160408-MM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Automatic Lathes<br>Medium                     | 1121795   | VBMT 160412-MM |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121866   | VBMT 160404-MK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121871   | VBMT 160408-MK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>Spare Parts<br>Medium                          | 1121794   | VBMT 160412-MK |                |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

 First choice | 1ª Escolha | 1ª Opción

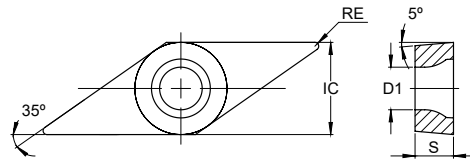
 Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

 Stock Items | Itens de stock

 Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 5°










| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| VBMT 160404    | VBMT 331       | 9,525   | 4,76 | 0,40 | 4,40 | 2,30   | 0,05 | 4,70 | 0,20        | 0,10 | 0,26 |
| VBMT 160408    | VBMT 332       | 9,525   | 4,76 | 0,80 | 4,40 | 2,30   | 0,05 | 4,70 | 0,40        | 0,16 | 0,53 |
| VBMT 160402-FF | VBMT 330.5-FF  | 9,525   | 4,76 | 0,20 | 4,40 | 1,00   | 0,07 | 1,80 | 0,09        | 0,04 | 0,14 |
| VBMT 160404-FF | VBMT 331-FF    | 9,525   | 4,76 | 0,40 | 4,40 | 1,20   | 0,10 | 1,80 | 0,13        | 0,05 | 0,20 |
| VBMT 160408-FF | VBMT 332-FF    | 9,525   | 4,76 | 0,80 | 4,40 | 1,60   | 0,14 | 1,80 | 0,17        | 0,07 | 0,27 |
| VBMT 110302-FP | VBMT 220.5-FP  | 6,350   | 3,18 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| VBMT 110304-FP | VBMT 221-FP    | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| VBMT 110308-FP | VBMT 222-FP    | 6,350   | 3,18 | 0,80 | 2,80 | 0,30   | 0,13 | 1,70 | 0,13        | 0,07 | 0,26 |
| VBMT 110312-FP | VBMT 223-FP    | 6,350   | 3,18 | 1,20 | 2,80 | 0,30   | 0,13 | 1,70 | 0,15        | 0,08 | 0,31 |
| VBMT 160402-FP | VBMT 330.5-FP  | 9,525   | 4,76 | 0,20 | 4,40 | 0,32   | 0,07 | 1,80 | 0,07        | 0,04 | 0,14 |
| VBMT 160404-FP | VBMT 331-FP    | 9,525   | 4,76 | 0,40 | 4,40 | 0,32   | 0,10 | 1,80 | 0,10        | 0,05 | 0,20 |
| VBMT 160408-FP | VBMT 332-FP    | 9,525   | 4,76 | 0,80 | 4,40 | 0,32   | 0,14 | 1,80 | 0,14        | 0,07 | 0,27 |
| VBMT 160412-FP | VBMT 333-FP    | 9,525   | 4,76 | 1,20 | 4,40 | 0,32   | 0,14 | 1,80 | 0,16        | 0,09 | 0,32 |
| VBMT 110302-FM | VBMT 220.5-FM  | 6,350   | 3,18 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| VBMT 110304-FM | VBMT 221-FM    | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| VBMT 110308-FM | VBMT 222-FM    | 6,350   | 3,18 | 0,80 | 2,80 | 0,30   | 0,13 | 1,70 | 0,13        | 0,07 | 0,26 |
| VBMT 160402-FM | VBMT 330.5-FM  | 9,525   | 4,76 | 0,20 | 4,40 | 0,32   | 0,07 | 1,80 | 0,07        | 0,04 | 0,14 |
| VBMT 160404-FM | VBMT 331-FM    | 9,525   | 4,76 | 0,40 | 4,40 | 0,32   | 0,10 | 1,80 | 0,10        | 0,05 | 0,20 |
| VBMT 160408-FM | VBMT 332-FM    | 9,525   | 4,76 | 0,80 | 4,40 | 0,32   | 0,14 | 1,80 | 0,14        | 0,07 | 0,27 |
| VBMT 160412-FM | VBMT 333-FM    | 9,525   | 4,76 | 1,20 | 4,40 | 0,32   | 0,14 | 1,80 | 0,16        | 0,09 | 0,32 |
| VBMT 110302-FK | VBMT 220.5-FK  | 6,350   | 3,18 | 0,20 | 2,80 | 0,30   | 0,06 | 1,70 | 0,06        | 0,03 | 0,13 |
| VBMT 110304-FK | VBMT 221-FK    | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,70 | 0,10        | 0,05 | 0,19 |
| VBMT 110308-FK | VBMT 222-FK    | 6,350   | 3,18 | 0,80 | 2,80 | 0,30   | 0,13 | 1,70 | 0,13        | 0,07 | 0,26 |
| VBMT 160402-FK | VBMT 330.5-FK  | 9,525   | 4,76 | 0,20 | 4,40 | 0,32   | 0,07 | 1,80 | 0,07        | 0,04 | 0,14 |
| VBMT 160404-FK | VBMT 331-FK    | 9,525   | 4,76 | 0,40 | 4,40 | 0,32   | 0,10 | 1,80 | 0,10        | 0,05 | 0,20 |
| VBMT 160408-FK | VBMT 332-FK    | 9,525   | 4,76 | 0,80 | 4,40 | 0,32   | 0,14 | 1,80 | 0,14        | 0,07 | 0,27 |
| VBMT 160404-MP | VBMT 331-MP    | 9,525   | 4,76 | 0,40 | 4,40 | 0,72   | 0,23 | 2,70 | 0,14        | 0,07 | 0,20 |
| VBMT 160408-MP | VBMT 332-MP    | 9,525   | 4,76 | 0,80 | 4,40 | 0,72   | 0,45 | 2,70 | 0,18        | 0,09 | 0,27 |
| VBMT 160412-MP | VBMT 333-MP    | 9,525   | 4,76 | 1,20 | 4,40 | 0,72   | 0,54 | 2,70 | 0,22        | 0,11 | 0,32 |
| VBMT 160404-MM | VBMT 331-MM    | 9,525   | 4,76 | 0,40 | 4,40 | 0,72   | 0,23 | 2,70 | 0,14        | 0,07 | 0,20 |
| VBMT 160408-MM | VBMT 332-MM    | 9,525   | 4,76 | 0,80 | 4,40 | 0,72   | 0,45 | 2,70 | 0,18        | 0,09 | 0,27 |
| VBMT 160412-MM | VBMT 333-MM    | 9,525   | 4,76 | 1,20 | 4,40 | 0,72   | 0,54 | 2,70 | 0,22        | 0,11 | 0,32 |
| VBMT 160404-MK | VBMT 331-MK    | 9,525   | 4,76 | 0,40 | 4,40 | 0,72   | 0,23 | 2,70 | 0,14        | 0,07 | 0,20 |
| VBMT 160408-MK | VBMT 332-MK    | 9,525   | 4,76 | 0,80 | 4,40 | 0,72   | 0,45 | 2,70 | 0,18        | 0,09 | 0,27 |
| VBMT 160412-MK | VBMT 333-MK    | 9,525   | 4,76 | 1,20 | 4,40 | 0,72   | 0,54 | 2,70 | 0,22        | 0,11 | 0,32 |

# VC - RHOMBIC 35° POSITIVE

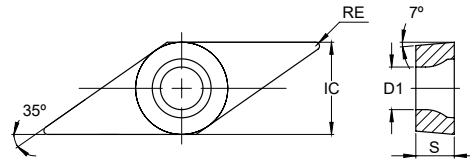
RÔMBICA 35° POSITIVA | RÓMBICA 35° POSITIVA

TURNING

|   |                   |                | P      |        |         |        |         |        |        |        |        |        |        | M      |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |
|---|-------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |                   |                | CVD    |        |         |        |         |        |        | PVD    |        |        |        | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |  |
|   |                   | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquetas   | (1) Geometry code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHP910 | PH7920 | PHP920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>VCMW<br>Finishing      | 1120816           | VCMTW 160404   |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   |                   |                |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>VCMT-FP<br>Finishing   | 1121776           | VCMT 110302-FP |        |        |         |        | ⊗       | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121779           | VCMT 110304-FP |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121977           | VCMT 160402-FP |        |        |         |        | ⊗       | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121978           | VCMT 160404-FP |        |        |         |        | ⊗       | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121979           | VCMT 160408-FP |        | ⊗      | ⊗       | ○      | ⊗       | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121980   | VCMT 160412-FP    |                |        |        | ○       |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>VCMT-FM<br>Finishing   | 1121775           | VCMT 110302-FM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
|   | 1121778           | VCMT 110304-FM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
|   | 1121981           | VCMT 160402-FM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
|   | 1121982           | VCMT 160404-FM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
|   | 1121983           | VCMT 160408-FM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        | ○      |        | ⊗      | ⊗      | ⊗      |  |
| 1121984   | VCMT 160412-FM    |                |        |        |         |        |         |        |        |        |        |        |        | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        | ○      |        | ⊗      | ⊗      | ⊗      |        |  |
| <br>VCMT-FK<br>Finishing | 1121777           | VCMT 110304-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121985           | VCMT 160402-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121986           | VCMT 160404-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121987           | VCMT 160408-FK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>VCMT-MP<br>Medium    | 1121754           | VCMT 110304-MP |        | ⊗      | ⊗       |        | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121752           | VCMT 110308-MP |        | ⊗      | ○       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121988           | VCMT 160404-MP |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121989           | VCMT 160408-MP |        | ⊗      | ⊗       | ⊗      | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121990           | VCMT 160412-MP |        |        | ○       |        | ⊗       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>VCMT-MM<br>Medium    | 1121780           | VCMT 110304-MM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
|   | 1121751           | VCMT 110308-MM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
|   | 1121991           | VCMT 160404-MM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
|   | 1121992           | VCMT 160408-MM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
|   | 1121993           | VCMT 160412-MM |        |        |         |        |         |        |        |        |        |        |        |        | ⊗      |        | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        |        | ⊗      | ⊗      |  |
| <br>VCMT-MK<br>Medium    | 1121753           | VCMT 110308-MK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121994           | VCMT 160404-MK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121995           | VCMT 160408-MK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121996           | VCMT 160412-MK |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

⊗ First choice | 1ª Escolha | 1ª Opción     
 ○ Available under request | Disponível sob consulta | Disponible bajo consulta     
 Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code  
⊗ Stock Items | Itens de stock     
 ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°





| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| VCMW 160404    | VCMW 331       | 9,525   | 4,76 | 0,40 | 4,40 | 2,30   | 0,05 | 4,70 | 0,20        | 0,08 | 0,26 |
| VCMT 110302-FP | VCMT 220.5-FP  | 6,350   | 3,18 | 0,20 | 2,80 | 0,30   | 0,07 | 1,50 | 0,07        | 0,03 | 0,13 |
| VCMT 110304-FP | VCMT 221-FP    | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,50 | 0,10        | 0,05 | 0,20 |
| VCMT 160402-FP | VCMT 330.5-FP  | 9,525   | 4,76 | 0,20 | 4,40 | 0,32   | 0,07 | 1,80 | 0,07        | 0,04 | 0,14 |
| VCMT 160404-FP | VCMT 331-FP    | 9,525   | 4,76 | 0,40 | 4,40 | 0,32   | 0,10 | 1,80 | 0,10        | 0,05 | 0,20 |
| VCMT 160408-FP | VCMT 332-FP    | 9,525   | 4,76 | 0,80 | 4,40 | 0,32   | 0,14 | 1,80 | 0,14        | 0,07 | 0,27 |
| VCMT 160412-FP | VCMT 333-FP    | 9,525   | 4,76 | 1,20 | 4,40 | 0,32   | 0,14 | 1,80 | 0,16        | 0,09 | 0,32 |
| VCMT 110302-FM | VCMT 220.5-FM  | 6,350   | 3,18 | 0,20 | 2,80 | 0,30   | 0,07 | 1,50 | 0,07        | 0,03 | 0,13 |
| VCMT 110304-FM | VCMT 221-FM    | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,50 | 0,10        | 0,05 | 0,20 |
| VCMT 160402-FM | VCMT 330.5-FM  | 9,525   | 4,76 | 0,20 | 4,40 | 0,32   | 0,07 | 1,80 | 0,07        | 0,04 | 0,14 |
| VCMT 160404-FM | VCMT 331-FM    | 9,525   | 4,76 | 0,40 | 4,40 | 0,32   | 0,10 | 1,80 | 0,10        | 0,05 | 0,20 |
| VCMT 160408-FM | VCMT 332-FM    | 9,525   | 4,76 | 0,80 | 4,40 | 0,32   | 0,14 | 1,80 | 0,14        | 0,07 | 0,27 |
| VCMT 160412-FM | VCMT 333-FM    | 9,525   | 4,76 | 1,20 | 4,40 | 0,32   | 0,14 | 1,80 | 0,16        | 0,09 | 0,32 |
| VCMT 110304-FK | VCMT 221-FK    | 6,350   | 3,18 | 0,40 | 2,80 | 0,30   | 0,10 | 1,50 | 0,10        | 0,05 | 0,20 |
| VCMT 160402-FK | VCMT 330.5-FK  | 9,525   | 4,76 | 0,20 | 4,40 | 0,32   | 0,07 | 1,80 | 0,07        | 0,04 | 0,14 |
| VCMT 160404-FK | VCMT 331-FK    | 9,525   | 4,76 | 0,40 | 4,40 | 0,32   | 0,10 | 1,80 | 0,10        | 0,05 | 0,20 |
| VCMT 160408-FK | VCMT 332-FK    | 9,525   | 4,76 | 0,80 | 4,40 | 0,32   | 0,14 | 1,80 | 0,14        | 0,07 | 0,27 |
| VCMT 110304-MP | VCMT 221-MP    | 6,350   | 3,18 | 0,40 | 2,80 | 0,77   | 0,31 | 2,55 | 0,15        | 0,10 | 0,25 |
| VCMT 110308-MP | VCMT 222-MP    | 6,350   | 3,18 | 0,80 | 2,80 | 0,77   | 0,61 | 2,55 | 0,20        | 0,13 | 0,33 |
| VCMT 160404-MP | VCMT 331-MP    | 9,525   | 4,76 | 0,40 | 4,40 | 0,72   | 0,23 | 2,70 | 0,14        | 0,07 | 0,20 |
| VCMT 160408-MP | VCMT 332-MP    | 9,525   | 4,76 | 0,80 | 4,40 | 0,72   | 0,45 | 2,70 | 0,18        | 0,09 | 0,27 |
| VCMT 160412-MP | VCMT 333-MP    | 9,525   | 4,76 | 1,20 | 4,40 | 0,72   | 0,54 | 2,70 | 0,22        | 0,11 | 0,32 |
| VCMT 110304-MM | VCMT 221-MM    | 6,350   | 3,18 | 0,40 | 2,80 | 0,77   | 0,31 | 2,55 | 0,15        | 0,10 | 0,25 |
| VCMT 110308-MM | VCMT 222-MM    | 6,350   | 3,18 | 0,80 | 2,80 | 0,77   | 0,61 | 2,55 | 0,20        | 0,13 | 0,33 |
| VCMT 160404-MM | VCMT 331-MM    | 9,525   | 4,76 | 0,40 | 4,40 | 0,72   | 0,23 | 2,70 | 0,14        | 0,07 | 0,20 |
| VCMT 160408-MM | VCMT 332-MM    | 9,525   | 4,76 | 0,80 | 4,40 | 0,72   | 0,45 | 2,70 | 0,18        | 0,09 | 0,27 |
| VCMT 160412-MM | VCMT 333-MM    | 9,525   | 4,76 | 1,20 | 4,40 | 0,72   | 0,54 | 2,70 | 0,22        | 0,11 | 0,32 |
| VCMT 110308-MK | VCMT 222-MK    | 6,350   | 3,18 | 0,80 | 2,80 | 0,77   | 0,61 | 2,55 | 0,20        | 0,13 | 0,33 |
| VCMT 160404-MK | VCMT 331-MK    | 9,525   | 4,76 | 0,40 | 4,40 | 0,72   | 0,23 | 2,70 | 0,14        | 0,07 | 0,20 |
| VCMT 160408-MK | VCMT 332-MK    | 9,525   | 4,76 | 0,80 | 4,40 | 0,72   | 0,45 | 2,70 | 0,18        | 0,09 | 0,27 |
| VCMT 160412-MK | VCMT 333-MK    | 9,525   | 4,76 | 1,20 | 4,40 | 0,72   | 0,54 | 2,70 | 0,22        | 0,11 | 0,32 |

# VC - RHOMBIC 35° POSITIVE

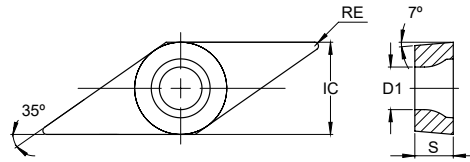
RÔMBICA 35° POSITIVA | RÓMBICA 35° POSITIVA

TURNING

|  |                         |                | P      |        |         |        |         |        |        |        |       |        |       | M      |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|--|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|  |                         |                | CVD    |        |         |        |         |        |        | PVD    |       |        |       | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |
|  |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5    | G4     | T1    | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas  | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PH910 | PH7920 | PH920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| <br>VCGT-FS<br>Finishing to<br>Fine Finishing | 1123861                 | VCGT 110301-FS |        |        |         |        |         |        |        | ⚠      |       |        |       |        |        | ⚠      | ⚠      |        | ⚠      |        |        |        |        | ⚠      | ⚠      |        |        | ⚠      |
|  | 1123862                 | VCGT 110302-FS |        |        |         |        |         |        |        |        |       |        |       |        |        |        | ⚠      | ⚠      |        | ⚠      |        |        |        |        | ⚠      | ⚠      |        | ⚠      |
|  | 1123863                 | VCGT 110304-FS |        |        |         |        |         |        |        | ⚠      |       |        |       |        |        |        | ⚠      | ⚠      |        | ⚠      |        |        |        |        | ⚠      | ⚠      |        | ⚠      |
| <br>VCGT-LN<br>Medium to Finishing            | 1124779                 | VCGT 110204-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |
|  | 1123689                 | VCGT 110301-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |
|  | 1121889                 | VCGT 110302-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |
|  | 1121890                 | VCGT 110304-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |
| PCBN & PCD inserts   | 1121891                 | VCGT 110308-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |
|  | 1124015                 | VCGT 130302-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |
|  | 1124016                 | VCGT 130304-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |
| Heavy turning  | 1124677                 | VCGT 130308-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |
|  | 1111878                 | VCGT 160402-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        | ⚠      |        |        |
|  | 1111533                 | VCGT 160404-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        | ⚠      |        |        |
|  | 1121893                 | VCGT 160408-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      | ⚠      | ⚠      |        |        |
| External Toolholders   | 1121894                 | VCGT 160412-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        | ○      |        |        |
|  | 1121929                 | VCGT 220530-LN |        |        |         |        |         |        |        |        |       |        |       |        |        |        |        |        |        |        |        |        |        | ⚠      |        |        |        |        |

⚠ First choice | 1ª Escolha | 1ª Opción     
 ○ Available under request | Disponível sob consulta | Disponible bajo consulta     
 Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code  
⚠ Stock items | Itens de stock     
 ⚠ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

RELIEF ANGLE 7°



| ISO Reference  | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |      |             |      |      |
|----------------|-----------------|---|------|------|------|--|------|------|-------------|------|------|
|                |                 | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX  | FN (mm/rev) | MIN  | MAX  |
| VCGT 110301-FS | VCGT 220.2-FS   | 6,350   | 3,18 | 0,10 | 2,80 | 0,30   | 0,10 | 1,00 | 0,03        | 0,01 | 0,08 |
| VCGT 110302-FS | VCGT 220.5-FS   | 6,350   | 3,18 | 0,20 | 2,80 | 0,50   | 0,10 | 1,50 | 0,07        | 0,02 | 0,12 |
| VCGT 110304-FS | VCGT 221-FS     | 6,350   | 3,18 | 0,40 | 2,80 | 1,00   | 0,30 | 2,50 | 0,15        | 0,08 | 0,25 |
| VCGT 110204-LN | VCGT 21.51-LN   | 6,350   | 2,42 | 0,40 | 2,80 | 1,53   | 0,05 | 3,00 | 0,15        | 0,10 | 0,25 |
| VCGT 110301-LN | VCGT 220.2-LN   | 6,350   | 3,18 | 0,10 | 2,80 | 1,53   | 0,05 | 3,00 | 0,04        | 0,02 | 0,06 |
| VCGT 110302-LN | VCGT 220.5-LN   | 6,350   | 3,18 | 0,20 | 2,80 | 1,53   | 0,05 | 3,00 | 0,07        | 0,05 | 0,12 |
| VCGT 110304-LN | VCGT 221-LN     | 6,350   | 3,18 | 0,40 | 2,80 | 1,53   | 0,05 | 3,00 | 0,15        | 0,10 | 0,25 |
| VCGT 110308-LN | VCGT 222-LN     | 6,350   | 3,18 | 0,80 | 2,80 | 1,53   | 0,05 | 3,00 | 0,22        | 0,15 | 0,45 |
| VCGT 130302-LN | VCGT 2.520.5-LN | 7,940   | 3,18 | 0,20 | 3,40 | 2,00   | 0,10 | 4,00 | 0,07        | 0,05 | 0,12 |
| VCGT 130304-LN | VCGT 2.521-LN   | 7,940   | 3,18 | 0,40 | 3,40 | 2,00   | 0,10 | 4,00 | 0,15        | 0,10 | 0,25 |
| VCGT 130308-LN | VCGT 2.522-LN   | 7,940   | 3,18 | 0,80 | 3,40 | 2,50   | 0,15 | 4,50 | 0,18        | 0,10 | 0,30 |
| VCGT 160402-LN | VCGT 330.5-LN   | 9,525   | 4,76 | 0,20 | 4,40 | 2,30   | 0,10 | 5,00 | 0,07        | 0,05 | 0,12 |
| VCGT 160404-LN | VCGT 331-LN     | 9,525   | 4,76 | 0,40 | 4,40 | 2,55   | 0,10 | 5,00 | 0,15        | 0,10 | 0,25 |
| VCGT 160408-LN | VCGT 332-LN     | 9,525   | 4,76 | 0,80 | 4,40 | 2,55   | 0,10 | 5,00 | 0,22        | 0,15 | 0,45 |
| VCGT 160412-LN | VCGT 333-LN     | 9,525   | 4,76 | 1,20 | 4,40 | 2,55   | 0,10 | 5,00 | 0,40        | 0,15 | 0,60 |
| VCGT 220530-LN | VCGT 43.57.5-LN | 12,700  | 5,56 | 3,00 | 5,50 | 3,55   | 0,10 | 7,00 | 0,80        | 0,15 | 1,60 |



INSERTS

# PCBN



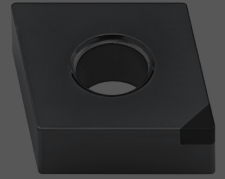
Polycrystalline Cubic Boron Nitride (PCBN) is extremely hard, surpassed only by diamond. However, unlike PCD, PCBN can safely be used for machining ferrous alloys. This material is unrivaled for finishing hardened steels and cast irons and can also be used for turning powder metal alloys and HRSA components.

O Nitreto de Boro Cúbico Policristalino (PCBN) é extremamente duro, apenas superado pelo diamante. No entanto, ao contrário do Diamante Policristalino (PCD), o PCBN pode ser usado com segurança para maquinar ligas ferrosas. Este material é incomparável para o acabamento de aços endurecidos e ferros fundidos, e também pode ser usado para torneamento de ligas de metal em pó e componentes de HRSA.

El Nitruro de Boro Cúbico Policristalino (PCBN) es extremadamente duro, solo superado por el diamante. Sin embargo, a diferencia del Diamante Policristalino (PCD), el PCBN se puede utilizar de manera segura para mecanizar aleaciones ferrosas. Este material es incomparable para el acabado de aceros endurecidos y hierros fundidos, y también se puede utilizar para el torneado de aleaciones de metal en polvo y componentes de HRSA.

## SINGLE TIP > page 586

- > 1 cutting edge  
1 aresta de corte | 1 arista de corte
- > Available in negative and positive inserts  
Disponível em pastilhas negativas e positivas | Disponible en plaquitas negativas y positivas



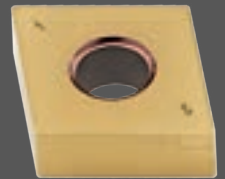
## MULTIPLE TIPS > page 586 | 596

- > 2, 3, 4 or 6 cutting edges  
2, 3, 4 ou 6 arestas de corte | 2, 3, 4 o 6 aristas de corte
- > Available in negative and positive inserts  
Disponível em pastilhas negativas e positivas | Disponible en plaquitas negativas y positivas



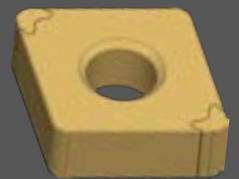
## NEW INTEGRAL TIPS > under request

- > 2, 3, 4 or 6 CBN tips without carbide base cutting edges  
2, 3, 4 ou 6 arestas de corte em CBN sem base de metal duro | 2, 3, 4 o 6 aristas de corte en CBN sin base de metal duro
- > Available in negative and positive inserts  
Disponível em pastilhas negativas e positivas | Disponible en plaquitas negativas y positivas



## NEW SOLID TIPS > page 590

- > 2, 3, 4 or 6 cutting edges  
2, 3, 4 ou 6 arestas de corte | 2, 3, 4 o 6 aristas de corte
- > Available in negative and positive inserts  
Disponível apenas em pastilhas negativas | Disponible solo en plaquitas negativas



## SOLID CBN > page 592

- > Round inserts from size 06 to 12  
Pastilhas redondas de tamanho 06 a 12 | Plaquitas redondas de talla 06 hasta 12
- > Possibility of regrinding  
Possibilidade de retificação | Posibilidad de rectificación



# C PCBN GRADES SELECTION

Seleção de graus | Selección de calidades

TURNING

PCBN (Polycrystalline-Cubic-Boron-Nitride) is not found in nature, it is a synthetic material which is the result of an high temperature and high pressure process (HTHP). When PCBN tips are brazed to a carbide insert a powerful cutting tool is born.

PCBN inserts excel in the finishing and semi-finishing process of hardened steels (45-68 HRC) as well as hard cast iron and heat-resistant super alloys (HRSA).

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

## Grades description Descrição de graus | Descripción de calidades

| Grade  | Code | Characteristics  | Application  |
|--------|------|--|--|
| PBY603 | Y5   | Low PCBN content grade with medium grain size and ceramic binder. Great wear and abrasion resistance.  | <ul style="list-style-type: none"> <li>For continuously and lightly interrupted cutting of Hardened Steel (H01-H10);</li> <li>Finishing abrasive high strength cast irons;</li> <li>Can also be used to machine HRSA (S01-S10);</li> </ul> |
| PBY620 | Y4   | Low PCBN content grade with medium grain size which provides enhanced crater and flank wear resistance with an excellent balance of toughness. | <ul style="list-style-type: none"> <li>For moderately to heavily interrupted turning of all hardened steels (H10-H20).</li> </ul>  |
| PBY625 | 4C   | Low PCBN content grade with very fine grain size for improved toughness.   | <ul style="list-style-type: none"> <li>Heavily interrupted machining of hardened steels.</li> </ul>  |
| PBH920 | S4   | High PCBN content with excellent abrasion resistance.  | <ul style="list-style-type: none"> <li>For machining all types of cast iron (K01-K30);</li> <li>First choice for machining ferrous powder metals;</li> <li>Can also be used to machine HRSA (S20-S30);</li> </ul>                          |
| PBY930 | W3   | High abrasive wear resistance; High impact toughness;  | <ul style="list-style-type: none"> <li>For Cast Iron with high Niquel and Chrome content (pumps and engine blocks).</li> </ul>   |
| PBY940 | W4   | High fracture toughness; High thermal conductivity;  | <ul style="list-style-type: none"> <li>For Alloy steels with high content of Cr, grey cast irons and hardened steels with Ni.</li> </ul>   |

NEW

NEW



# GEOMETRY SELECTION

Seleção da geometria | Selección de la geometria

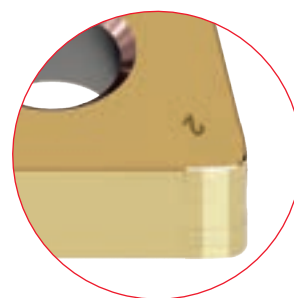
The insert geometry and edge preparation are extremely important in hard part turning since they have a significant influence on tool life and productivity. Palbit product range includes standard and wiper inserts. The standard nose radius generates the lowest cutting forces and has the lowest stability requirements while wiper gives an unbeatable combination of high productivity and excellent surface finish.

A large nose radius provides a greater edge strength and therefore extended tool life. For this reason, it is advised to use the largest allowed nose radius to each process requirements.

## Wiper insert Pastilha wiper | Plaquita wiper

**Wiper inserts provide two possibilities for process improvement:**

- Improved surface finish with standard cutting data;
- Maintained surface finish at substantially higher feed rate;



|                                     | Standard (RE = 0,8mm) | Wiper (RE= 0,8mm) |
|-------------------------------------|-----------------------|-------------------|
| Insert type                         |                       |                   |
| Surface Roughness (R <sub>a</sub> ) | 0,81 μm               | 0,42 μm           |

### Note

This values were achieved with the next cutting conditions:

H Steel HRC60 |  $v_c = 130$  m/min |  $f_n = 0,12$  mm/rev |  $a_p = 0,2$  mm |  $\lambda = 2,5$  mm / ISO 4287

## Formulas for surface roughness calculation

Fórmulas para calculo da rugosidade da superfície | Fórmulas para calcular la rugosidad de la superficie

$$R_a = 0,032 \times \frac{f_n^2}{r_\epsilon} \times 1000 \mu\text{m}$$

$$R_t = 3,91 \times R_a \mu\text{m}$$

$R_a$  - Mean Surface Roughness (μm)

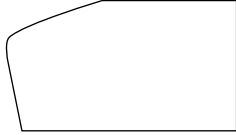
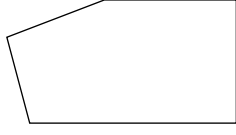


$R_t$  - Roughness Total Height (μm)

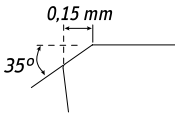

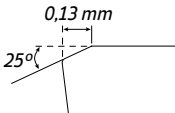

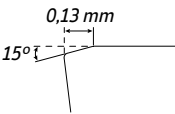

$f_n$  - Feed Rate (mm/rev)

$r_\epsilon$  - Insert Radius (mm)

The most important criteria for the stability and cutting edge tool-life is to define the correct cutting edge preparation. Its choice is mainly required in order to achieve the best economical result.

## Edge preparation Preparação de aresta | Preparación del filo

|                                 |   |  |  |
|---------------------------------|---|--|--|
| Cutting forces<br>edge strength | + | <b>S - Land</b><br>   | <b>S   Preparation with chamfer and honing - Standard</b> <ul style="list-style-type: none"> <li>First choice for hard part turning;</li> <li>Stronger edge than T - land, with more resistance to chipping and fracture, resulting in more predictable tool life;</li> <li>Generates consistent surface finish;</li> <li>Critical in interrupted cutting and when using large depth of cut;</li> <li>Feed rate must be greater than hone size;</li> </ul> |
|                                 |   | <b>T - Land</b><br>   | <b>T   Preparation with chamfer</b> <ul style="list-style-type: none"> <li>T - land is a common edge preparation for PCBN;</li> <li>Preferred choice for cast iron;</li> <li>Good alternative to S - land in hard part turning when reduced cutting forces and tighter tolerances are required;</li> </ul>   |
|                                 |   | <b>E - Land</b><br> | <b>E   Preparation with edge honing</b> <ul style="list-style-type: none"> <li>Recommended for HRSA finishing operation;</li> <li>Honing helps strengthen the edge, giving resistance to chipping and fracturing;</li> <li>Feed rates must be greater than the hone size to allow actual cutting action to take place and prevent rubbing;</li> </ul>  |
|                                 | - | <b>F - Land</b><br> | <b>F   Preparation without honing</b> <ul style="list-style-type: none"> <li>Sharp cutting edge;</li> <li>F - Standard is a common edge preparation for PCD;</li> <li>Recommended for aluminium or other non-ferrous materials;</li> </ul>   |

| Honing Types                                    | Specifications  |
|---|---|
| <b>S3515</b><br>For interrupted machining       |  <span style="float: right;">  Difficult Conditions         </span> |
| <b>S2513</b><br>For general purpose machining   |  <span style="float: right;">  Average Conditions         </span>   |
| <b>S1513</b><br>For stable continuous machining |  <span style="float: right;">  Good Conditions         </span>      |

**Note**  
Based on our experience sometimes it is necessary to define edge preparation during several tests to provide the best possible solution for each application.

# CHIP BREAKER TAILOR-MADE

Quebra-aperas personalizados | Rompevirutas personalizados

Our laser machining and grinding machining technology can reach a wide range of tailor-made solutions. The chip breakers can be customized according to our customer's needs and still remain with a high cutting edge quality.

## PCBN recommended cutting data

Condições de corte recomendadas para PCBN | Datos de corte recomendadas para PCBN

| Workpiece material  | Recommend grade for PCBN |        |        |        | VC (m/min)  |            |
|---|--------------------------|--------|--------|--------|-------------|------------|
|   | PBH920                   | PBY603 | PBY620 | PBY625 |             |            |
| Hardened Steel (HRC 45-68)<br>Tool-Steel, Case Hardened Steel,<br>Continuous Cut<br>(recommended without Coolants)  |                          | ⊗      |        |        | Semi-finish | 80 - 200   |
|   |                          |        |        |        | Finish      | 80 - 180   |
| Hardened Steel (HRC 45-68)<br>Tool-Steel, Case Hardened Steel,<br>Interrupted Cut<br>(recommended without Coolants) | ○                        |        | ⊗      | NEW ⊗  | Semi-finish | 70 - 180   |
|   |                          |        |        | ⊗      | Finish      | 70 - 160   |
| Grey Cast Iron  | ⊗                        |        |        |        | Semi-finish | 500 - 1000 |
|   |                          |        |        |        | Finish      | 600 - 2000 |
| High Temperature Alloys (Inconel,<br>Waspoloy, Hasteloy)<br>Exotic and High Nickel + Cobalt basis                   | ⊗                        | ⊗      |        |        | Finish      | 50 - 300   |

⊗ Recommended ○ Second choice

|   |  |   |         |
|---|--|---|---------|
| H |  | M |         |
| O |  | V |         |
| P |  | W |         |
| S |  | L |         |
| T |  | A |         |
| C |  | B |         |
| D |  | K |         |
| E |  | R |         |
| F |  | X | Special |

**1- Insert shape symbol**

| Symbol | m (mm)      | d (mm)      | s (mm) |
|--------|-------------|-------------|--------|
| A      | ±0.005      | ±0.025      | ±0.025 |
| F      | ±0.005      | ±0.013      | ±0.025 |
| C      | ±0.013      | ±0.025      | ±0.025 |
| H      | ±0.013      | ±0.013      | ±0.025 |
| E      | ±0.025      | ±0.025      | ±0.025 |
| G      | ±0.025      | ±0.025      | ±0.13  |
| J      | ±0.005      | ±0.05~±0.13 | ±0.025 |
| K*     | ±0.013      | ±0.05~±0.13 | ±0.025 |
| L*     | ±0.025      | ±0.05~±0.13 | ±0.025 |
| M*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.13  |
| N*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.025 |
| U*     | ±0.13~±0.38 | ±0.08~±0.25 | ±0.13  |

**Detailed dimension of M class insert**  
Insert height Tolerances (mm)

| Inscribed circle | T     | S     | C     | D     | V     |
|------------------|-------|-------|-------|-------|-------|
| 6.35             | ±0.08 | -     | -     | -     | -     |
| 9.525            | ±0.08 | ±0.08 | ±0.11 | ±0.10 | ±0.13 |
| 12.70            | ±0.13 | ±0.13 | ±0.13 | ±0.15 | -     |
| 15.875           | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 19.05            | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 25.40            | -     | ±0.18 | -     | -     | -     |
| 31.75            | -     | ±0.25 | -     | -     | -     |

**Inscribed circle Tolerances (mm)**

| Inscribed circle | T     | S     | C     | D     | V     |
|------------------|-------|-------|-------|-------|-------|
| 6.35             | ±0.05 | -     | -     | -     | -     |
| 9.525            | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 |
| 12.70            | ±0.08 | ±0.08 | ±0.08 | ±0.08 | ±0.08 |
| 15.875           | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 |
| 19.05            | -     | -     | -     | -     | ±0.10 |
| 25.40            | -     | ±0.13 | -     | -     | ±0.10 |
| 31.75            | -     | ±0.20 | -     | -     | ±0.12 |

**As a rule, the sides of these inserts are as sintered. Tolerance differs with insert size, for the accuracy of class M, refer to the table on the right.**

**3 - Tolerances symbol**

| A | B | C | D | E                     |
|---|---|---|---|-----------------------|
|   |   |   |   |                       |
| F | G | N | P | O                     |
|   |   |   |   | Other clearance angle |

**2 - Normal clearance symbol**



| 4 - Insert symbol |           |                                      |                          |       |        |              |            |                            |            |
|-------------------|-----------|--------------------------------------|--------------------------|-------|--------|--------------|------------|----------------------------|------------|
| symbol            | Type      | Hole type                            | Chip breaker             | Shape | symbol | Type         | Hole type  | Chip breaker               | Shape      |
| W                 | with hole | Round hole one countersink (40°-60°) | Without chip breaker     |       | G      | with hole    | Round hole | Chip breaker on both sides |            |
| T                 |           |                                      | Chip breaker on one side |       | N      | without hole | -          | Without chip breaker       |            |
| A                 | with hole | Round hole                           | Without chip breaker     |       | R      |              | -          | Chip breaker on one side   |            |
| M                 |           |                                      | Chip breaker on one side |       | X      | -            | -          | -                          | On request |

# TURNING PCBN INSERTS ISO IDENTIFICATION SYSTEM

Sistema de identificación ISO para pastillas de PCBN | Codificación ISO para plaquitas de PCBN

| R's  | 35°<br>V's | 55°<br>D's | 80°<br>C's | 90°<br>S's | 60°<br>T's | 80°<br>W's | IC     |       | ANSI   |
|------|------------|------------|------------|------------|------------|------------|--------|-------|--------|
|      |            |            |            |            |            |            | mm     | inch  | Symbol |
| -    | 06         | 04         | -          | 03         | 06         | 02         | 3,97   | 5/32  | 1,20   |
| -    | 08         | 05         | 04         | 04         | 08         | L3         | 4,76   | 3/16  | 1,50   |
| -    | 09         | 06         | 05         | 05         | 09         | 03         | 5,56   | 7/32  | 1,80   |
| 06** | -          | -          | -          | -          | -          | -          | 6,00   | 0,236 |        |
| 06*  | 11         | 07         | 06         | 06         | 11         | 04         | 6,35   | 1/4   | 2,00   |
| 07*  | 13         | 09         | 08         | 07         | 13         | 05         | 7,94   | 5/16  | 2,50   |
| 08*  | -          | -          | -          | -          | -          | -          | 8,00   | 0,315 |        |
| 09*  | 16         | 11         | 09         | 09         | 16         | 06         | 9,525  | 3/8   | 3,00   |
| 10** | -          | -          | -          | -          | -          | -          | 10,00  | 0,394 |        |
| 12** | -          | -          | -          | -          | -          | -          | 12,00  | 0,472 |        |
| 12*  | 22         | 15         | 12         | 12         | 22         | 08         | 12,70  | 1/2   | 4,00   |
| 15*  | 27         | 19         | 16         | 15         | 27         | 10         | 15,875 | 5/8   | 5,00   |
| 16** | -          | -          | -          | -          | -          | -          | 16,00  | 0,63  |        |
| 19*  | 33         | 23         | 19         | 19         | 33         | 13         | 19,05  | 3/4   | 6,00   |
| 20** | -          | -          | -          | -          | -          | -          | 20,00  | 0,787 |        |
| 25** | -          | -          | -          | -          | -          | -          | 25,00  | 0,984 |        |
| 25*  | 44         | 31         | 25         | 25         | 44         | 17         | 25,40  | 1,00  | 8,00   |
| 31*  | 54         | 38         | 32         | 31         | 54         | 21         | 31,75  | 1 1/4 | 10,00  |
| 32** | -          | -          | -          | -          | -          | -          | 32,00  | 1,26  |        |

\* ANSI designation only (Radius Designation is R0)

\*\* Metric designation only (Radius Designation is M0)

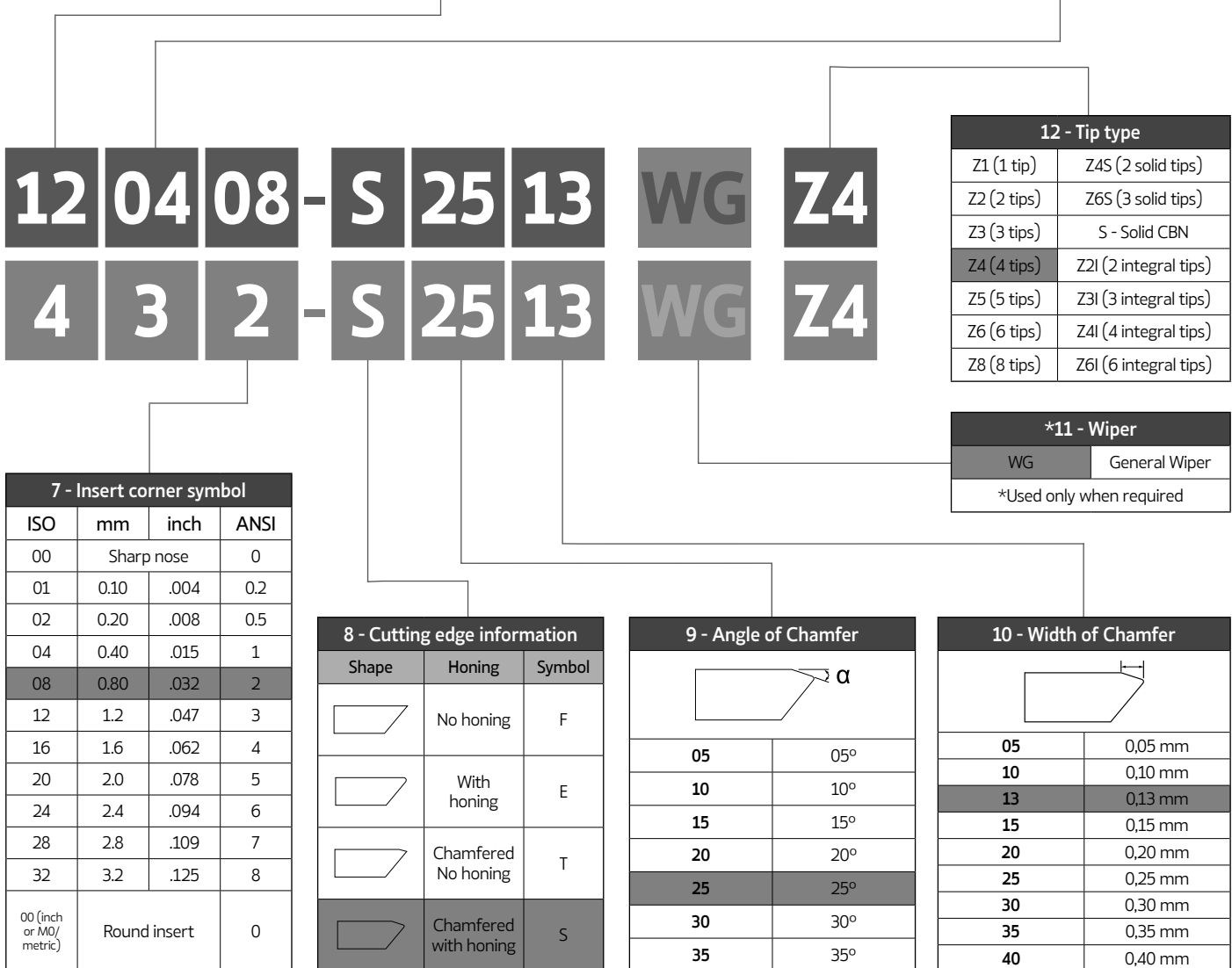
According to International Standard ISO 1832 - 2012(E)

"Indexable inserts for cutting tools - Designation"

| ISO | mm    | ANSI | inch  |
|-----|-------|------|-------|
| 01  | 1.59  | 1    | 0.062 |
| T1  | 1.98  | 1.2  | 0.078 |
| 02  | 2.38  | 1.5  | 0.094 |
| 03  | 3.18  | 2    | 0.125 |
| T3  | 3.97  | 2.5  | 0.156 |
| 04  | 4.76  | 3    | 0.188 |
| 05  | 5.56  | 3.5  | 0.219 |
| 06  | 6.35  | 4    | 0.250 |
| 07  | 7.94  | 5    | 0.312 |
| 09  | 9.52  | 6    | 0.375 |
| 12  | 12.70 | 8    | 0.500 |

5 - Insert size symbol

6 - Insert thickness symbol





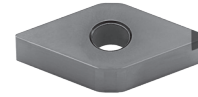
**CNGA Z1**  
Single Tip



Size 12

Page C - 586

**DNGA Z1**  
Single Tip



Size 15

Page C - 586

**CNGA Z2 | Z4**  
Multiple Tips



Size 12

Page C - 586

**DNGA Z2 | Z4**  
Multiple Tips



Size 11 | 15

Page C - 586

**SNGA Z4**  
Multiple Tips



Size 12

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**TNGA Z3 | Z6**  
Multiple Tips



Size 16

Page C - 588

**VNGA Z2**  
Multiple Tips



Size 16

Page C - 588

**WNGA Z3 | Z6**  
Multiple Tips



Size 08

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## NEGATIVE PCBN INSERTS OVERVIEW

Vista genérica de pastilhas negativas PCBN | Visión general de plaquitas negativas de PCBN

| CNGA Z4S<br>Solid Tips  | DNGA Z4S<br>Solid Tips  | TNGA Z6S<br>Solid Tips   | VNGA Z4S<br>Solid Tips  |
|---|---|--|---|
| NEW   | NEW   | NEW  | NEW   |
|  |  |  |  |
| Size 12   | Size 11   15  | Size 16  | Size 16   |
| Page C - 590  | Page C - 590  | Page C - 590   | Page C - 590  |

### RNGN S Solid CBN

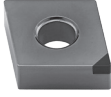
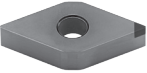








Size 06 | 09 | 12

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# PCBN NEGATIVE INSERTS

TURNING

| Inserts<br>Pastilhas<br>Plaquetas  | (1)<br>Geometry code | (2) Grade code          |                         | K                    | H  |    |
|--|----------------------|-------------------------|-------------------------|----------------------|----|----|
|  |                      | ISO Reference           | ANSI Reference          | S4                   | Y5 | Y4 |
| PBH920   |                      |                         |                         |                      |    |    |
| PBV603   |                      |                         |                         |                      |    |    |
| PBV620   |                      |                         |                         |                      |    |    |
| SINGLE TIP   |                      |                         |                         |                      |    |    |
|             | CNGA Z1              | 1124300                 | CNGA 120404-S2513 Z1    | CNGA 431-S2513 Z1    | ○  |    |
|  |                      | 1124111                 | CNGA 120408-S2513 Z1    | CNGA 432-S2513 Z1    | ⊗  |    |
|  |                      | 1124301                 | CNGA 120412-S2513 Z1    | CNGA 433-S2513 Z1    | ○  |    |
|  |                      | 1124302                 | CNGA 120416-S2513 Z1    | CNGA 434-S2513 Z1    | ○  |    |
|             | DNGA Z1              | 1124306                 | DNGA 150404-S2513 Z1    | DNGA 431-S2513 Z1    | ○  | ○  |
|  |                      | 1124112                 | DNGA 150408-S2513 Z1    | DNGA 432-S2513 Z1    | ⊗  | ○  |
|  |                      | 1124536                 | DNGA 150412-S2513 Z1    | DNGA 433-S2513 Z1    | ○  | ○  |
|  |                      | 1124307                 | DNGA 150608-S2513 Z1    | DNGA 442-S2513 Z1    | ○  |    |
|  |                      | 1124308                 | DNGA 150612-S2513 Z1    | DNGA 443-S2513 Z1    | ○  |    |
| MULTIPLE TIP   |                      |                         |                         |                      |    |    |
|             | CNGA Z2              | 1124343                 | CNGA 120402-S2513 Z2    | CNGA 431.5-S2513 Z2  | ○  |    |
|  |                      | 1124344                 | CNGA 120404-S2513 Z2    | CNGA 431-S2513 Z2    | ⊗  | ⊗  |
|  |                      | 1124175                 | CNGA 120408-S2513 Z2    | CNGA 432-S2513 Z2    | ⊗  | ⊗  |
|  |                      | 1124568                 | CNGA 120408-S3515 Z2    | CNGA 432-S3515 Z2    |    | ⊗  |
|  |                      | 1124468                 | CNGA 120412-S2513 Z2    | CNGA 433-S2513 Z2    | ⊗  | ⊗  |
|  | 1124569              | CNGA 120412-S3515 Z2    | CNGA 433-S3515 Z2       |                      | ○  |    |
|           | CNGA Z4              | 1124474                 | CNGA 120404-S2513 Z4    | CNGA 431-S2513 Z4    |    | ⊗  |
|  |                      | 1124692                 | CNGA 120408-S1513 Z4    | CNGA 432-S1513 Z4    | ○  |    |
|  |                      | 1124134                 | CNGA 120408-S2513 Z4    | CNGA 432-S2513 Z4    | ○  | ○  |
|  |                      | 1124570                 | CNGA 120408-S3515 Z4    | CNGA 432-S3515 Z4    |    | ○  |
|  |                      | 1124475                 | CNGA 120412-S2513 Z4    | CNGA 433-S2513 Z4    |    | ○  |
|  | 1124571              | CNGA 120412-S3515 Z4    | CNGA 433-S3515 Z4       |                      | ○  |    |
| <br>Wiper | CNGA WG Z4           | 1124534                 | CNGA 120404-S1513 WG Z4 | CNGA 431-S1513 WG Z4 |    | ○  |
|  |                      | 1124535                 | CNGA 120404-S2513 WG Z4 | CNGA 431-S2513 WG Z4 |    | ○  |
|  |                      | 1124517                 | CNGA 120408-S1513 WG Z4 | CNGA 432-S1513 WG Z4 |    | ○  |
|  |                      | 1124518                 | CNGA 120408-S2513 WG Z4 | CNGA 432-S2513 WG Z4 |    | ○  |
|  | 1125024              | CNGA 120412-S1513 WG Z4 | CNGA 433-S1513 WG Z4    |                      | ○  |    |
|           | DNGA Z2              | 1124616                 | DNGA 110404-S2513 Z2    | DNGA 331-S2513 Z2    |    | ⊗  |
|  |                      | 1124615                 | DNGA 110408-S2513 Z2    | DNGA 332-S2513 Z2    |    | ⊗  |
|  |                      | 1124617                 | DNGA 110412-S2513 Z2    | DNGA 333-S2513 Z2    |    | ⊗  |
|  |                      | 1124482                 | DNGA 150404-S2513 Z2    | DNGA 431-S2513 Z2    |    | ⊗  |
|  |                      | 1124483                 | DNGA 150408-S2513 Z2    | DNGA 432-S2513 Z2    |    | ⊗  |
|  |                      | 1124537                 | DNGA 150412-S2513 Z2    | DNGA 433-S2513 Z2    | ○  | ⊗  |
|           | DNGA Z4              | 1124348                 | DNGA 150604-S2513 Z2    | DNGA 441-S2513 Z2    | ⊗  | ⊗  |
|  |                      | 1124177                 | DNGA 150608-S2513 Z2    | DNGA 442-S2513 Z2    | ⊗  | ⊗  |
|  |                      | 1124572                 | DNGA 150608-S3515 Z2    | DNGA 442-S3515 Z2    |    | ○  |
|  |                      | 1124377                 | DNGA 150612-S2513 Z2    | DNGA 443-S2513 Z2    | ⊗  | ⊗  |
|  |                      | 1124573                 | DNGA 150612-S3515 Z2    | DNGA 443-S3515 Z2    |    | ○  |
|           | DNGA Z4              | 1124479                 | DNGA 150604-S2513 Z4    | DNGA 441-S2513 Z4    |    | ⊗  |
|  |                      | 1124133                 | DNGA 150608-S2513 Z4    | DNGA 442-S2513 Z4    | ○  | ○  |
|  |                      | 1124575                 | DNGA 150608-S3515 Z4    | DNGA 442-S3515 Z4    |    | ○  |
|  |                      | 1124480                 | DNGA 150612-S2513 Z4    | DNGA 443-S2513 Z4    |    | ○  |
|  |                      | 1124576                 | DNGA 150612-S3515 Z4    | DNGA 443-S3515 Z4    |    | ○  |

⊗ Stock Items | Itens de stock

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code







# PCBN NEGATIVE INSERTS

Single tip | Multiple tips

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |        |      |      |      |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|--------|------|------|------|------|--|------|------|-----------|------|------|--|
| CDEC  | IC     | S    | RE   | D1   | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| SINGLE TIP  |        |      |      |      |      |  |      |      |           |      |      |  |
| 1   | 12,70  | 4,76 | 0,40 | 5,16 | 2,50 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 1   | 12,70  | 4,76 | 0,80 | 5,16 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 1   | 12,70  | 4,76 | 1,20 | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 1   | 12,70  | 4,76 | 1,60 | 5,16 | 2,20 | 0,30   | 0,05 | 0,50 | 0,15      | 0,08 | 0,30 |  |
| 1   | 12,70  | 4,76 | 0,40 | 5,16 | 2,50 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 1   | 12,70  | 4,76 | 0,80 | 5,16 | 2,50 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 1   | 12,70  | 4,76 | 1,20 | 5,16 | 2,20 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 1   | 12,70  | 6,35 | 0,80 | 5,16 | 2,50 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 1   | 12,70  | 6,35 | 1,20 | 5,16 | 2,20 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| MULTIPLE TIP  |        |      |      |      |      |  |      |      |           |      |      |  |
| 2   | 12,70  | 4,76 | 0,20 | 5,16 | 2,60 | 0,15   | 0,08 | 0,38 | 0,05      | 0,05 | 0,20 |  |
| 2   | 12,70  | 4,76 | 0,40 | 5,16 | 2,50 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 2   | 12,70  | 4,76 | 0,80 | 5,16 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 2   | 12,70  | 4,76 | 0,80 | 5,16 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 2   | 12,70  | 4,76 | 1,20 | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 2   | 12,70  | 4,76 | 1,20 | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,70  | 4,76 | 0,40 | 5,16 | 2,50 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 4   | 12,70  | 4,76 | 0,80 | 5,16 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,70  | 4,76 | 0,80 | 5,16 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,70  | 4,76 | 0,80 | 5,16 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,70  | 4,76 | 1,20 | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,70  | 4,76 | 1,20 | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,70  | 4,76 | 0,40 | 5,16 | 2,40 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 4   | 12,70  | 4,76 | 0,40 | 5,16 | 2,40 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 4   | 12,70  | 4,76 | 0,80 | 5,16 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,70  | 4,76 | 0,80 | 5,16 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,70  | 4,76 | 0,80 | 5,16 | 2,40 | 2,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 2   | 9,525  | 4,76 | 0,40 | 3,81 | 2,50 | 0,10   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 2   | 9,525  | 4,76 | 0,80 | 3,81 | 2,00 | 0,15   | 0,08 | 0,40 | 0,10      | 0,08 | 0,30 |  |
| 2   | 9,525  | 4,76 | 1,20 | 3,81 | 2,00 | 0,20   | 0,08 | 0,40 | 0,15      | 0,08 | 0,30 |  |
| 2   | 12,700 | 4,76 | 0,40 | 5,16 | 2,50 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 2   | 12,700 | 4,76 | 0,80 | 5,16 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 2   | 12,700 | 4,76 | 1,20 | 5,16 | 2,20 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 2   | 12,700 | 6,35 | 0,40 | 5,16 | 2,50 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 2   | 12,700 | 6,35 | 0,80 | 5,16 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 2   | 12,700 | 6,35 | 0,80 | 5,16 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 2   | 12,700 | 6,35 | 1,20 | 5,16 | 2,00 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 2   | 12,700 | 6,35 | 1,20 | 5,16 | 2,00 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,700 | 6,35 | 0,40 | 5,16 | 2,50 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 4   | 12,700 | 6,35 | 0,80 | 5,16 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,700 | 6,35 | 0,80 | 5,16 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,700 | 6,35 | 1,20 | 5,16 | 1,70 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,700 | 6,35 | 1,20 | 5,16 | 1,70 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |

# PCBN NEGATIVE INSERTS

TURNING

|   |                      |                      |                     | K              | H      |        |
|---|----------------------|----------------------|---------------------|----------------|--------|--------|
|   |                      |                      |                     | S4             | Y5     | Y4     |
|   |                      |                      |                     | (2) Grade code |        |        |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry code | ISO Reference        | ANSI Reference      | PBH920         | PBY603 | PBY620 |
| MULTIPLE TIP  |                      |                      |                     |                |        |        |
|    | 1124178              | SNGA 120404-S2513 Z4 | SNGA 431-S2513 Z4   | ○              | ○      | ⊗      |
|   | 1124538              | SNGA 120404-T2513 Z4 | SNGA 431-T2513 Z4   | ○              |        |        |
|   | 1124354              | SNGA 120408-S2513 Z4 | SNGA 432-S2513 Z4   | ○              | ○      | ⊗      |
|   | 1124577              | SNGA 120408-S3515 Z4 | SNGA 432-S3515 Z4   |                |        | ○      |
|   | 1124433              | SNGA 120408-T2513 Z4 | SNGA 432-T2513 Z4   | ⊗              |        |        |
|   | 1124539              | SNGA 120412-S2513 Z4 | SNGA 433-S2513 Z4   |                | ○      | ⊗      |
|   | 1124578              | SNGA 120412-S3515 Z4 | SNGA 433-S3515 Z4   |                |        | ○      |
|   | 1124540              | SNGA 120412-T2513 Z4 | SNGA 433-T2513 Z4   | ○              |        |        |
|    | 1124357              | TNGA 160404-S2513 Z3 | TNGA 331-S2513 Z3   | ○              | ⊗      | ⊗      |
|   | 1124179              | TNGA 160408-S2513 Z3 | TNGA 332-S2513 Z3   | ○              | ⊗      | ⊗      |
|   | 1124579              | TNGA 160408-S3515 Z3 | TNGA 332-S3515 Z3   |                |        | ○      |
|   | 1124469              | TNGA 160412-S2513 Z3 | TNGA 333-S2513 Z3   | ○              | ⊗      | ⊗      |
|   | 1124746              | TNGA 160412-S3515 Z3 | TNGA 333-S3515 Z3   |                |        | ⊗      |
|   | 1124603              | TNGA 160416-S2513 Z3 | TNGA 334-S2513 Z3   |                | ⊗      | ⊗      |
|   | 1124604              | TNGA 160420-S2513 Z3 | TNGA 335-S2513 Z3   |                | ⊗      | ⊗      |
|  | 1124477              | TNGA 160404-S2513 Z6 | TNGA 331-S2513 Z6   | ⊗              | ⊗      | ○      |
|   | 1124097              | TNGA 160408-S2513 Z6 | TNGA 332-S2513 Z6   | ⊗              | ⊗      | ○      |
|   | 1124581              | TNGA 160408-S3515 Z6 | TNGA 332-S3515 Z6   |                |        | ○      |
|   | 1125023              | TNGA 160412-S1513 Z6 | TNGA 333-S1513 Z6   |                | ⊗      |        |
|   | 1124478              | TNGA 160412-S2513 Z6 | TNGA 333-S2513 Z6   |                | ⊗      | ○      |
|   | 1124582              | TNGA 160412-S3515 Z6 | TNGA 333-S3515 Z6   |                |        | ○      |
|  | 1124361              | VNGA 160402-S2513 Z2 | VNGA 331.5-S2513 Z2 | ○              |        |        |
|   | 1124163              | VNGA 160404-S2513 Z2 | VNGA 331-S2513 Z2   | ○              | ⊗      | ⊗      |
|   | 1124098              | VNGA 160408-S2513 Z2 | VNGA 332-S2513 Z2   | ○              | ⊗      | ⊗      |
|   | 1124470              | VNGA 160412-S2513 Z2 | VNGA 333-S2513 Z2   | ○              | ⊗      | ⊗      |
|  | 1124471              | WNGA 080404-S2513 Z3 | WNGA 431-S2513 Z3   | ○              | ⊗      | ⊗      |
|   | 1124472              | WNGA 080408-S2513 Z3 | WNGA 432-S2513 Z3   | ○              | ⊗      | ⊗      |
|   | 1124583              | WNGA 080408-S3515 Z3 | WNGA 432-S3515 Z3   |                |        | ○      |
|   | 1124473              | WNGA 080412-S2513 Z3 | WNGA 433-S2513 Z3   | ○              | ⊗      | ⊗      |
|   | 1124584              | WNGA 080412-S3515 Z3 | WNGA 433-S3515 Z3   |                |        | ○      |
|  | 1124589              | WNGA 080404-S2513 Z6 | WNGA 431-S2513 Z6   |                | ○      | ○      |
|   | 1124588              | WNGA 080408-S2513 Z6 | WNGA 432-S2513 Z6   |                | ○      | ○      |
|   | 1124585              | WNGA 080408-S3515 Z6 | WNGA 432-S3515 Z6   |                |        | ○      |
|   | 1124587              | WNGA 080412-S2513 Z6 | WNGA 433-S2513 Z6   |                | ○      | ○      |
|   | 1124586              | WNGA 080412-S3515 Z6 | WNGA 433-S3515 Z6   |                |        | ○      |

⊗ Stock Items | Itens de stock

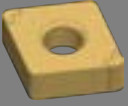
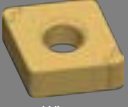
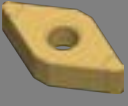


○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

# PCBN NEGATIVE INSERTS

Multiple tips

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |        |      |       |      |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|--------|------|-------|------|------|--|------|------|-----------|------|------|--|
| CDEC  | IC     | S    | RE    | D1   | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| MULTIPLE TIP  |        |      |       |      |      |  |      |      |           |      |      |  |
| 4   | 12,700 | 4,76 | 0,40  | 5,16 | 2,40 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 4   | 12,700 | 4,76 | 0,40  | 5,16 | 2,40 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 4   | 12,700 | 4,76 | 0,80  | 5,16 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 0,80  | 5,16 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 1,20  | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 1,20  | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 1,20  | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 1,20  | 5,16 | 2,30 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 3   | 9,525  | 4,76 | 0,40  | 3,81 | 2,30 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 3   | 9,525  | 4,76 | 0,80  | 3,81 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 3   | 9,525  | 4,76 | 0,80  | 3,81 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 3   | 9,525  | 4,76 | 1,20  | 3,81 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 3   | 9,525  | 4,76 | 1,20  | 3,81 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 3   | 9,525  | 4,76 | 1,60  | 3,81 | 3,00 | 0,30   | 0,08 | 0,70 | 0,14      | 0,10 | 0,35 |  |
| 3   | 9,525  | 4,73 | 2,00  | 3,81 | 3,00 | 0,35   | 0,10 | 0,55 | 0,16      | 0,10 | 0,40 |  |
| 6   | 9,525  | 4,76 | 0,40  | 3,81 | 2,30 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 6   | 9,525  | 4,76 | 0,80  | 3,81 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 6   | 9,525  | 4,76 | 0,80  | 3,81 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 6   | 9,525  | 4,76 | 1,20  | 3,81 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 6   | 9,525  | 4,76 | 1,20  | 3,81 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 6   | 9,525  | 4,76 | 1,20  | 3,81 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 2   | 9,525  | 4,76 | 20,00 | 3,81 | 3,00 | 0,13   | 0,08 | 0,50 | 0,05      | 0,05 | 0,20 |  |
| 2   | 9,525  | 4,76 | 0,40  | 3,81 | 2,80 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 2   | 9,525  | 4,76 | 0,80  | 3,81 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 2   | 9,525  | 4,76 | 1,20  | 3,81 | 1,90 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 3   | 12,700 | 4,76 | 0,40  | 5,16 | 2,30 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 3   | 12,700 | 4,76 | 0,80  | 5,16 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 3   | 12,700 | 4,76 | 0,80  | 5,16 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 3   | 12,700 | 4,76 | 1,20  | 5,16 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 3   | 12,700 | 4,76 | 1,20  | 5,16 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 6   | 12,700 | 4,76 | 1,20  | 5,16 | 2,00 | 0,25   | 0,08 | 0,40 | 0,12      | 0,08 | 0,30 |  |
| 6   | 12,700 | 4,76 | 0,80  | 5,16 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 6   | 12,700 | 4,76 | 0,80  | 5,16 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 6   | 12,700 | 4,76 | 0,40  | 5,16 | 2,30 | 0,15   | 0,08 | 0,60 | 0,08      | 0,05 | 0,20 |  |
| 6   | 12,700 | 4,76 | 1,20  | 5,16 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |

| Inserts<br>Pastilhas<br>Plaquitas  | (1)<br>Geometry code | (2) Grade code           |                       | H      |        |        |
|--|----------------------|--------------------------|-----------------------|--------|--------|--------|
|  |                      |                          |                       | Y5     | Y4     | 4C     |
|  |                      | ISO Reference            | ANSI Reference        | PBYG03 | PBYG20 | PBYG25 |
| SOLID TIPS   |                      |                          |                       |        |        |        |
| <b>NEW</b> CNGA Z4S<br>             | 1124982              | CNGA 120404-S2515 Z4S    | CNGA 431-S2515 Z4S    |        |        | ○      |
|  | 1124983              | CNGA 120408-S2515 Z4S    | CNGA 432-S2515 Z4S    |        |        | ⊗      |
|  | 1124804              | CNGA 120412-S2513 Z4S    | CNGA 433-S2513 Z4S    |        |        | ⊗      |
| <b>NEW</b> CNGA WG Z4S<br><br>Wiper | 1125025              | CNGA 120412-S1513 WG Z4S | CNGA 433-S1513 WG Z4S | ○      |        |        |
| <b>NEW</b> DNGA Z4S<br>             | 1124992              | DNGA 110404-S2515 Z4S    | DNGA 331-S2515 Z4S    |        |        | ○      |
|  | 1124993              | DNGA 110408-S2515 Z4S    | DNGA 332-S2515 Z4S    |        |        | ⊗      |
|  | 1124994              | DNGA 110412-S2515 Z4S    | DNGA 333-S2515 Z4S    |        |        | ⊗      |
|  | 1124986              | DNGA 150404-S2515 Z4S    | DNGA 431-S2515 Z4S    |        |        | ○      |
|  | 1124987              | DNGA 150408-S2515 Z4S    | DNGA 432-S2515 Z4S    |        |        | ⊗      |
|  | 1124988              | DNGA 150412-S2515 Z4S    | DNGA 433-S2515 Z4S    |        |        | ⊗      |
| <b>NEW</b> TNGA Z6S<br>           | 1124984              | TNGA 160404-S2515 Z6S    | TNGA 331-S2515 Z6S    |        |        | ○      |
|  | 1124985              | TNGA 160408-S2515 Z6S    | TNGA 332-S2515 Z6S    |        |        | ⊗      |
|  | 1124960              | TNGA 160412-S1513 Z6S    | TNGA 333-S1513 Z6S    | ⊗      |        |        |
|  | 1124836              | TNGA 160412-S2513 Z6S    | TNGA 333-S2513 Z6S    |        |        | ⊗      |
|  | 1125026              | TNGA 160420-S2513 Z6S    | TNGA 335-S2513 Z6S    | ⊗      | ⊗      |        |
| <b>NEW</b> VNGA Z4S<br>           | 1124995              | VNGA 160404-S2515 Z4S    | VNGA 331-S2515 Z4S    |        |        | ○      |
|  | 1124996              | VNGA 160408-S2515 Z4S    | VNGA 332-S2515 Z4S    |        |        | ⊗      |
|  | 1124997              | VNGA 160412-S2515 Z4S    | VNGA 333-S2515 Z4S    |        |        | ⊗      |

⊗ Stock items | Itens de stock

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

# PCBN NEGATIVE INSERTS


Solid tips

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |        |      |      |      |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|--------|------|------|------|------|--|------|------|-----------|------|------|--|
| CDEC  | IC     | S    | RE   | D1   | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| SOLID TIPS  |        |      |      |      |      |  |      |      |           |      |      |  |
| 4   | 12,700 | 4,76 | 0,40 | 5,16 | 2,20 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 4   | 12,700 | 4,76 | 0,80 | 5,16 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 1,20 | 5,16 | 2,00 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 1,20 | 5,16 | 2,10 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 4   | 9,525  | 4,76 | 0,40 | 3,81 | 2,20 | 0,10   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 4   | 9,525  | 4,76 | 0,80 | 3,81 | 2,10 | 0,15   | 0,08 | 0,40 | 0,10      | 0,08 | 0,30 |  |
| 4   | 9,525  | 4,76 | 1,20 | 3,81 | 2,00 | 0,20   | 0,08 | 0,40 | 0,15      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 0,40 | 5,16 | 2,20 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 4   | 12,700 | 4,76 | 0,80 | 5,16 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 12,700 | 4,76 | 1,20 | 5,16 | 2,00 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |
| 6   | 9,525  | 4,76 | 0,40 | 3,81 | 2,20 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 6   | 9,525  | 4,76 | 0,80 | 3,81 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 6   | 9,525  | 4,76 | 1,20 | 3,81 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 6   | 9,525  | 4,76 | 1,20 | 3,81 | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |  |
| 6   | 9,525  | 4,76 | 2,00 | 3,81 | 2,50 | 0,35   | 0,10 | 0,70 | 0,16      | 0,10 | 0,40 |  |
| 4   | 9,525  | 4,76 | 0,40 | 3,81 | 2,20 | 0,15   | 0,08 | 0,50 | 0,08      | 0,05 | 0,20 |  |
| 4   | 9,525  | 4,76 | 0,80 | 3,81 | 2,10 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 4   | 9,525  | 4,76 | 1,20 | 3,81 | 2,00 | 0,25   | 0,08 | 0,50 | 0,12      | 0,08 | 0,30 |  |



|                                   |                      |                |                | H      |        |
|-----------------------------------|----------------------|----------------|----------------|--------|--------|
|                                   |                      | (2) Grade code |                | W3     | W4     |
| Inserts<br>Pastilhas<br>Plaquitas | (1)<br>Geometry code | ISO Reference  | ANSI Reference | PBY930 | PBY940 |

## SOLID INSERT

|   |        |         |                     |                  |                       |                                  |
|---|--------|---------|---------------------|------------------|-----------------------|----------------------------------|
|  | RNGN S | 1124631 | RNGN 060300-S2020 S | RNGN 220-S2020 S | <input type="radio"/> | <input checked="" type="radio"/> |
|   |        | 1124630 | RNGN 090300-S2020 S | RNGN 320-S2020 S | <input type="radio"/> | <input checked="" type="radio"/> |
|   |        | 1124629 | RNGN 120300-S2020 S | RNGN 420-S2020 S | <input type="radio"/> | <input checked="" type="radio"/> |
|   |        | 1124699 | RNGN 120400-S2020 S | RNGN 430-S2020 S | <input type="radio"/> | <input checked="" type="radio"/> |

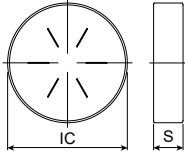
 Stock Items | Itens de stock Available under request | Disponível sob consulta | Disponible bajo consultaInsert Order Code: <sup>(1)</sup>Repair code + <sup>(2)</sup>Grade code

|                    |                                       |                | H                     |                       |
|--------------------|---------------------------------------|----------------|-----------------------|-----------------------|
|                    |                                       | (2) Grade code | W3                    | W4                    |
| (1)<br>Repair code | Reference<br>Referência<br>Referencia |                | PBY930                | PBY940                |
| 3120072            | RNGN 06 (2.18) 00-S2020S (0603)       |                | <input type="radio"/> | <input type="radio"/> |
| 3120058            | RNGN 060200-S2020 S (0903)            |                | <input type="radio"/> | <input type="radio"/> |
| 3120068            | RNGN 060300-S2020 S (0903)            |                | <input type="radio"/> | <input type="radio"/> |
| 3120071            | RNGN 060300-S2020 S (1203)            |                | <input type="radio"/> | <input type="radio"/> |
| 3120057            | RNGN 090300-S2020 S (1203)            |                | <input type="radio"/> | <input type="radio"/> |
| 3120070            | RNGN 090400-S2020 S (1204)            |                | <input type="radio"/> | <input type="radio"/> |
| 3120056            | RNGN 120300-S2020 S (1204)            |                | <input type="radio"/> | <input type="radio"/> |

 Stock Items | Itens de stock Available under request | Disponível sob consulta | Disponible bajo consultaInsert Order Code: <sup>(1)</sup>Repair code + <sup>(2)</sup>Grade code

# CBN SOLID INSERTS

## Reground Inserts

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico                              |
|---|------|--|------|------|-----------|------|------|---|
| IC  | S    | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |   |
| SOLID INSERT  |      |  |      |      |           |      |      |  |
| 4   | 2,40 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |   |
| 4   | 2,40 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |   |
| 4   | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 6   | 2,00 | 0,25   | 0,08 | 0,60 | 0,12      | 0,08 | 0,30 |   |

| Final Dimensions (mm)<br>Dimensões Finais (mm)<br>Dimensiones Finales (mm) |      | Raw Material<br>Matéria-prima<br>Materia prima |
|--|------|--|
| IC   | S    |  |
| 6,35   | 2,18 | RNGN 060300-S2020 S                            |
| 6,35   | 2,38 | RNGN 090300-S2020 S                            |
| 6,35   | 3,18 | RNGN 090300-S2020 S                            |
| 6,35   | 3,18 | RNGN 120300-S2020 S                            |
| 9,53   | 3,18 | RNGN 120300-S2020 S                            |
| 9,53   | 4,76 | RNGN 120400-S2020 S                            |
| 12,7   | 3,18 | RNGN 120400-S2020 S                            |

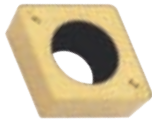
**TPGW Z1**

Single Tip



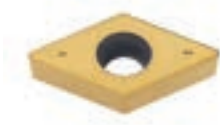
Size 11

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**CCGW Z2**  
Multiple Tips

Size 06 | 09

Page C- 596

**DCGW Z2**  
Multiple Tips

Size 07 | 11

Page C- 596

**TCGW | TPGW Z3**  
Multiple Tips

Size 09 | 11

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# POSITIVE PCBN INSERTS OVERVIEW

Vista genérica de pastilhas positivas PCBN | Visión general de plaquitas positivas de PCBN



TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

## VBGW Z2 Multiple Tips



Size 11 | 16

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## VCGW Z2 Multiple Tips





Size 16

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# PCBN POSITIVE INSERTS

TURNING

| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry code | (2) Grade code          |                          | H            |              |
|---|----------------------|-------------------------|--------------------------|--------------|--------------|
|   |                      | ISO Reference           | ANSI Reference           | Y5<br>PBVG03 | Y4<br>PBVG20 |
|    | 1124605              | CCGW 060202-S1513 Z2    | CCGW 21.50.5-S1513 Z2    | ⊗            | ⊗            |
|   | 1124635              | CCGW 060202-S2513 Z2    | CCGW 21.50.5-S2513 Z2    | ⊗            | ⊗            |
|   | 1124606              | CCGW 060204-S1513 Z2    | CCGW 21.51-S1513 Z2      | ⊗            | ⊗            |
|   | 1124555              | CCGW 060204-S2513 Z2    | CCGW 21.51-S2513 Z2      | ⊗            | ⊗            |
|   | 1124607              | CCGW 060208-S1513 Z2    | CCGW 21.52-S1513 Z2      | ⊗            | ⊗            |
|   | 1124636              | CCGW 060208-S2513 Z2    | CCGW 21.52-S2513 Z2      | ⊗            | ⊗            |
|   | 1124638              | CCGW 09T302-S2513 Z2    | CCGW 32.50.5-S2513 Z2    | ⊗            | ⊗            |
|   | 1124640              | CCGW 09T304-S2513 Z2    | CCGW 32.51-S2513 Z2      | ⊗            | ⊗            |
|   | 1124632              | CCGW 09T308-S2513 Z2    | CCGW 32.52-S2513 Z2      | ⊗            | ⊗            |
|   | 1124637              | CCGW 09T302-S2513 WG Z2 | CCGW 32.50.5-S2513 WG Z2 | ○            | ○            |
|  | 1124639              | CCGW 09T304-S2513 WG Z2 | CCGW 32.51-S2513 WG Z2   | ⊗            | ⊗            |
|   | 1124641              | CCGW 09T308-S2513 WG Z2 | CCGW 32.52-S2513 WG Z2   | ⊗            | ⊗            |
|   | 1124608              | CCGW 09T302-S1513 Z2    | CCGW 32.50.5-S1513 Z2    | ⊗            | ⊗            |
|   | 1124609              | CCGW 09T304-S1513 Z2    | CCGW 32.51-S1513 Z2      | ⊗            | ⊗            |
|   | 1124610              | CCGW 09T308-S1513 Z2    | CCGW 32.52-S1513 Z2      | ⊗            | ⊗            |
|   | 1124642              | DCGW 070202-S1513 Z2    | DCGW 21.50.5-S1513 Z2    | ⊗            | ○            |
|   | 1124611              | DCGW 070202-S2513 Z2    | DCGW 21.50.5-S2513 Z2    | ⊗            | ⊗            |
|   | 1124643              | DCGW 070204-S1513 Z2    | DCGW 21.51-S1513 Z2      | ⊗            | ○            |
|   | 1124436              | DCGW 070204-S2513 Z2    | DCGW 21.51-S2513 Z2      | ⊗            | ⊗            |
|   | 1124644              | DCGW 070208-S1513 Z2    | DCGW 21.52-S1513 Z2      | ○            | ○            |
|   | 1124612              | DCGW 070208-S2513 Z2    | DCGW 21.52-S2513 Z2      | ⊗            | ⊗            |
|   | 1124613              | DCGW 11T302-S2513 Z2    | DCGW 32.50.5-S2513 Z2    | ⊗            | ⊗            |
|   | 1124554              | DCGW 11T304-S2513 Z2    | DCGW 32.51-S2513 Z2      | ⊗            | ⊗            |
|   | 1124744              | DCGW 11T304-S3515 Z2    | DCGW 32.51-S3515 Z2      |              | ⊗            |
|   | 1124614              | DCGW 11T308-S2513 Z2    | DCGW 32.52-S2513 Z2      | ⊗            | ⊗            |
|   | 1124745              | DCGW 11T308-S3515 Z2    | DCGW 32.52-S3515 Z2      |              | ⊗            |
|   | 1124645              | DCGW 11T302-S1513 Z2    | DCGW 32.50.5-S1513 Z2    | ⊗            | ○            |
|   | 1124647              | DCGW 11T304-S1513 Z2    | DCGW 32.51-S1513 Z2      | ⊗            | ⊗            |
|   | 1124649              | DCGW 11T308-S1513 Z2    | DCGW 32.52-S1513 Z2      | ⊗            | ○            |

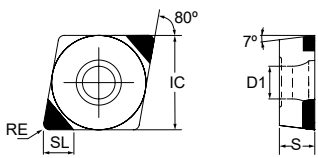
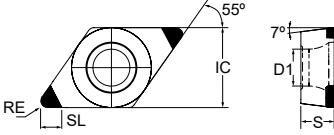
⊗ Stock Items | Itens de stock

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code






# PCBN POSITIVE INSERTS

Multiple tips

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |       |      |      |      |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico                                |
|---|-------|------|------|------|------|--|------|------|-----------|------|------|---|
| CDEC  | IC    | S    | RE   | D1   | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |   |
| 2   | 6,350 | 2,38 | 0,20 | 2,80 | 2,00 | 0,15   | 0,05 | 0,20 | 0,08      | 0,05 | 0,20 |    |
| 2   | 6,350 | 2,38 | 0,20 | 2,80 | 2,40 | 0,15   | 0,05 | 0,20 | 0,08      | 0,05 | 0,20 |   |
| 2   | 6,350 | 2,38 | 0,40 | 2,80 | 2,00 | 0,15   | 0,05 | 0,40 | 0,08      | 0,05 | 0,25 |   |
| 2   | 6,350 | 2,38 | 0,40 | 2,80 | 2,00 | 0,15   | 0,05 | 0,40 | 0,08      | 0,05 | 0,25 |   |
| 2   | 6,350 | 2,38 | 0,80 | 2,80 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 6,350 | 2,38 | 0,80 | 2,80 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 9,525 | 3,97 | 0,20 | 4,40 | 2,50 | 0,15   | 0,05 | 0,20 | 0,08      | 0,05 | 0,20 |   |
| 2   | 9,525 | 3,97 | 0,40 | 4,40 | 2,50 | 0,20   | 0,08 | 0,40 | 0,10      | 0,05 | 0,25 |   |
| 2   | 9,525 | 3,97 | 0,80 | 4,40 | 2,50 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 9,525 | 3,97 | 0,20 | 4,40 | 2,40 | 0,15   | 0,05 | 0,20 | 0,08      | 0,05 | 0,20 |   |
| 2   | 9,525 | 3,97 | 0,40 | 4,40 | 2,40 | 0,20   | 0,08 | 0,40 | 0,10      | 0,05 | 0,25 |   |
| 2   | 9,525 | 3,97 | 0,80 | 4,40 | 2,40 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 9,525 | 3,97 | 0,20 | 4,40 | 2,00 | 0,15   | 0,05 | 0,20 | 0,08      | 0,05 | 0,20 |   |
| 2   | 9,525 | 3,97 | 0,40 | 4,40 | 2,00 | 0,20   | 0,08 | 0,40 | 0,10      | 0,05 | 0,25 |   |
| 2   | 9,525 | 3,97 | 0,80 | 4,40 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 6,350 | 2,38 | 0,20 | 2,80 | 2,50 | 0,15   | 0,08 | 0,20 | 0,08      | 0,05 | 0,20 |  |
| 2   | 6,350 | 2,38 | 0,20 | 2,80 | 2,00 | 0,15   | 0,08 | 0,20 | 0,08      | 0,05 | 0,20 |   |
| 2   | 6,350 | 2,38 | 0,40 | 2,80 | 2,50 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,25 |   |
| 2   | 6,350 | 2,38 | 0,40 | 2,80 | 2,40 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,25 |   |
| 2   | 6,350 | 2,38 | 0,80 | 2,80 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 6,350 | 2,38 | 0,80 | 2,80 | 2,50 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 9,525 | 3,97 | 0,20 | 4,40 | 2,70 | 0,15   | 0,08 | 0,20 | 0,08      | 0,05 | 0,20 |   |
| 2   | 9,525 | 3,97 | 0,40 | 4,40 | 2,50 | 0,20   | 0,08 | 0,40 | 0,10      | 0,05 | 0,25 |   |
| 2   | 9,525 | 3,97 | 0,40 | 4,40 | 2,50 | 0,20   | 0,08 | 0,40 | 0,10      | 0,05 | 0,25 |   |
| 2   | 9,525 | 3,97 | 0,80 | 4,40 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 9,525 | 3,97 | 0,80 | 4,40 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |
| 2   | 9,525 | 3,97 | 0,20 | 4,40 | 2,70 | 0,15   | 0,08 | 0,20 | 0,08      | 0,05 | 0,20 |   |
| 2   | 9,525 | 3,97 | 0,40 | 4,40 | 2,50 | 0,20   | 0,08 | 0,40 | 0,10      | 0,05 | 0,25 |   |
| 2   | 9,525 | 3,97 | 0,80 | 4,40 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |   |

# PCBN POSITIVE INSERTS

TURNING

| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry code | (2) Grade code       |                         | H            |              |
|---|----------------------|----------------------|-------------------------|--------------|--------------|
|   |                      | ISO Reference        | ANSI Reference          | PBY603<br>Y5 | PBY620<br>Y4 |
|    | 1124715              | TCGW 110204-S2513 Z3 | TCGW 21.51-S2513 Z3     | ○            |              |
|   | 1124434              | TCGW 16T304-S2513 Z3 | TCGW 32.51-S2513 Z3     | ⊗            | ⊗            |
|   | 1124651              | TCGW 16T308-S2513 Z3 | TCGW 32.52-S2513 Z3     | ⊗            | ⊗            |
|    | 1124657              | TPGW 110302-S2513 Z1 | TPGW 220.5-S2513 Z1     | ○            | ○            |
|   | 1124660              | TPGW 110304-S2513 Z1 | TPGW 221-S2513 Z1       | ⊗            | ○            |
|   | 1124598              | TPGW 110308-S2513 Z1 | TPGW 222-S2513 Z1       | ⊗            | ⊗            |
|    | 1124653              | TPGW 090202-S2513 Z3 | TPGW 1.81.50.5-S2513 Z3 | ⊗            | ○            |
|   | 1124655              | TPGW 090204-S2513 Z3 | TPGW 1.81.51-S2513 Z3   | ⊗            | ⊗            |
|   | 1124652              | TPGW 090202-S1513 Z3 | TPGW 1.81.50.5-S1513 Z3 | ⊗            | ○            |
|   | 1124654              | TPGW 090204-S1513 Z3 | TPGW 1.81.51-S1513 Z3   | ⊗            | ○            |
|   | 1124658              | TPGW 110302-S2513 Z3 | TPGW 220.5-S2513 Z3     | ⊗            | ⊗            |
|   | 1124661              | TPGW 110304-S2513 Z3 | TPGW 221-S2513 Z3       | ⊗            | ⊗            |
|   | 1124663              | TPGW 110308-S2513 Z3 | TPGW 222-S2513 Z3       | ○            | ⊗            |
|   | 1124656              | TPGW 110302-S1513 Z3 | TPGW 220.5-S1513 Z3     | ⊗            | ○            |
|   | 1124659              | TPGW 110304-S1513 Z3 | TPGW 221-S1513 Z3       | ⊗            | ○            |
| 1124662   | TPGW 110308-S1513 Z3 | TPGW 222-S1513 Z3    | ○                       | ○            |              |
|  | 1124664              | VBGW 110302-S2513 Z2 | VBGW 220.5-S2513 Z2     | ⊗            | ⊗            |
|   | 1124665              | VBGW 110304-S2513 Z2 | VBGW 221-S2513 Z2       | ⊗            | ⊗            |
|   | 1124666              | VBGW 110308-S2513 Z2 | VBGW 222-S2513 Z2       | ○            | ⊗            |
|   | 1124618              | VBGW 160402-S2513 Z2 | VBGW 330.5-S2513 Z2     | ⊗            | ⊗            |
|   | 1124619              | VBGW 160404-S2513 Z2 | VBGW 331-S2513 Z2       | ⊗            | ⊗            |
|   | 1124620              | VBGW 160408-S2513 Z2 | VBGW 332-S2513 Z2       | ⊗            | ⊗            |
|   | 1124621              | VBGW 160402-S1513 Z2 | VBGW 330.5-S1513 Z2     | ⊗            | ⊗            |
| 1124622   | VBGW 160404-S1513 Z2 | VBGW 331-S1513 Z2    | ⊗                       | ⊗            |              |
| 1124623   | VBGW 160408-S1513 Z2 | VBGW 332-S1513 Z2    | ⊗                       | ⊗            |              |
|  | 1124667              | VCGW 160404-S2513 Z2 | VCGW 331-S2513 Z2       | ⊗            | ⊗            |
|   | 1124668              | VCGW 160408-S2513 Z2 | VCGW 332-S2513 Z2       | ⊗            | ⊗            |

⊗ Stock Items | Itens de stock

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

Spare Parts

Technical Data

# PCBN POSITIVE INSERTS

Multiple tips

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |       |      |      |      |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|-------|------|------|------|------|--|------|------|-----------|------|------|--|
| CDEC  | IC    | S    | RE   | D1   | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| 3   | 6,350 | 2,38 | 0,20 | 4,40 | 2,50 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 3   | 9,525 | 3,97 | 0,40 | 4,40 | 2,50 | 0,15   | 0,08 | 0,45 | 0,08      | 0,05 | 0,20 |  |
| 3   | 9,525 | 3,97 | 0,80 | 4,40 | 2,00 | 0,20   | 0,08 | 0,45 | 0,10      | 0,08 | 0,30 |  |
| 1   | 6,350 | 3,18 | 0,20 | 2,80 | 2,40 | 0,15   | 0,08 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 1   | 6,350 | 3,18 | 0,40 | 2,80 | 2,30 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 1   | 6,350 | 3,18 | 0,80 | 2,80 | 2,40 | 0,20   | 0,08 | 0,45 | 0,10      | 0,08 | 0,20 |  |
| 3   | 5,560 | 2,38 | 0,20 | 2,50 | 2,50 | 0,10   | 0,05 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 3   | 5,560 | 2,38 | 0,40 | 2,50 | 2,30 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,15 |  |
| 3   | 5,560 | 2,38 | 0,20 | 2,50 | 2,50 | 0,10   | 0,08 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 3   | 5,560 | 2,38 | 0,40 | 2,50 | 2,30 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,15 |  |
| 3   | 6,350 | 3,18 | 0,20 | 2,80 | 2,40 | 0,15   | 0,08 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 3   | 6,350 | 3,18 | 0,40 | 2,80 | 2,30 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 3   | 6,350 | 3,18 | 0,80 | 2,80 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,20 |  |
| 3   | 6,350 | 3,18 | 0,20 | 2,80 | 2,40 | 0,15   | 0,08 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 3   | 6,350 | 3,18 | 0,40 | 2,80 | 2,30 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 3   | 6,350 | 3,18 | 0,80 | 2,80 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,20 |  |
| 2   | 6,350 | 3,18 | 0,20 | 2,80 | 3,20 | 0,10   | 0,08 | 0,20 | 0,05      | 0,05 | 0,15 |  |
| 2   | 6,350 | 3,18 | 0,40 | 2,80 | 2,80 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 2   | 6,350 | 3,18 | 0,80 | 2,80 | 2,00 | 0,15   | 0,08 | 0,50 | 0,10      | 0,08 | 0,25 |  |
| 2   | 9,525 | 4,76 | 0,20 | 4,40 | 2,00 | 0,10   | 0,08 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 2   | 9,525 | 4,76 | 0,40 | 4,40 | 2,00 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 2   | 9,525 | 4,76 | 0,80 | 4,40 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 2   | 9,525 | 4,76 | 0,20 | 4,40 | 2,00 | 0,10   | 0,08 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 2   | 9,525 | 4,76 | 0,40 | 4,40 | 2,00 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 2   | 9,525 | 4,76 | 0,80 | 4,40 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |
| 2   | 9,525 | 4,76 | 0,40 | 4,40 | 2,80 | 0,15   | 0,08 | 0,40 | 0,08      | 0,05 | 0,20 |  |
| 2   | 9,525 | 4,76 | 0,80 | 4,40 | 2,00 | 0,20   | 0,08 | 0,50 | 0,10      | 0,08 | 0,30 |  |



INSERTS

# PCD



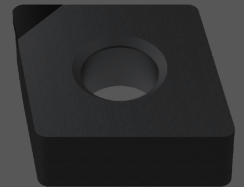
Polycrystalline Diamond is exceptionally hard and resistant to abrasion. It is most effective for machining non-ferrous materials, particularly aluminum and copper alloys, achieving unparalleled productivity and tool longevity. However, it is also the preferred option for machining composites and ceramics.

Polycrystalline Diamond é excepcionalmente duro e resistente à abrasão. É mais eficaz para a maquinação de materiais não ferrosos, especialmente ligas de alumínio e cobre, alcançando uma produtividade e longevidade da ferramenta incomparáveis. No entanto, também é a opção preferida para a maquinação de compósitos e cerâmicas.

Polycrystalline Diamond es excepcionalmente duro y resistente a la abrasión. Es más efectivo para mecanizar materiales no ferrosos, especialmente aleaciones de aluminio y cobre, logrando una productividad y longevidad de herramienta incomparables. Sin embargo, también es la opción preferida para mecanizar compuestos y cerámicas.

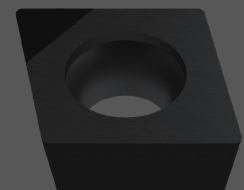
## NEGATIVE INSERTS > page 608

- > 1 cutting edge  
1 aresta de corte | 1 arista de corte
- > Neutral rake angle  
Ângulo de ataque neutro | Ángulo de ataque neutro



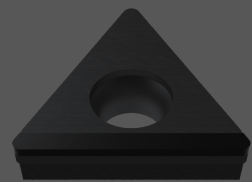
## POSITIVE INSERTS > page 612

- > 1 cutting edge  
1 aresta de corte | 1 arista de corte
- > Neutral or high positive rake angle  
Ângulo de ataque neutro ou altamente positivo | Ángulo de ataque neutro o altamente positivo



## FULL EDGE TIPS > page 620

- > 1 cutting edge  
1 aresta de corte | 1 arista de corte
- > Neutral or high positive rake angle  
Ângulo de ataque neutro ou altamente positivo | Ángulo de ataque neutro o altamente positivo
- > For higher depth of cut  
Para uma maior profundidade de corte | Para mayor profundidad de corte



PCD (Polycrystalline Diamond) is a composite of diamond particles that are sintered with a metallic binder creating the hardest and one of the most abrasion resistant materials used in cutting tools.

Its development achieved an extremely significance for the machining of Non-Ferrous Materials, such as high-silicon aluminium, metal matrix composites (MMC) and carbon fibre reinforced plastics (CFRP).

## Grades description Descrição de graus | Descripción de calidades

| Grade  | Code | Characteristics   | Application  |
|--------|------|---|--|
| PDP410 | D6   | General purpose<br>Fine surface finishing   | <ul style="list-style-type: none"> <li>• &lt;14% silicon aluminium alloy - automotive industry</li> <li>• Graphite and graphite composites</li> <li>• Wood composites</li> <li>• Copper alloy</li> </ul>   |
| PDP403 | I3   | Highest abrasion resistance<br>Bimodal grain structure for increased diamond percentage content | <ul style="list-style-type: none"> <li>• &gt;14% silicon aluminium alloy</li> <li>• Fiber glass, fiberboard</li> <li>• Wood laminates</li> <li>• Metal matrix composites</li> <li>• Stone sawing</li> <li>• Ceramics</li> <li>• Sintered tungsten carbide (10-16% Co)</li> </ul> |

**PDP410**

<14% silicon  
aluminium  
alloy

**PDP403**

>14% silicon  
aluminium  
alloy



# GEOMETRY SELECTION

Seleção da geometria | Selección de la geometria

The insert geometry and nose radius are very important on turning operation having direct influence on the tool life and productivity.

## Insert nose radius is an important performance parameter:

- For good chip breaking, must be used a small nose radius: 0,2-0,4mm (0,008-0,016inch);
- A large nose radius: 0,8-1,2mm (0,031-0,047inch) generates better surface finishing and produces thinner chips, which reduces the degree of crater wear in hard part turning operations
- The machining with large nose radius and small depth of cut results in reduced entry and exit forces..

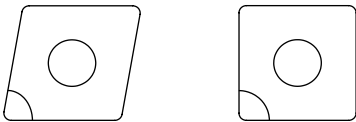
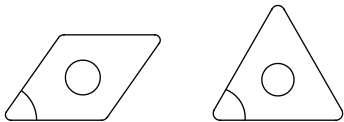
In general, a large nose radius provides greater edge strength and therefore extended tool life. For this reason, it is advised to use the largest and allowed nose radius based on the requirements of each process.

### Finishing and semi-finishing:

In these cases, there are special requirements on the surface and tolerances.

### Roughing:

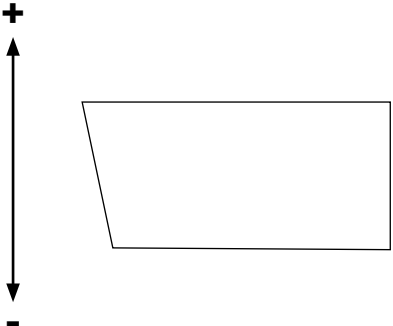
For the evaluation of the cutting edge radius in roughing operations it is recommended to use the following formula, in order to calculate the minimum radius vs feed:

| Insert shape  | Formula   |
|---|---|
|  | $\text{Radius} > 1,6 \times \text{feed per rev.}$ |
|  | $\text{Radius} > 2,5 \times \text{feed per rev.}$ |

The most important criteria for the stability and cutting edge tool-life is to define the correct cutting edge preparation. Its choice is mainly required in order to achieve the best economical result.

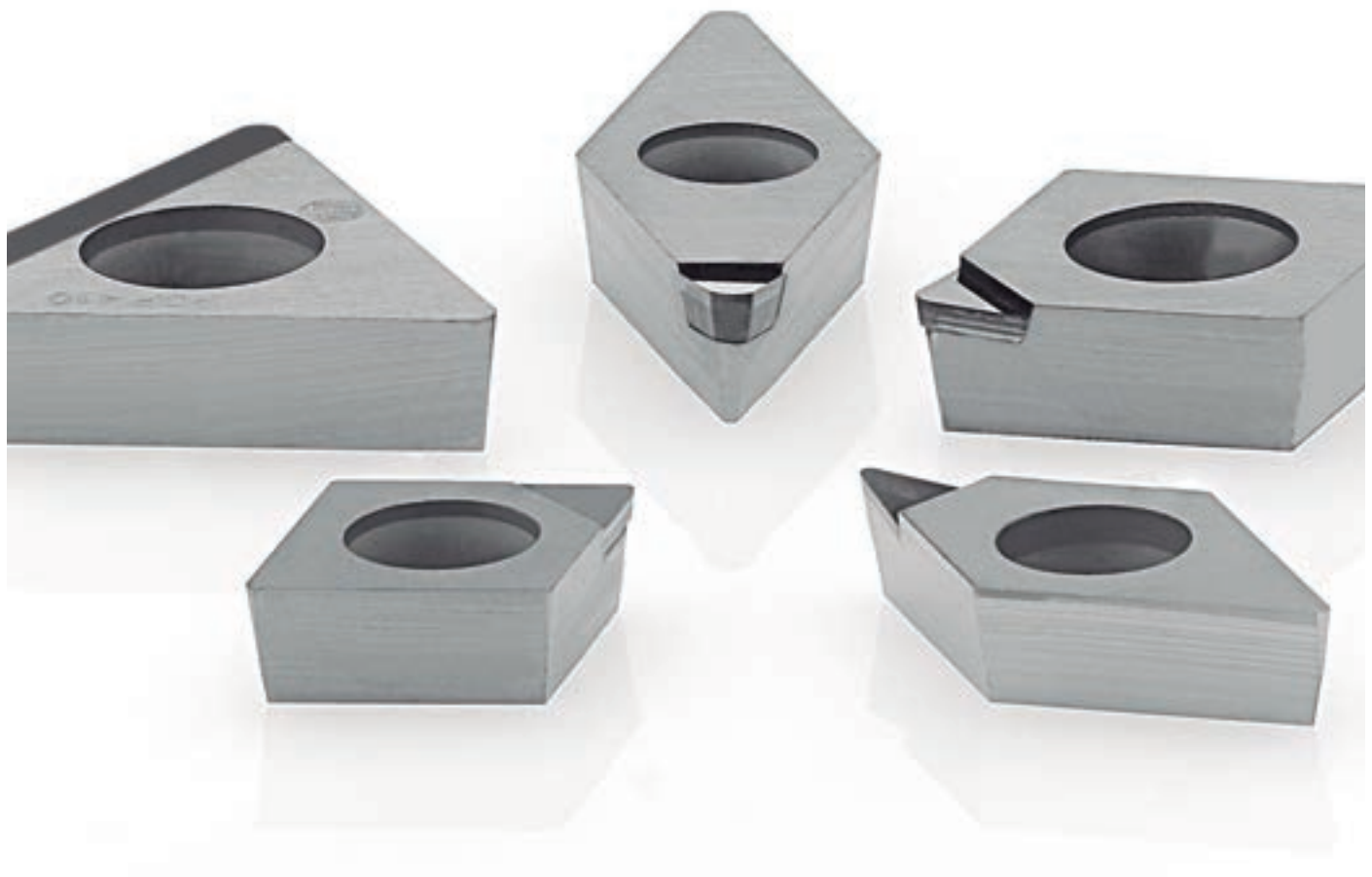
### Edge preparation:

PCD: F type cutting edge preparation:

|   |   |
|---|---|
| <p>Cutting forces<br/>Edge strength</p>  | <p><b>F – Standard preparation without honing - Standard</b></p> <ul style="list-style-type: none"> <li>• Sharp cutting edge;</li> <li>• Standard and recommended edge preparation for aluminium or other non-ferrous materials.</li> </ul> |
|---|---|

### Note:

Based on our experience sometimes is necessary to define edge preparation during several tests to provide the best possible solution for each application.



# PCD RECOMMENDED CUTTING DATA

Condições de corte recomendadas para PCD | Datos de corte recomendadas para PCD

| Workpiece material                                       | VC (m/min)            |                      | Recommend grade for PCD |         |
|--|-----------------------|----------------------|-------------------------|---------|
|  |                       |                      | PDP 410                 | PDP 403 |
| <b>Aluminium alloys:</b><br>Aluminium,<br>Si<14%         | Roughing<br>Finishing | 800-3000<br>800-3000 | ⊗<br>⊗                  |         |
| <b>Aluminium:</b><br>Aluminium,<br>Si≥14%                | Roughing<br>Finishing | 300-700<br>250-700   | ○<br>○                  | ⊗<br>⊗  |
| <b>Copper alloys:</b><br>Copper, Zinc, Brass             | Roughing<br>Finishing | 600-1200<br>700-1500 | ⊗<br>⊗                  |         |
| <b>Metal matrix composites:</b><br>Al (10-20%) SiC       | Roughing<br>Finishing | 300-1150<br>400-1260 |                         | ⊗<br>⊗  |
| <b>Tungsten carbide 10-16% Co:</b><br>Unsintered         | Roughing<br>Finishing | 50-200<br>60-220     |                         | ⊗<br>⊗  |
| <b>Tungsten carbide 10-16% Co:</b><br>Sintered           | Roughing<br>Finishing | 20-40<br>25-45       |                         | ⊗<br>⊗  |
| Ebonite, Fiberglass, Plastic materials, Graphite, Glass. | Roughing<br>Finishing | 200-1500<br>300-2000 | ⊗<br>⊗                  | ⊗<br>⊗  |
| <b>Ceramic:</b> Unsintered                               | Roughing<br>Finishing | 50-150<br>50-200     |                         | ⊗<br>⊗  |
| <b>Ceramic:</b> Sintered                                 | Roughing<br>Finishing | 20-35<br>20-40       |                         | ⊗<br>⊗  |
| <b>Wood</b>  | Finishing             | 1000-4000            | ⊗                       |         |

⊗ Recommended ○ Second choice

# TURNING PCD INSERTS ISO IDENTIFICATION SYSTEM

|   |  |   |         |
|---|--|---|---------|
| H |  | M |         |
| O |  | V |         |
| P |  | W |         |
| S |  | L |         |
| T |  | A |         |
| C |  | B |         |
| D |  | K |         |
| E |  | R |         |
| F |  | X | Special |

1- Insert shape symbol

Triangular inserts with a facet (secondary cutting edge)

| Symbol | m (mm)      | d (mm)      | s (mm) |
|--------|-------------|-------------|--------|
| A      | ±0.005      | ±0.025      | ±0.025 |
| F      | ±0.005      | ±0.013      | ±0.025 |
| C      | ±0.013      | ±0.025      | ±0.025 |
| H      | ±0.013      | ±0.013      | ±0.025 |
| E      | ±0.025      | ±0.025      | ±0.025 |
| G      | ±0.025      | ±0.025      | ±0.13  |
| J      | ±0.005      | ±0.05~±0.13 | ±0.025 |
| K*     | ±0.013      | ±0.05~±0.13 | ±0.025 |
| L*     | ±0.025      | ±0.05~±0.13 | ±0.025 |
| M*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.13  |
| N*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.025 |
| U*     | ±0.13~±0.38 | ±0.08~±0.25 | ±0.13  |

| Inscribed circle | T     | S     | C     | D     | V     |
|------------------|-------|-------|-------|-------|-------|
| 6.35             | ±0.08 | -     | -     | -     | -     |
| 9.525            | ±0.08 | ±0.08 | ±0.11 | ±0.10 | ±0.13 |
| 12.70            | ±0.13 | ±0.13 | ±0.13 | ±0.15 | -     |
| 15.875           | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 19.05            | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 25.40            | -     | ±0.18 | -     | -     | -     |
| 31.75            | -     | ±0.25 | -     | -     | -     |

| Inscribed circle | T     | S     | C     | D     | V     |
|------------------|-------|-------|-------|-------|-------|
| 6.35             | ±0.05 | -     | -     | -     | -     |
| 9.525            | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 |
| 12.70            | ±0.08 | ±0.08 | ±0.08 | ±0.08 | ±0.08 |
| 15.875           | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 |
| 19.05            | -     | -     | -     | -     | ±0.10 |
| 25.40            | -     | ±0.13 | -     | -     | ±0.10 |
| 31.75            | -     | ±0.20 | -     | -     | ±0.12 |

As a rule, the sides of these inserts are as sintered. Tolerance differs with insert size, for the accuracy of class M, refer to the table on the right.

3 - Tolerances symbol

|   |   |   |   |                       |
|---|---|---|---|-----------------------|
| A | B | C | D | E                     |
|   |   |   |   |                       |
| F | G | N | P | O                     |
|   |   |   |   | Other clearance angle |

2 - Normal clearance symbol

|      |   |   |   |   |
|------|---|---|---|---|
| ISO  | D | C | G | W |
| ANSI | D | C | G | W |

| 4 - Insert symbol |           |                                      |                          |       |        |              |            |                            |       |
|-------------------|-----------|--------------------------------------|--------------------------|-------|--------|--------------|------------|----------------------------|-------|
| symbol            | Type      | Hole type                            | Chip breaker             | Shape | symbol | Type         | Hole type  | Chip breaker               | Shape |
| W                 | with hole | Round hole one countersink (40°-60°) | Without chip breaker     |       | G      | with hole    | Round hole | Chip breaker on both sides |       |
| T                 |           |                                      | Chip breaker on one side |       | N      | without hole | -          | Without chip breaker       |       |
| A                 | with hole | Round hole                           | Without chip breaker     |       | R      | without hole | -          | Chip breaker on one side   |       |
| M                 |           |                                      | Chip breaker on one side |       | X      |              | -          | -                          | -     |

# TURNING PCD INSERTS ISO IDENTIFICATION SYSTEM

Sistema de identificação ISO para pastilhas de PCD | Codificación ISO para plaquitas de PCD

| R's  | 35°<br>V's | 55°<br>D's | 80°<br>C's | 90°<br>S's | 60°<br>T's | 80°<br>W's | IC     |       | ANSI   |
|------|------------|------------|------------|------------|------------|------------|--------|-------|--------|
|      |            |            |            |            |            |            | mm     | inch  | Symbol |
| -    | 06         | 04         | -          | 03         | 06         | 02         | 3,97   | 5/32  | 1,20   |
| -    | 08         | 05         | 04         | 04         | 08         | L3         | 4,76   | 3/16  | 1,50   |
| -    | 09         | 06         | 05         | 05         | 09         | 03         | 5,56   | 7/32  | 1,80   |
| 06** | -          | -          | -          | -          | -          | -          | 6,00   | 0,236 |        |
| 06*  | 11         | 07         | 06         | 06         | 11         | 04         | 6,35   | 1/4   | 2,00   |
| 07*  | 13         | 09         | 08         | 07         | 13         | 05         | 7,94   | 5/16  | 2,50   |
| 08*  | -          | -          | -          | -          | -          | -          | 8,00   | 0,315 |        |
| 09*  | 16         | 11         | 09         | 09         | 16         | 06         | 9,525  | 3/8   | 3,00   |
| 10** | -          | -          | -          | -          | -          | -          | 10,00  | 0,394 |        |
| 12** | -          | -          | -          | -          | -          | -          | 12,00  | 0,472 |        |
| 12*  | 22         | 15         | 12         | 12         | 22         | 08         | 12,70  | 1/2   | 4,00   |
| 15*  | 27         | 19         | 16         | 15         | 27         | 10         | 15,875 | 5/8   | 5,00   |
| 16** | -          | -          | -          | -          | -          | -          | 16,00  | 0,63  |        |
| 19*  | 33         | 23         | 19         | 19         | 33         | 13         | 19,05  | 3/4   | 6,00   |
| 20** | -          | -          | -          | -          | -          | -          | 20,00  | 0,787 |        |
| 25** | -          | -          | -          | -          | -          | -          | 25,00  | 0,984 |        |
| 25*  | 44         | 31         | 25         | 25         | 44         | 17         | 25,40  | 1,00  | 8,00   |
| 31*  | 54         | 38         | 32         | 31         | 54         | 21         | 31,75  | 1 1/4 | 10,00  |
| 32** | -          | -          | -          | -          | -          | -          | 32,00  | 1,26  |        |

\* ANSI designation only (Radius Designation is R0)

\*\* Metric designation only (Radius Designation is M0)

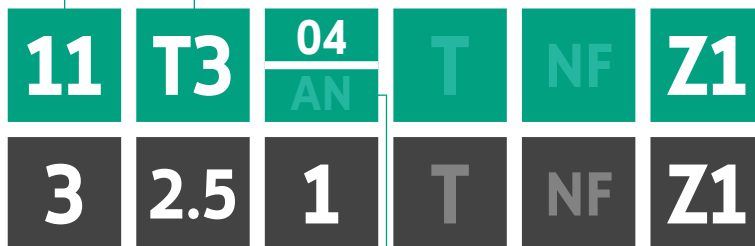
According to International Standard ISO 1832 - 2012(E)

"Indexable inserts for cutting tools - Designation"

| ISO | mm    | ANSI | inch  |
|-----|-------|------|-------|
| 01  | 1.59  | 1    | 0.062 |
| T1  | 1.98  | 1.2  | 0.078 |
| 02  | 2.38  | 1.5  | 0.094 |
| 03  | 3.18  | 2    | 0.125 |
| T3  | 3.97  | 2.5  | 0.156 |
| 04  | 4.76  | 3    | 0.188 |
| 05  | 5.56  | 3.5  | 0.219 |
| 06  | 6.35  | 4    | 0.250 |
| 07  | 7.94  | 5    | 0.312 |
| 09  | 9.52  | 6    | 0.375 |
| 12  | 12.70 | 8    | 0.500 |

5 - Insert size symbol

6 - Insert thickness symbol



| ISO                                      | mm           | inch | ANSI |
|--|--------------|------|------|
| 00                                       | Sharp nose   |      | 0    |
| 01                                       | 0.10         | .004 | 0.2  |
| 02                                       | 0.20         | .008 | 0.5  |
| 04                                       | 0.40         | .015 | 1    |
| 08                                       | 0.80         | .032 | 2    |
| 12                                       | 1.2          | .047 | 3    |
| 16                                       | 1.6          | .062 | 4    |
| 20                                       | 2.0          | .078 | 5    |
| 24                                       | 2.4          | .094 | 6    |
| 28                                       | 2.8          | .109 | 7    |
| 32                                       | 3.2          | .125 | 8    |
| <sup>00</sup><br>(inch or M0/<br>metric) | Round insert |      | 0    |

| For inserts having secondary edges two digits are used: |         |   |         |
|---|---------|---|---------|
| 1 <sup>st</sup> digit is secondary edge                 |         | 2 <sup>nd</sup> digit is secondary edges relief angle |         |
| A   | 45°     | A   | 3°      |
| D   | 60°     | B   | 5°      |
| E   | 75°     | C   | 7°      |
| F   | 85°     | D   | 15°     |
| P   | 90°     | E   | 20°     |
| Z   | special | F   | 25°     |
|   |         | G   | 30°     |
|   |         | N   | 0°      |
|   |         | P   | 11°     |
|   |         | Z   | special |

\*only when required.






| Shape | Honing                | Symbol |
|-------|-----------------------|--------|
|       | No honing             | F      |
|       | With honing           | E      |
|       | Chamfered No honing   | T      |
|       | Chamfered with honing | S      |

\*only when required.

|             |                      |
|-------------|----------------------|
| Z1 (1 tip)  | Z6 (6 tips)          |
| Z2 (2 tips) | Z8 (8 tips)          |
| Z3 (3 tips) | FL (Full edge left)  |
| Z4 (4 tips) | FR (Full edge right) |
| Z5 (5 tips) | O (other)            |

|    |           |
|----|-----------|
| NF | Finishing |
|----|-----------|



| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry code | (2) Grade code |                | N                                   |                                     |
|---|----------------------|----------------|----------------|-------------------------------------|-------------------------------------|
|   |                      | ISO Reference  | ANSI Reference | D6<br>PDP410                        | I3<br>PDP403                        |
| SINGLE TIP  |                      |                |                |                                     |                                     |
|    | 1124228              | CNGA 120404 Z1 | CNGA 431 Z1    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|   | 1124110              | CNGA 120408 Z1 | CNGA 432 Z1    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124229              | CNGA 120412 Z1 | CNGA 433 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124230              | CNGA 120416 Z1 | CNGA 434 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|    | 1124235              | DNGA 150404 Z1 | DNGA 431 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124236              | DNGA 150408 Z1 | DNGA 432 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124362              | DNGA 150608 Z1 | DNGA 442 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124363              | DNGA 150612 Z1 | DNGA 443 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124243              | SNGA 090304 Z1 | SNGA 321 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124244              | SNGA 090308 Z1 | SNGA 322 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124245              | SNGA 120404 Z1 | SNGA 431 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124246              | SNGA 120408 Z1 | SNGA 432 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|  | 1124256              | TNGA 110304 Z1 | TNGA 221 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124257              | TNGA 110308 Z1 | TNGA 222 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124258              | TNGA 160404 Z1 | TNGA 331 Z1    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124259              | TNGA 160408 Z1 | TNGA 332 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124385              | TNGA 160412 Z1 | TNGA 333 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|  | 1124285              | VNGA 160404 Z1 | VNGA 331 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124286              | VNGA 160408 Z1 | VNGA 332 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124287              | VNGA 160412 Z1 | VNGA 333 Z1    | <input type="checkbox"/>            | <input type="checkbox"/>            |

Stock Items | Itens de stock

Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

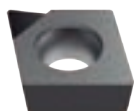
# PCD NEGATIVE INSERTS

## Single tip

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      |    |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|------|------|------|----|------|--|------|------|-----------|------|------|--|
| IC  | S    | RE   | D1   | AN | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| SINGLE TIP  |      |      |      |    |      |  |      |      |           |      |      |  |
| 12,700  | 4,76 | 0,40 | 5,16 | -  | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,06 | 0,20 |  |
| 12,700  | 4,76 | 0,80 | 5,16 | -  | 3,50 | 0,15   | 0,07 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 12,700  | 4,76 | 1,20 | 5,16 | -  | 3,50 | 0,25   | 0,08 | 1,20 | 0,30      | 0,10 | 0,40 |  |
| 12,700  | 4,76 | 1,60 | 5,16 | -  | 3,50 | 0,50   | 0,08 | 1,60 | 0,35      | 0,10 | 0,50 |  |
| 12,700  | 4,76 | 0,40 | 5,16 | -  | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 12,700  | 4,76 | 0,80 | 5,16 | -  | 3,50 | 0,15   | 0,07 | 0,80 | 0,15      | 0,05 | 0,25 |  |
| 12,700  | 6,35 | 0,80 | 5,16 | -  | 3,50 | 0,15   | 0,07 | 0,80 | 0,15      | 0,05 | 0,25 |  |
| 12,700  | 6,35 | 1,20 | 5,16 | -  | 3,50 | 0,20   | 0,08 | 1,20 | 0,20      | 0,05 | 0,30 |  |
| 9,525   | 3,18 | 0,40 | 3,81 | -  | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,07 | 0,20 |  |
| 9,525   | 3,18 | 0,80 | 3,81 | -  | 3,50 | 0,20   | 0,08 | 0,80 | 0,12      | 0,08 | 0,25 |  |
| 12,700  | 4,76 | 0,40 | 5,16 | -  | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,07 | 0,25 |  |
| 12,700  | 4,76 | 0,80 | 5,16 | -  | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 6,350   | 3,18 | 0,40 | 2,26 | -  | 3,50 | 0,10   | 0,08 | 0,40 | 0,08      | 0,03 | 0,15 |  |
| 6,350   | 3,18 | 0,80 | 2,26 | -  | 3,50 | 0,15   | 0,10 | 0,80 | 0,10      | 0,05 | 0,25 |  |
| 9,525   | 4,76 | 0,40 | 3,81 | -  | 3,50 | 0,10   | 0,08 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 4,76 | 0,80 | 3,81 | -  | 3,50 | 0,20   | 0,10 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 4,76 | 1,20 | 3,81 | -  | 3,50 | 0,20   | 0,10 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 4,76 | 0,40 | 3,81 | -  | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,07 | 0,20 |  |
| 9,525   | 4,76 | 0,80 | 3,81 | -  | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 4,76 | 1,20 | 3,81 | -  | 3,50 | 0,25   | 0,10 | 1,20 | 0,17      | 0,10 | 0,35 |  |

## SINGLE TIP

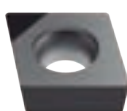
CCGT Z1



Size 06 | 09 | 12

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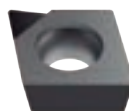
CCGW Z1



Size 06 | 09 | 12

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CPGT Z1



Size 06 | 09 | 12

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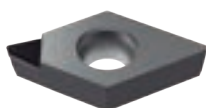
CPGW Z1



Size 06 | 09 | 12

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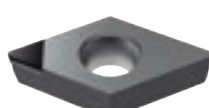
DCGT Z1



Size 07 | 11

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DCGW Z1



Size 07 | 11 | 15

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SCGT Z1



Size 06 | 09 | 12

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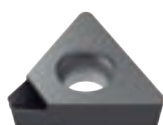
SCGW Z1



Size 06 | 09 | 12

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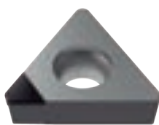
TCGT Z1



Size 09 | 11 | 16

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TCGW Z1



Size 09 | 11 | 16

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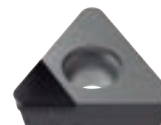
TPGT Z1



Size 11 | 16

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TPGW Z1



Size 11 | 16

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VCGT Z1



Size 07 | 11 | 16

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VCGW Z1



Size 07 | 11 | 16

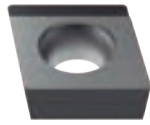
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## PCD POSITIVE INSERTS OVERVIEW

Vista genérica de pastilhas positivas PCD | Visión general de plaquitas positivas de PCD

### FULL EDGE

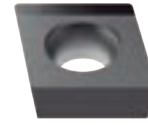
#### CCGT FR/FL



Size 06 | 09 | 12

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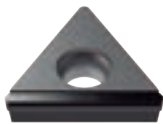
#### CCGW FR/FL



Size 06 | 09 | 12

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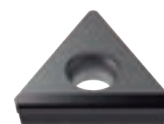
#### TCGT FL



Size 11 | 16

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#### TCGW FL



Size 11 | 16 | 22

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TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

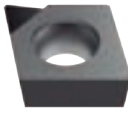

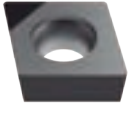
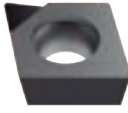
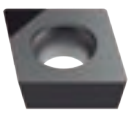
External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

|   |                      |                   |                                  | N                                |                       |
|---|----------------------|-------------------|----------------------------------|----------------------------------|-----------------------|
|   |                      | (2) Grade code    |                                  | D6                               | B                     |
| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry code | ISO Reference     | ANSI Reference                   | PDP410                           | PDP403                |
| SINGLE TIP  |                      |                   |                                  |                                  |                       |
|    | 1124113              | CCGT 060202 Z1    | CCGT 21.50.5 Z1                  | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124209              | CCGT 060204 Z1    | CCGT 21.51 Z1                    | <input type="radio"/>            | <input type="radio"/> |
|   | 1124487              | CCGT 060220 Z1    | CCGT 21.55 Z1                    | <input type="radio"/>            | <input type="radio"/> |
|   | 1112592              | CCGT 09T304 Z1    | CCGT 32.51 Z1                    | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124210              | CCGT 09T308 Z1    | CCGT 32.52 Z1                    | <input type="radio"/>            | <input type="radio"/> |
|   | 1124211              | CCGT 120404 Z1    | CCGT 431 Z1                      | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1112630              | CCGT 120408 Z1    | CCGT 432 Z1                      | <input checked="" type="radio"/> | <input type="radio"/> |
|    | 1124465              | CCGT 09T304-NF Z1 | CCGT 32.51-NF Z1                 | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124726              | CCGT 09T308-NF Z1 | CCGT 32.52-NF Z1                 | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124114              | CCGW 060202 Z1    | CCGW 21.50.5 Z1                  | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124218              | CCGW 060204 Z1    | CCGW 21.51 Z1                    | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124793              | CCGW 060220 Z1    | CCGW 21.55 Z1                    | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124219              | CCGW 09T302 Z1    | CCGW 32.50.5 Z1                  | <input type="radio"/>            | <input type="radio"/> |
|   | 1112593              | CCGW 09T304 Z1    | CCGW 32.51 Z1                    | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124220              | CCGW 09T308 Z1    | CCGW 32.2 Z1                     | <input type="radio"/>            | <input type="radio"/> |
|   | 1124221              | CCGW 120404 Z1    | CCGW 431 Z1                      | <input checked="" type="radio"/> | <input type="radio"/> |
| 1112631   | CCGW 120408 Z1       | CCGW 432 Z1       | <input checked="" type="radio"/> | <input type="radio"/>            |                       |
|  | 1124392              | CPGT 060202 Z1    | CCGT 21.50.5 Z1                  | <input type="radio"/>            | <input type="radio"/> |
|   | 1124393              | CPGT 060204 Z1    | CCGT 21.51 Z1                    | <input type="radio"/>            | <input type="radio"/> |
|   | 1124394              | CPGT 09T304 Z1    | CCGT 32.51 Z1                    | <input type="radio"/>            | <input type="radio"/> |
|   | 1124395              | CPGT 09T308 Z1    | CCGT 32.52 Z1                    | <input type="radio"/>            | <input type="radio"/> |
|   | 1124396              | CPGT 120404 Z1    | CCGT 431 Z1                      | <input type="radio"/>            | <input type="radio"/> |
|   | 1124397              | CPGT 120408 Z1    | CCGT 432 Z1                      | <input type="radio"/>            | <input type="radio"/> |
|  | 1124398              | CPGW 060202 Z1    | CPGW 21.50.5 Z1                  | <input type="radio"/>            | <input type="radio"/> |
|   | 1124399              | CPGW 060204 Z1    | CPGW 21.51 Z1                    | <input type="radio"/>            | <input type="radio"/> |
|   | 1124400              | CPGW 09T302 Z1    | CPGW 32.50.5 Z1                  | <input type="radio"/>            | <input type="radio"/> |
|   | 1124401              | CPGW 09T304 Z1    | CPGW 32.51 Z1                    | <input checked="" type="radio"/> | <input type="radio"/> |
|   | 1124402              | CPGW 09T308 Z1    | CPGW 32.52 Z1                    | <input type="radio"/>            | <input type="radio"/> |
|   | 1124403              | CPGW 120404 Z1    | CPGW 431 Z1                      | <input type="radio"/>            | <input type="radio"/> |
|   | 1124404              | CPGW 120408 Z1    | CPGW 432 Z1                      | <input type="radio"/>            | <input type="radio"/> |

Stock Items | Itens de stock


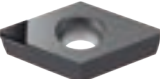


Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

# PCD POSITIVE INSERTS

Single tip

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      |     |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|------|------|------|-----|------|--|------|------|-----------|------|------|--|
| IC  | S    | RE   | D1   | AN  | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| SINGLE TIP  |      |      |      |     |      |  |      |      |           |      |      |  |
| 6,350   | 2,38 | 0,20 | 2,80 | 7°  | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 6,350   | 2,38 | 0,40 | 2,80 | 7°  | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,07 | 0,25 |  |
| 6,350   | 2,38 | 2,00 | 2,80 | 10° | 3,14 | 0,20   | 0,10 | 0,50 | 0,15      | 0,10 | 0,30 |  |
| 9,525   | 3,97 | 0,40 | 4,40 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,07 | 0,25 |  |
| 9,525   | 3,97 | 0,80 | 4,40 | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 12,700  | 4,76 | 0,40 | 5,50 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,07 | 0,25 |  |
| 12,700  | 4,76 | 0,80 | 5,50 | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 3,97 | 0,40 | 4,40 | -   | 4,00 | 0,12   | 0,07 | 0,40 | 0,15      | 0,07 | 0,25 |  |
| 9,525   | 3,97 | 0,80 | 4,40 | -   | 4,00 | 0,20   | 0,08 | 0,80 | 0,20      | 0,08 | 0,30 |  |
| 6,350   | 2,38 | 0,20 | 2,80 | -   | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,05 | 0,13 |  |
| 6,350   | 2,38 | 0,40 | 2,80 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,11      | 0,07 | 0,23 |  |
| 6,350   | 2,38 | 2,00 | 2,80 | -   | 3,20 | 0,80   | 0,40 | 2,00 | 0,15      | 0,10 | 0,40 |  |
| 9,525   | 3,97 | 0,20 | 4,40 | -   | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 9,525   | 3,97 | 0,40 | 4,40 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,06 | 0,25 |  |
| 9,525   | 3,97 | 0,80 | 4,40 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 12,700  | 4,76 | 0,40 | 5,50 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,06 | 0,25 |  |
| 12,700  | 4,76 | 0,80 | 5,50 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 6,350   | 2,38 | 0,20 | 2,80 | 7°  | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 6,350   | 2,38 | 0,40 | 2,80 | 7°  | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,07 | 0,25 |  |
| 9,525   | 3,97 | 0,40 | 4,40 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,07 | 0,25 |  |
| 9,525   | 3,97 | 0,80 | 4,40 | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 12,700  | 4,76 | 0,40 | 5,50 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,07 | 0,25 |  |
| 12,700  | 4,76 | 0,80 | 5,50 | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 6,350   | 2,38 | 0,20 | 2,80 | -   | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,05 | 0,13 |  |
| 6,350   | 2,38 | 0,40 | 2,80 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,11      | 0,07 | 0,23 |  |
| 9,525   | 3,97 | 0,20 | 4,40 | -   | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 9,525   | 3,97 | 0,40 | 4,40 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,06 | 0,25 |  |
| 9,525   | 3,97 | 0,80 | 4,40 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 12,700  | 4,76 | 0,40 | 5,50 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,12      | 0,06 | 0,25 |  |
| 12,700  | 4,76 | 0,80 | 5,50 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |

| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry code | (2) Grade code |                 | N                                   |                                     |
|---|----------------------|----------------|-----------------|-------------------------------------|-------------------------------------|
|   |                      |                |                 | D6<br>PDP410                        | I3<br>PDP403                        |
| SINGLE TIP  |                      |                |                 |                                     |                                     |
|    | 1124116              | DCGT 070202 Z1 | DCGT 21.50.5 Z1 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124231              | DCGT 070204 Z1 | DCGT 21.51 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1112634              | DCGT 11T304 Z1 | DCGT 32.501 Z1  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124380              | DCGT 11T308 Z1 | DCGT 32.52 Z1   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|   | 1124529              | DCGT 150408 Z1 | DCGT 432 Z1     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|    | 1124232              | DCGW 070202 Z1 | DCGW 21.50.5 Z1 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124233              | DCGW 070204 Z1 | DCGW 21.51 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124458              | DCGW 11T302 Z1 | DCGW 32.50.5 Z1 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1112635              | DCGW 11T304 Z1 | DCGW 32.51 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124168              | DCGW 11T308 Z1 | DCGW 32.52 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124234              | DCGW 150404 Z1 | DCGW 431 Z1     | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124117              | DCGW 150408 Z1 | DCGW 432 Z1     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|  | 1124386              | SCGT 060202 Z1 | SCGT 21.50.5 Z1 | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124387              | SCGT 060204 Z1 | SCGT 21.51 Z1   | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124388              | SCGT 09T304 Z1 | SCGT 32.51 Z1   | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124389              | SCGT 09T308 Z1 | SCGT 32.52 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|   | 1124390              | SCGT 120404 Z1 | SCGT 431 Z1     | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124391              | SCGT 120408 Z1 | SCGT 432 Z1     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|  | 1124237              | SCGW 060202 Z1 | SCGW 21.50.5 Z1 | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124238              | SCGW 060204 Z1 | SCGW 21.51 Z1   | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124239              | SCGW 09T304 Z1 | SCGW 32.51 Z1   | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124240              | SCGW 09T308 Z1 | SCGW 32.52 Z1   | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124794              | SCGW 09T312 Z1 | SCGW 32.53 Z1   | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124241              | SCGW 120404 Z1 | SCGW 431 Z1     | <input type="checkbox"/>            | <input type="checkbox"/>            |
|   | 1124242              | SCGW 120408 Z1 | SCGW 432 Z1     | <input type="checkbox"/>            | <input type="checkbox"/>            |

Stock items | Itens de stock

Available under request | Disponível sob consulta | Disponible bajo consulta

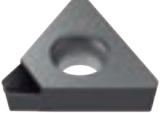
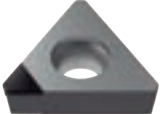


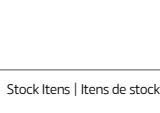

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

# PCD POSITIVE INSERTS

Single tip

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |       |     |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|------|------|-------|-----|------|--|------|------|-----------|------|------|--|
| IC  | S    | RE   | D1    | AN  | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| SINGLE TIP  |      |      |       |     |      |  |      |      |           |      |      |  |
| 6,350   | 2,38 | 0,20 | 2,80  | 7°  | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 6,350   | 2,38 | 0,40 | 2,80  | 7°  | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,40 | 4,40  | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,80 | 4,40  | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 12,700  | 4,76 | 0,80 | 5,50  | 10° | 3,50 | 0,60   | 0,10 | 1,20 | 0,25      | 0,10 | 0,40 |  |
| 6,350   | 2,38 | 0,20 | 2,80  | -   | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,05 | 0,15 |  |
| 6,350   | 2,38 | 0,40 | 2,80  | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,20 | 4,40  | -   | 3,50 | 0,10   | 0,05 | 0,35 | 0,10      | 0,05 | 0,15 |  |
| 9,525   | 3,97 | 0,40 | 4,40  | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,80 | 4,40  | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 12,700  | 4,76 | 0,40 | 5,50  | -   | 3,50 | 0,10   | 0,08 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 12,700  | 4,76 | 0,80 | 5,50  | -   | 3,50 | 0,20   | 0,10 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 6,350   | 2,38 | 0,20 | 2,80  | 7°  | 3,50 | 0,08   | 0,05 | 0,20 | 0,07      | 0,05 | 0,15 |  |
| 6,350   | 2,38 | 0,40 | 2,80  | 7°  | 3,50 | 0,10   | 0,05 | 0,40 | 0,09      | 0,05 | 0,20 |  |
| 9,520   | 3,97 | 0,40 | 4,40  | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,520   | 3,97 | 0,80 | 4,40  | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,07 | 0,30 |  |
| 12,700  | 4,76 | 0,40 | 5,50  | 10° | 3,50 | 0,12   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 12,700  | 4,76 | 0,80 | 5,50  | 10° | 3,50 | 0,22   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 6,350   | 2,38 | 0,20 | 6,35  | -   | 3,50 | 0,08   | 0,05 | 0,20 | 0,07      | 0,05 | 0,15 |  |
| 6,350   | 2,38 | 0,40 | 6,35  | -   | 3,50 | 0,10   | 0,05 | 0,40 | 0,09      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,40 | 9,53  | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,80 | 9,53  | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,07 | 0,30 |  |
| 6,350   | 3,96 | 1,20 | 6,35  | -   | 3,50 | 0,30   | 0,09 | 1,20 | 0,20      | 0,10 | 0,40 |  |
| 12,700  | 4,76 | 0,40 | 12,70 | -   | 3,50 | 0,12   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 12,700  | 4,76 | 0,80 | 12,70 | -   | 3,50 | 0,22   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |



|   |                      |                |                | N                 |                                     |                          |
|---|----------------------|----------------|----------------|-------------------|-------------------------------------|--------------------------|
|   |                      | (2) Grade code |                | D6                | B                                   |                          |
| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry code | ISO Reference  | ANSI Reference | PDP410            | PDP403                              |                          |
| SINGLE TIP  |                      |                |                |                   |                                     |                          |
|    | TCGT Z1              | 1124186        | TCGT 090202 Z1 | TCGT 1.81.50.5 Z1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124188        | TCGT 090204 Z1 | TCGT 1.81.51 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124501        | TCGT 090208 Z1 | TCGT 1.81.52 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124119        | TCGT 110204 Z1 | TCGT 21.51 Z1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124190        | TCGT 110208 Z1 | TCGT 21.52 Z1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|    | TCGW Z1              | 1124185        | TCGW 090202 Z1 | TCGW 1.81.50.5 Z1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124187        | TCGW 090204 Z1 | TCGW 1.81.51 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124507        | TCGW 110202 Z1 | TCGW 21.50.5 Z1   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124192        | TCGW 110204 Z1 | TCGW 21.51 Z1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124189        | TCGW 110208 Z1 | TCGW 21.52 Z1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|  | TPGT Z1              | 1124260        | TPGT 110302 Z1 | TPGT 220.5 Z1     | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124261        | TPGT 110304 Z1 | TPGT 221 Z1       | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124262        | TPGT 110308 Z1 | TPGT 222 Z1       | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124263        | TPGT 16T304 Z1 | TPGT 32.51 Z1     | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124174        | TPGT 16T308 Z1 | TPGT 32.52 Z1     | <input type="checkbox"/>            | <input type="checkbox"/> |
|  | TPGW Z1              | 1124264        | TPGT 160404 Z1 | TPGT 331 Z1       | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124265        | TPGT 160408 Z1 | TPGT 332 Z1       | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124266        | TPGW 110202 Z1 | TPGW 21.50.5 Z1   | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124267        | TPGW 110204 Z1 | TPGW 21.51 Z1     | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124268        | TPGW 110208 Z1 | TPGW 21.52 Z1     | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |                      | 1124269        | TPGW 110302 Z1 | TPGW 220.5 Z1     | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124270        | TPGW 110304 Z1 | TPGW 221 Z1       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124379        | TPGW 110308 Z1 | TPGW 222 Z1       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|   |                      | 1124271        | TPGW 16T304 Z1 | TPGW 32.51 Z1     | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124272        | TPGW 16T308 Z1 | TPGW 32.52 Z1     | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |                      | 1124273        | TPGW 160404 Z1 | TPGW 331 Z1       | <input type="checkbox"/>            | <input type="checkbox"/> |
|   |                      | 1124274        | TPGW 160408 Z1 | TPGW 332 Z1       | <input type="checkbox"/>            | <input type="checkbox"/> |

Stock Items | Itens de stock



Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

# PCD POSITIVE INSERTS

Single tip

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      |     |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|------|------|------|-----|------|--|------|------|-----------|------|------|--|
| IC  | S    | RE   | D1   | AN  | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| SINGLE TIP  |      |      |      |     |      |  |      |      |           |      |      |  |
| 5,560   | 2,38 | 0,20 | 2,50 | 7°  | 3,00 | 0,07   | 0,04 | 0,20 | 0,07      | 0,03 | 0,10 |  |
| 5,560   | 2,38 | 0,40 | 2,50 | 7°  | 3,00 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 7,540   | 2,38 | 0,80 | 2,50 | 7°  | 3,00 | 0,45   | 0,10 | 0,80 | 0,18      | 0,08 | 0,30 |  |
| 6,350   | 2,38 | 0,40 | 2,80 | 7°  | 3,00 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 2,38 | 0,80 | 2,80 | 7°  | 3,00 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 3,97 | 0,40 | 4,40 | 10° | 3,00 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,80 | 4,40 | 10° | 3,00 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 5,560   | 2,38 | 0,20 | 2,50 | -   | 3,00 | 0,07   | 0,04 | 0,20 | 0,07      | 0,03 | 0,10 |  |
| 5,560   | 2,38 | 0,40 | 2,50 | -   | 3,00 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 2,38 | 0,20 | 2,80 | -   | 3,00 | 0,07   | 0,04 | 0,20 | 0,07      | 0,03 | 0,10 |  |
| 6,350   | 2,38 | 0,40 | 2,80 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 2,38 | 0,80 | 2,80 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 3,97 | 0,40 | 4,40 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,80 | 4,40 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 6,350   | 3,18 | 0,20 | 3,40 | 10° | 3,50 | 0,07   | 0,04 | 0,20 | 0,07      | 0,05 | 0,10 |  |
| 6,350   | 3,18 | 0,40 | 3,40 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 3,18 | 0,80 | 3,40 | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 3,97 | 0,40 | 4,30 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,80 | 4,30 | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 4,76 | 0,40 | 4,30 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 4,76 | 0,80 | 4,30 | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 6,350   | 2,38 | 0,20 | 2,80 | -   | 3,50 | 0,07   | 0,04 | 0,20 | 0,07      | 0,05 | 0,10 |  |
| 6,350   | 2,38 | 0,40 | 2,80 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 2,38 | 0,80 | 2,80 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 6,350   | 3,18 | 0,20 | 2,80 | -   | 3,50 | 0,07   | 0,04 | 0,20 | 0,07      | 0,05 | 0,10 |  |
| 6,350   | 3,18 | 0,40 | 2,80 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 3,18 | 0,80 | 2,80 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 3,97 | 0,40 | 4,30 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 3,97 | 0,80 | 4,30 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 4,76 | 0,40 | 4,30 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 4,76 | 0,80 | 4,30 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |

| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry code | (2) Grade code |                   | N            |              |
|---|----------------------|----------------|-------------------|--------------|--------------|
|   |                      | ISO Reference  | ANSI Reference    | D6<br>PDP410 | B3<br>PDP403 |
| SINGLE TIP  |                      |                |                   |              |              |
|  | 1124275              | VCGT 070202 Z1 | VCGT 1.31.50.5 Z1 | ○            | ○            |
|   | 1124276              | VCGT 070204 Z1 | VCGT 1.31.51 Z1   | ○            | ○            |
|   | 1124277              | VCGT 110302 Z1 | VCGT 220.5 Z1     | ⊗            | ○            |
|   | 1124071              | VCGT 110304 Z1 | VCGT 221 Z1       | ⊗            | ○            |
|   | 1124278              | VCGT 160404 Z1 | VCGT 331 Z1       | ⊗            | ○            |
|   | 1112640              | VCGT 160408 Z1 | VCGT 332 Z1       | ⊗            | ○            |
|   | 1124279              | VCGT 160412 Z1 | VCGT 333 Z1       | ○            | ○            |
|  | 1124280              | VCGW 070202 Z1 | VCGW 1.31.50.5 Z1 | ○            | ○            |
|   | 1124281              | VCGW 070204 Z1 | VCGW 1.31.51 Z1   | ⊗            | ○            |
|   | 1124796              | VCGW 110302 Z1 | VCGW 220.5 Z1     | ⊗            | ○            |
|   | 1124378              | VCGW 110304 Z1 | VCGW 221 Z1       | ⊗            | ○            |
|   | 1124282              | VCGW 110308 Z1 | VCGW 222 Z1       | ⊗            | ○            |
|   | 1124795              | VCGW 160402 Z1 | VCGW 330.5 Z1     | ⊗            | ○            |
|   | 1124283              | VCGW 160404 Z1 | VCGW 331 Z1       | ⊗            | ○            |
|   | 1112641              | VCGW 160408 Z1 | VCGW 332 Z1       | ⊗            | ○            |
|   | 1124284              | VCGW 160412 Z1 | VCGW 333 Z1       | ⊗            | ○            |

⊗ Stock Items | Itens de stock



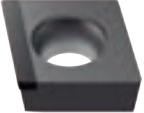



○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

# PCD POSITIVE INSERTS

Single tip

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      |     |      | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |      |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |
|---|------|------|------|-----|------|--|------|------|-----------|------|------|--|
| IC  | S    | RE   | D1   | AN  | SL   | AP (mm)  | MIN  | MAX  | FN (mm/r) | MIN  | MAX  |  |
| SINGLE TIP  |      |      |      |     |      |  |      |      |           |      |      |  |
| 3,970   | 2,38 | 0,20 | 2,20 | 7°  | 3,00 | 0,08   | 0,05 | 0,20 | 0,08      | 0,03 | 0,10 |  |
| 3,970   | 2,38 | 0,40 | 2,20 | 7°  | 3,00 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 3,18 | 0,20 | 2,80 | 10° | 3,50 | 0,08   | 0,05 | 0,20 | 0,08      | 0,03 | 0,10 |  |
| 6,350   | 3,18 | 0,40 | 2,80 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 4,76 | 0,40 | 4,40 | 10° | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 4,76 | 0,80 | 4,40 | 10° | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 4,76 | 1,20 | 4,40 | 10° | 3,50 | 0,30   | 0,10 | 1,20 | 0,17      | 0,08 | 0,35 |  |
| 3,970   | 2,38 | 0,20 | 2,20 | -   | 3,00 | 0,08   | 0,05 | 0,20 | 0,08      | 0,03 | 0,10 |  |
| 3,970   | 2,38 | 0,40 | 2,20 | -   | 3,00 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 3,18 | 0,20 | 2,80 | -   | 3,50 | 0,13   | 0,05 | 0,20 | 0,10      | 0,05 | 0,15 |  |
| 6,350   | 3,18 | 0,40 | 2,80 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 6,350   | 3,18 | 0,80 | 2,80 | -   | 3,50 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 4,76 | 0,20 | 4,40 | -   | 3,50 | 0,18   | 0,05 | 0,30 | 0,10      | 0,05 | 0,15 |  |
| 9,525   | 4,76 | 0,40 | 4,40 | -   | 3,50 | 0,10   | 0,07 | 0,40 | 0,10      | 0,05 | 0,20 |  |
| 9,525   | 4,76 | 0,80 | 4,40 | -   | 4,00 | 0,20   | 0,08 | 0,80 | 0,15      | 0,08 | 0,30 |  |
| 9,525   | 4,76 | 1,20 | 4,40 | -   | 3,50 | 0,30   | 0,10 | 1,20 | 0,17      | 0,08 | 0,35 |  |

|   |                      |                |                 | N      |        |
|---|----------------------|----------------|-----------------|--------|--------|
|   |                      | (2) Grade code |                 | D6     | I3     |
| Inserts<br>Pastilhas<br>Plaquitas   | (1)<br>Geometry code | ISO Reference  | ANSI Reference  | PDP410 | PDP403 |
| FULL EDGE   |                      |                |                 |        |        |
|    | 1124212              | CCGT 09T302 FR | CCGT 32.50.5 FR | ○      | ○      |
|   | 1124165              | CCGT 09T304 FR | CCGT 32.51 FR   | ⊗      | ○      |
|   | 1124213              | CCGT 120404 FR | CCGT 431 FR     | ○      | ○      |
|   | 1124214              | CCGT 120408 FR | CCGT 432 FR     | ○      | ○      |
|    | 1124215              | CCGT 09T302 FL | CCGT 32.50.5 FL | ○      | ○      |
|   | 1124166              | CCGT 09T304 FL | CCGT 32.51 FL   | ⊗      | ○      |
|   | 1124216              | CCGT 120404 FL | CCGT 431 FL     | ⊗      | ○      |
|   | 1124217              | CCGT 120408 FL | CCGT 432 FL     | ⊗      | ○      |
|    | 1124547              | CCGW 060204 FR | CCGW 21.51 FR   | ⊗      | ○      |
|   | 1124170              | CCGW 09T304 FR | CCGW 32.51 FR   | ○      | ○      |
|   | 1124222              | CCGW 09T308 FR | CCGW 32.52 FR   | ○      | ○      |
|   | 1124223              | CCGW 120404 FR | CCGW 431 FR     | ○      | ○      |
|  | 1124224              | CCGW 120408 FR | CCGW 432 FR     | ○      | ○      |
|   | 1124548              | CCGW 060204 FL | CCGW 21.51 FL   | ⊗      | ○      |
|   | 1124171              | CCGW 09T304 FL | CCGW 32.51 FL   | ○      | ○      |
|   | 1124225              | CCGW 09T308 FL | CCGW 32.52 FL   | ○      | ○      |
|  | 1124226              | CCGW 120404 FL | CCGW 431 FL     | ○      | ○      |
|   | 1124227              | CCGW 120408 FL | CCGW 432 FL     | ⊗      | ○      |
|   | 1124173              | TCGT 110204 FL | TCGT 21.51 FL   | ⊗      | ○      |
|   | 1124248              | TCGT 110208 FL | TCGT 21.52 FL   | ○      | ○      |
|  | 1124249              | TCGT 16T304 FL | TCGT 32.51 FL   | ⊗      | ○      |
|   | 1124250              | TCGT 16T308 FL | TCGT 32.52 FL   | ⊗      | ○      |
|   | 1124252              | TCGW 110202 FL | TCGW 21.50.5 FL | ○      | ○      |
|   | 1112777              | TCGW 110204 FL | TCGW 21.51 FL   | ⊗      | ○      |
|   | 1124253              | TCGW 16T304 FL | TCGW 32.51 FL   | ⊗      | ○      |
|   | 1124254              | TCGW 16T308 FL | TCGW 32.52 FL   | ⊗      | ○      |
|   | 1124255              | TCGW 220404 FL | TCGW 431 FL     | ○      | ○      |
|   | 1124382              | TCGW 220408 FL | TCGW 432 FL     | ⊗      | ○      |

⊗ Stock Items | Itens de stock

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

# PCD POSITIVE INSERTS

Full edge

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      |     |       | Cutting conditions<br>Condições de corte<br>Condiciones de corte |      |       |           |      |      | Technical drawing<br>Desenho técnico<br>Dibujo técnico |  |
|---|------|------|------|-----|-------|--|------|-------|-----------|------|------|--|--|
| IC  | S    | RE   | D1   | AN  | SL    | AP (mm)  | MIN  | MAX   | FN (mm/r) | MIN  | MAX  |  |  |
| FULL EDGE   |      |      |      |     |       |  |      |       |           |      |      |  |  |
| 9,525   | 3,97 | 0,20 | 4,40 | 10° | 9,70  | 4,85   | 0,20 | 6,40  | 0,08      | 0,05 | 0,15 |  |  |
| 9,525   | 3,97 | 0,40 | 4,40 | 10° | 9,70  | 4,85   | 0,40 | 6,40  | 0,12      | 0,07 | 0,25 |  |  |
| 12,700  | 4,76 | 0,40 | 5,50 | 10° | 12,90 | 6,45   | 0,40 | 8,50  | 0,15      | 0,08 | 0,30 |  |  |
| 12,700  | 4,76 | 0,80 | 5,50 | 10° | 12,90 | 6,45   | 0,80 | 8,50  | 0,30      | 0,10 | 0,40 |  |  |
| 9,525   | 3,97 | 0,20 | 4,40 | 10° | 9,70  | 4,85   | 0,20 | 6,40  | 0,08      | 0,05 | 0,15 |  |  |
| 9,525   | 3,97 | 0,40 | 4,40 | 10° | 9,70  | 4,85   | 0,40 | 6,40  | 0,12      | 0,07 | 0,25 |  |  |
| 12,700  | 4,76 | 0,40 | 5,50 | 10° | 12,90 | 6,45   | 0,40 | 8,50  | 0,15      | 0,08 | 0,30 |  |  |
| 12,700  | 4,76 | 0,80 | 5,50 | 10° | 12,90 | 6,45   | 0,80 | 8,50  | 0,30      | 0,10 | 0,40 |  |  |
| 9,525   | 3,97 | 0,40 | 4,40 | -   | 9,70  | 4,85   | 0,40 | 6,40  | 0,12      | 0,07 | 0,25 |  |  |
| 9,525   | 3,97 | 0,40 | 4,40 | -   | 9,70  | 4,85   | 0,40 | 6,40  | 0,12      | 0,07 | 0,25 |  |  |
| 9,525   | 3,97 | 0,80 | 4,40 | -   | 9,70  | 4,85   | 0,80 | 6,40  | 0,16      | 0,10 | 0,35 |  |  |
| 12,700  | 4,76 | 0,40 | 5,50 | -   | 12,90 | 6,45   | 0,40 | 8,50  | 0,15      | 0,08 | 0,30 |  |  |
| 12,700  | 4,76 | 0,80 | 5,50 | -   | 12,90 | 6,45   | 0,80 | 8,50  | 0,30      | 0,10 | 0,40 |  |  |
| 6,350   | 2,38 | 0,40 | 2,80 | -   | 6,50  | 3,25   | 0,40 | 4,20  | 0,08      | 0,07 | 0,25 |  |  |
| 9,525   | 3,97 | 0,40 | 4,40 | -   | 9,70  | 4,85   | 0,40 | 6,40  | 0,12      | 0,07 | 0,25 |  |  |
| 9,525   | 3,97 | 0,80 | 4,40 | -   | 9,70  | 4,85   | 0,80 | 6,40  | 0,16      | 0,10 | 0,35 |  |  |
| 12,700  | 4,76 | 0,40 | 5,50 | -   | 12,90 | 6,45   | 0,40 | 8,50  | 0,15      | 0,08 | 0,30 |  |  |
| 12,700  | 4,76 | 0,80 | 5,50 | -   | 12,90 | 6,45   | 0,80 | 8,50  | 0,30      | 0,10 | 0,40 |  |  |
| 6,350   | 2,38 | 0,40 | 2,80 | 7°  | 10,41 | 5,20   | 0,40 | 6,90  | 0,10      | 0,05 | 0,20 |  |  |
| 6,350   | 2,38 | 0,80 | 2,80 | 7°  | 9,83  | 4,92   | 0,80 | 6,50  | 0,15      | 0,08 | 0,30 |  |  |
| 9,525   | 3,97 | 0,40 | 4,40 | 10° | 15,91 | 7,96   | 0,40 | 10,50 | 0,10      | 0,05 | 0,20 |  |  |
| 9,525   | 3,97 | 0,80 | 4,40 | 10° | 15,33 | 7,67   | 0,80 | 10,15 | 0,15      | 0,08 | 0,30 |  |  |
| 6,350   | 2,38 | 0,20 | 2,80 | -   | 10,71 | 5,20   | 0,40 | 6,90  | 0,10      | 0,05 | 0,20 |  |  |
| 6,350   | 2,38 | 0,40 | 2,80 | -   | 10,41 | 5,21   | 0,80 | 6,50  | 0,15      | 0,08 | 0,30 |  |  |
| 9,525   | 3,97 | 0,40 | 4,40 | -   | 15,91 | 7,96   | 0,40 | 10,50 | 0,10      | 0,05 | 0,20 |  |  |
| 9,525   | 3,97 | 0,80 | 4,40 | -   | 15,33 | 7,67   | 0,80 | 10,15 | 0,15      | 0,08 | 0,30 |  |  |
| 12,700  | 4,76 | 0,40 | 5,50 | -   | 21,40 | 8,00   | 0,40 | 10,70 | 0,10      | 0,08 | 0,20 |  |  |
| 12,700  | 4,76 | 0,80 | 5,50 | -   | 20,83 | 7,84   | 0,80 | 10,45 | 0,15      | 0,10 | 0,30 |  |  |

# INSERTS FOR **HEAVY TURNING**



Heavy turning entails precisely shaping large-scale components using robust machinery and specialized techniques. This process tackles formidable tasks such as shaping massive shafts, cylinders, and gears utilized in sectors like aerospace, energy, and transportation. It requires expertise, precision, and rigorous quality control.

O torneamento pesado envolve a modelagem precisa de componentes em grande escala usando maquinaria robusta e técnicas especializadas. Este processo enfrenta tarefas formidáveis, como moldar eixos, cilindros e engrenagens maciças utilizadas em setores como aeroespacial, energia e transporte. Exige experiência, precisão e rigoroso controle de qualidade.

El torneado pesado implica la modelación precisa de componentes a gran escala utilizando maquinaria robusta y técnicas especializadas. Este proceso aborda tareas formidables como la conformación de ejes, cilindros y engranajes masivos utilizados en sectores como el aeroespacial, energético y de transporte. Requiere experiencia, precisión y un riguroso control de calidad.

## BAR PEELING > page 624

Inserts for refining blanks into polished bars, suitable for diverse applications. Versatile across materials, it streamlines production with specialized tools

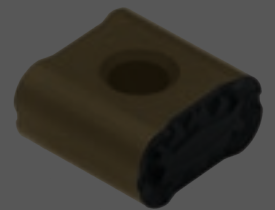
Pastilhas para refinar peças brutas em barras polidas, adequadas para diversas aplicações. Versátil em diferentes materiais, otimiza a produção com ferramentas especializadas | Plaquetas para refinar piezas en bruto en barras pulidas, adecuadas para diversas aplicaciones. Versátil en diferentes materiales, optimiza la producción con herramientas especializadas



## RAILWAY > page 630

Inserts are designed to meet diverse railway machining needs, covering tasks such as handling new rails, re-profiling, managing crossings, joints, wheel-set production, and maintenance

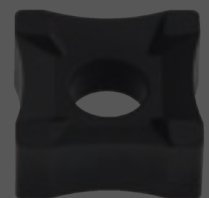
As pastilhas são projetadas para atender às diversas necessidades de maquinaria ferroviária, abrangendo tarefas como o manuseio de carris novos, o reperfilamento, a gestão de cruzamentos, juntas, produção de conjuntos de rodas e manutenção | As pastilhas están diseñados para satisfacer las diversas necesidades de mecanizado ferroviario, cubriendo tareas como el manejo de rieles nuevos, el reperfilado, la gestión de cruces, juntas, la producción de conjuntos de ruedas y mantenimiento



## SCARFING > page 640

Scarfig is common in steel, pipeline, and metal industries for welded component quality. Inserts remove surface imperfections, ensuring smooth surfaces

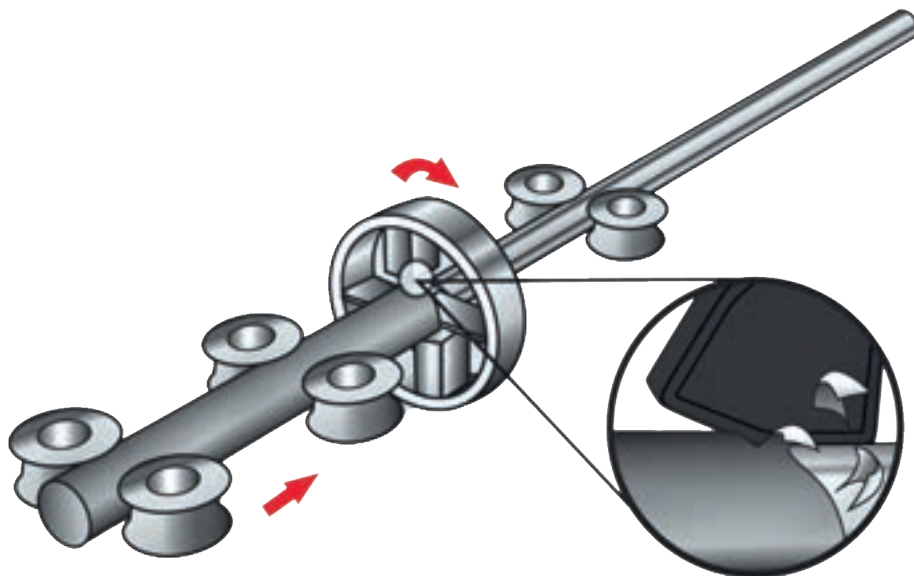
Scarfig é comum nas indústrias de aço, tubulações e metalurgia para garantir a qualidade dos componentes soldados. As pastilhas removem imperfeições superficiais, garantindo superfícies lisas | Scarfig es común en las industrias del acero, tuberías y metalurgia para garantizar la calidad de los componentes soldados. Las pastillas eliminan imperfecciones superficiales, asegurando superficies lisas





## BAR PEELING INSERTS

Bar Peeling is the machining process by which a raw forged blank is converted into a polished bar. During this peeling process, surface cracks and oxide layers are removed giving a perfect roundness with good surface and dimensional accuracy to the bar. The range of materials that can be machined with these tools is vast and goes from all kind of Steels to Cast Iron parts.



The size of blank bar can go from 4 mm (157 inch) to over 400 mm (15.75 inch) in diameter.

The surface quality and dimensional tolerances are also high, which leads to less machining at later stages.

Our aim is at the same time improving your productivity (by removing maximal chips volume) and, at the same time, matching or surpassing your surface quality requirements. This is why our Bar Peeling program is vast, comprising both standard tools and also special custom-made solutions to every customer needs. Please don't hesitate to contact us regarding other possible geometries that we may have although not presented in this catalogue.



# BAR PEELING INSERTS IDENTIFICATION SYSTEM

Sistema de identificação para pastilhas de torneamento de barra | Codificación para plaquitas de torneado de barra

|          |          |          |          |           |           |           |   |           |
|----------|----------|----------|----------|-----------|-----------|-----------|---|-----------|
| <b>L</b> | <b>N</b> | <b>G</b> | <b>F</b> | <b>20</b> | <b>10</b> | <b>35</b> | - | <b>MP</b> |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b>  | <b>6</b>  | <b>7</b>  |   | <b>8</b>  |

### 1 - Insert Shape

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
|          |          |          |          |          |
| <b>I</b> | <b>J</b> | <b>L</b> | <b>R</b> | <b>S</b> |
|          |          |          |          |          |
| <b>T</b> | <b>U</b> | <b>W</b> | <b>X</b> |          |

### 2 - Clearance Angle

**N**

### 5 - Length of Cutting Edge (LE)

The length of the secondary cutting edge is indicated in mm

|       |       |
|-------|-------|
| 13 mm | 25 mm |
| 14 mm | 27 mm |
| 15 mm | 28 mm |
| 17 mm | 38 mm |
| 20 mm | 44 mm |
| 22 mm | 50 mm |

### 3 - Tolerances

| symbol    | m (mm)      | d (mm)      | s (mm) |
|-----------|-------------|-------------|--------|
| <b>A</b>  | ±0.005      | ±0.025      | ±0.025 |
| <b>F</b>  | ±0.005      | ±0.013      | ±0.025 |
| <b>C</b>  | ±0.013      | ±0.025      | ±0.025 |
| <b>H</b>  | ±0.013      | ±0.013      | ±0.025 |
| <b>E</b>  | ±0.025      | ±0.025      | ±0.025 |
| <b>G</b>  | ±0.025      | ±0.025      | ±0.13  |
| <b>J</b>  | ±0.005      | ±0.05~±0.13 | ±0.025 |
| <b>K*</b> | ±0.013      | ±0.05~±0.13 | ±0.025 |
| <b>L*</b> | ±0.025      | ±0.05~±0.13 | ±0.025 |
| <b>M*</b> | ±0.08~±0.20 | ±0.05~±0.13 | ±0.13  |
| <b>N*</b> | ±0.08~±0.20 | ±0.05~±0.13 | ±0.025 |
| <b>U*</b> | ±0.13~±0.38 | ±0.08~0.25  | ±0.13  |

### 4 - Insert type

| symbol   | Type         | Type of hole                              | Chip breaker               | Shape      |
|----------|--------------|---|----------------------------|------------|
| <b>W</b> | with hole    | Round hole / one countersink (40°-60°)    | Without chip breaker       |            |
| <b>T</b> | with hole    |   | Chip breaker on one side   |            |
| <b>Q</b> | with hole    | Round hole / one countersink (40°-60°)    | Without chip breaker       |            |
| <b>U</b> | with hole    |   | Chip breaker on both sides |            |
| <b>B</b> | with hole    | Round hole / one countersink (70°-90°)    | Without chip breaker       |            |
| <b>H</b> | with hole    |   | Chip breaker on one side   |            |
| <b>C</b> | with hole    | Round hole / double countersink (70°-90°) | Without chip breaker       |            |
| <b>J</b> | with hole    |   | Chip breaker on both sides |            |
| <b>A</b> | with hole    | Round hole                                | Without chip breaker       |            |
| <b>M</b> | with hole    |   | Chip breaker on one side   |            |
| <b>G</b> | with hole    |   | Chip breaker on both sides |            |
| <b>N</b> | without hole | --  | Without chip breaker       |            |
| <b>R</b> | without hole | --  | Chip breaker on one side   |            |
| <b>F</b> | without hole | --  | Chip breaker on both sides |            |
| <b>X</b> | -            | -   | --                         | On request |

### 6 - Thickness (S)

The length of the secondary cutting edge is indicated in mm

|               |
|---------------|
| 08 = 8,00 mm  |
| 09 = 9,52 mm  |
| 10 = 10,00 mm |
| 12 = 12,00 mm |
| 12 = 12,70 mm |
| 13 = 13,00 mm |
| 14 = 14,00 mm |
| 18 = 18,00 mm |

\* As a rule, the sides of these inserts are as sintered. Tolerance differs with insert size, for the accuracy of Class M, refer to the table on the right.

### 8 - Chip Breaker

Chip breaker according to Palbit geometries

|    |    |
|----|----|
| FP | MH |
| ST | RP |
| MP | LH |









### 7 - Depth of Cut (AP)

Maximum depth of cut

|              |
|--------------|
| 20 = 2,00 mm |
| 25 = 2,50 mm |
| 35 = 3,50 mm |
| 40 = 4,00 mm |
| 80 = 8,00 mm |

# BAR PEELING INSERTS RANGE

TURNING

|   |                   |                      | P      |        |        |        |        |        |        |        |        | M      |        |        |        |        |        | K      |        |        |        |        |   |
|---|-------------------|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
|   |                   |                      | CVD    |        |        |        |        |        |        |        |        | CVD    |        |        |        |        |        | CVD    |        |        |        |        |   |
|   |                   | (2) Grade code       | L7     | R2     | L8     | R3     | U5     | P1     | V8     | N2     | S9     | L9     | U4     | L8     | U5     | N2     | P1     | V8     | V6     | L5     | L6     | L9     |   |
| Inserts<br>Pastilhas<br>Plaquetas   | (1) Geometry code | ISO / ANSI Reference | PH5115 | PHG115 | PH5125 | PHG125 | PHS225 | PH5228 | PHS228 | PH5135 | PHG135 | PH5740 | PHS215 | PH5125 | PHS225 | PH5135 | PHS228 | PHS228 | PHS240 | PH5705 | PH5320 | PH5740 |   |
| <br>INGR-MP<br>Rectangular 90°   | 1123828           | INGR 221240-MP       | ⊗      | ○      | ○      |        |        |        |        |        |        |        |        | ○      |        |        |        |        |        |        |        |        |   |
|   | 1123830           | JNGF 201220-MP       | ○      |        | ⊗      | ○      |        |        |        |        | ○      |        |        | ⊗      |        |        |        |        |        |        |        |        |   |
| <br>JNGF-MP<br>Rectangular 90°   | 1123996           | JNGF 201220-MP SP1   |        |        | ○      |        |        |        |        |        |        |        |        | ○      |        |        |        |        |        |        |        |        |   |
|   | 1123997           | JNGF 201220-MP SP2   | ⊗      |        | ⊗      |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        | ○      |   |
|   | 1124043           | JNGF 271220-MP       |        |        | ⊗      |        |        |        |        |        |        | ○      |        | ⊗      |        |        |        |        |        |        |        |        | ○ |
| <br>JNGF-PM<br>Rectangular 90°   | 1124452           | JNGF 201220-PM       |        | ○      |        |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |   |
|   | 1124567           | JNGF 201220-PM SP    |        | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |
| <br>LNGF-MP<br>Rectangular 90° | 1123826           | LNGF 201035-MP       | ○      | ⊗      | ○      |        | ○      |        |        |        |        |        |        | ○      |        | ○      |        |        |        |        | ⊗      |        |   |
|   | 1123827           | LNGF 201235-MP       | ○      | ○      | ○      |        |        |        |        |        |        |        |        | ○      |        |        |        |        |        |        |        |        |   |
| <br>UNGF-MP<br>Rectangular 90° | 1123829           | UNGF 171240-MP       | ○      |        | ○      | ⊗      |        |        |        |        |        |        |        | ○      |        |        |        |        |        |        |        |        |   |
| <br>TNMJ-MP<br>Triangular 60°  | 1123838           | TNMJ 201025-MP       | ⊗      | ⊗      | ⊗      | ⊗      | ⊗      |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |        |   |
|   | 1123843           | TNMJ 201425-MP       |        |        | ⊗      | ○      |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |   |
| <br>TNGM-MP<br>Triangular 60°  | 1124104           | TNGM 220812-MP       |        |        | ⊗      |        |        |        |        | ⊗      |        |        | ⊗      |        | ⊗      |        |        |        |        |        |        |        |   |
| <br>TNMM-LH<br>Triangular 60°  | 1124102           | TNMM 441116-LH       |        |        |        |        |        |        |        | ○      | ⊗      |        |        |        | ○      |        |        |        |        |        |        |        |   |

⊗ First choice | 1ª Escolha | 1ª Opción     
 ○ Available under request | Disponível sob consulta | Disponible bajo consulta     
 Insert Order Code: (1) Geometry code + (2) Grade code  
⊗ Stock items | Itens de stock     
 ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock






# BAR PEELING INSERTS RANGE

Negative inserts | Pastilhas negativas | Plaquetas negativas

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |       |       |       |       |      |      |      |       | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |           |      | Technical Drawing<br>Desenho Técnico<br>Diseño Técnico |  |  |
|---|-------|-------|-------|-------|------|------|------|-------|--|------|-------|-----------|------|--|--|--|
| INSL  | IC    | LE    | W1    | S1    | D1   | RE   | APMX | KRINS | AP (mm)  | MIN  | MAX   | FN (mm/r) | MIN  | MAX  |  |  |
| 38,25   | -     | 22,00 | 17,50 | 12,00 | -    | -    | 4,00 | 20    | 2,00   | 0,40 | 4,00  | 3,50      | 1,00 | 8,00   |  |  |
| 36,90   | -     | 20,00 | 18,00 | 12,35 | -    | -    | 2,00 | 20    | 1,50   | 1,00 | 2,00  | 3,50      | 1,50 | 6,00   |  |  |
| 36,30   | -     | 20,00 | 18,00 | 12,45 | -    | -    | 2,00 | 20    | 1,50   | 1,00 | 2,00  | 3,50      | 1,50 | 6,00   |  |  |
| 36,50   | -     | 20,00 | 18,00 | 12,45 | -    | -    | 2,00 | 20    | 1,50   | 1,00 | 2,00  | 3,50      | 1,50 | 6,00   |  |  |
| 36,90   | -     | 27,00 | 18,00 | 12,45 | -    | -    | 2,00 | 20    | 1,50   | 1,00 | 2,00  | 3,50      | 1,50 | 6,00   |  |  |
| 37,52   | -     | 21,00 | 18,00 | 12,45 | -    | -    | 3,00 | 20    | 1,50   | 1,00 | 2,00  | 4,00      | 2,00 | 6,00   |  |  |
| 37,52   | -     | 21,00 | 18,00 | 12,45 | -    | -    | 3,00 | 20    | 1,50   | 1,00 | 2,00  | 4,00      | 2,00 | 6,00   |  |  |
| 40,00   | -     | 20,00 | 20,00 | 10,00 | -    | -    | 3,50 | 25    | 2,00   | 0,80 | 3,50  | 2,50      | 1,00 | 6,50   |  |  |
| 40,00   | -     | 20,00 | 20,00 | 12,00 | -    | -    | 3,50 | 25    | 2,00   | 0,80 | 3,50  | 2,50      | 1,00 | 6,50   |  |  |
| 36,50   | -     | 17,00 | 18,00 | 12,00 | -    | -    | 4,00 | 15    | 1,50   | 0,35 | 4,00  | 2,00      | 1,00 | 5,00   |  |  |
| -   | 28,60 | 20,00 | -     | 10,00 | 7,00 | -    | 2,50 | 20    | 1,00   | 0,70 | 2,50  | 3,00      | 1,00 | 5,50   |  |  |
| -   | 28,60 | 20,00 | -     | 14,00 | 7,00 | -    | 2,50 | 20    | 1,00   | 0,70 | 2,50  | 3,00      | 1,00 | 5,50   |  |  |
| -   | 19,05 | 22,00 | -     | 8,00  | 7,96 | -    | 1,20 | 15    | 0,70   | 0,20 | 1,30  | 14,00     | 5,00 | 18,00  |  |  |
| -   | 25,40 | 41,70 | -     | 11,50 | 9,20 | 1,60 | -    | -     | 12,00  | 2,00 | 25,00 | 0,80      | 0,50 | 1,60   |  |  |

# BAR PEELING INSERTS RANGE

TURNING

|   |                   |                      | P      |        |        |        |        |        |        |        |        | M      |        |        |        |        |        | K      |        |        |        |        |  |  |  |
|---|-------------------|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|--|
|   |                   |                      | CVD    |        |        |        |        |        |        |        |        | CVD    |        |        |        |        |        | CVD    |        |        |        |        |  |  |  |
|   |                   | (2) Grade code       | L7     | R2     | L8     | R3     | U5     | P1     | V8     | N2     | S9     | L9     | U4     | L8     | U5     | N2     | P1     | V8     | V6     | L5     | L6     | L9     |  |  |  |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO / ANSI Reference | PH5115 | PHG115 | PH5125 | PHG125 | PHS225 | PH5228 | PHS228 | PH5135 | PHG135 | PH5740 | PHS215 | PH5125 | PHS225 | PH5135 | PH5228 | PHS228 | PHS240 | PH5705 | PH5320 | PH5740 |  |  |  |
| <b>XNMJ-MP</b>  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|    | 1123835           | XNMJ 151380-MP       | ○      | ⊗      |        |        |        | ⊗      |        | ○      |        |        |        | ⊗      |        | ○      | ⊗      |        |        |        |        |        |  |  |  |
| Special 85°   |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
| <b>XNMJ-MH</b>  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|    | 1123836           | XNMJ 151380-MH       | ○      | ○      | ⊗      |        |        | ⊗      |        |        |        | ○      |        | ⊗      |        |        | ⊗      |        |        |        |        | ○      |  |  |  |
| Special 85°   |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
| <b>XNGF-FP</b>  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|    | 1123837           | XNGF 150980-FP       |        |        | ○      |        |        |        |        | ○      |        |        |        | ○      |        | ○      | ⊗      |        |        |        |        |        |  |  |  |
| Special 85°   |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
| <b>XNGJ-RP</b>  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|   | 1123834           | XNGJ 151380-RP       |        |        | ○      |        |        |        |        |        |        |        |        | ○      |        |        | ⊗      |        |        |        |        |        |  |  |  |
| Special 85°   |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
| <b>WNGJ-MP</b>  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|  | 1124041           | WNGJ 130950-MP       |        |        | ⊗      | ○      |        | ⊗      |        |        |        |        |        | ⊗      |        |        | ⊗      |        |        | ○      | ⊗      |        |  |  |  |
| Special 75°   |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
| <b>RNMX-MP</b>  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|  | 1123831           | RNMX 381200-MP       | ○      | ○      | ⊗      |        |        |        | ○      |        |        |        |        | ○      |        |        | ⊗      | ○      |        |        |        |        |  |  |  |
|   | 1123832           | RNMX 5018M0-MP       | ○      | ○      |        |        |        |        | ⊗      |        |        |        |        | ○      |        |        | ○      | ⊗      |        |        |        |        |  |  |  |
| Round R°  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
| <b>RNMX-RP</b>  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |
|  | 1123833           | RNMX 5018M0-RP       | ○      | ○      |        |        |        |        | ○      |        |        |        |        | ○      |        |        | ⊗      | ○      |        |        |        |        |  |  |  |
| Round R°  |                   |                      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |  |

⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

# BAR PEELING INSERTS RANGE

Negative inserts | Pastilhas negativas | Plaquetas negativas

| Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |       |       |    |       |       |    |      |       | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |           |      | Technical Drawing<br>Desenho Técnico<br>Diseño Técnico |  |  |
|---|-------|-------|----|-------|-------|----|------|-------|--|------|-------|-----------|------|--|--|--|
| INSL  | IC    | LE    | W1 | S1    | D1    | RE | APMX | KRINS | AP (mm)  | MIN  | MAX   | FN (mm/r) | MIN  | MAX  |  |  |
| -   | 31,75 | 15,00 | -  | 13,00 | 9,00  | -  | 8,00 | 25,00 | 3,00   | 1,00 | 6,50  | 6,00      | 4,00 | 12,00  |  |  |
| -   | 31,75 | 15,00 | -  | 13,00 | 9,00  | -  | 8,00 | 25,00 | 3,00   | 1,00 | 6,50  | 6,00      | 4,00 | 12,00  |  |  |
| -   | 28,58 | 15,00 | -  | 8,88  | -     | -  | 8,00 | 30,00 | 3,00   | 1,00 | 4,50  | 6,00      | 4,00 | 12,00  |  |  |
| -   | 31,75 | 15,00 | -  | 13,00 | 9,00  | -  | 8,00 | 25,00 | 3,00   | 1,00 | 6,50  | 6,00      | 4,00 | 12,00  |  |  |
| -   | 22,23 | 13,00 | -  | 9,56  | 7,93  | -  | 5,00 | 15,00 | 3,00   | 0,50 | 5,00  | 6,00      | 3,00 | 11,00  |  |  |
| -   | 38,10 | -     | -  | 12,70 | 13,00 | -  | -    | -     | 4,00   | 2,00 | 8,00  | 2,00      | 1,00 | 4,00   |  |  |
| -   | 50,00 | -     | -  | 18,00 | 12,70 | -  | -    | -     | 6,00   | 2,00 | 12,00 | 3,50      | 2,50 | 6,50   |  |  |
| -   | 50,00 | -     | -  | 18,00 | 12,70 | -  | -    | -     | 6,00   | 2,00 | 12,00 | 6,00      | 4,00 | 10,50  |  |  |



# RAILWAY TURNING

Palbit is constantly investing in new technologies, research and development of cutting tools for the railway industry.

We supply a complete range of tooling solutions based on a wide experience and know-how to achieve high efficiency machining on new rails and weels as well as re-profiling, crossing rails, joints and more.

## FACE TURNING

Inserts with MT-CVD coating grade and high wear resistance for the machining of forged steels providing longer tool file.

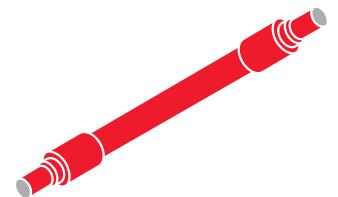


## WHEEL TURNING

Inserts with special design geometry for wheel re-profiling providing productivity through a better chip evacuation. High built-up edge resistance and wear providing efficiency and increasing tool life.

## EXTERNAL TURNING

MT-CVD coating inserts with high wear resistance for turning long axle shafts.





|   |  |   |         |
|---|--|---|---------|
| H |  | M |         |
| O |  | V |         |
| P |  | W |         |
| S |  | L |         |
| T |  | A |         |
| C |  | B |         |
| D |  | K |         |
| E |  | R |         |
| F |  | X | Special |

1- Insert shape symbol

| Symbol | m (mm)      | d (mm)      | s (mm) |
|--------|-------------|-------------|--------|
| A      | ±0.005      | ±0.025      | ±0.025 |
| F      | ±0.005      | ±0.013      | ±0.025 |
| C      | ±0.013      | ±0.025      | ±0.025 |
| H      | ±0.013      | ±0.013      | ±0.025 |
| E      | ±0.025      | ±0.025      | ±0.025 |
| G      | ±0.025      | ±0.025      | ±0.13  |
| J      | ±0.005      | ±0.05~±0.13 | ±0.025 |
| K*     | ±0.013      | ±0.05~±0.13 | ±0.025 |
| L*     | ±0.025      | ±0.05~±0.13 | ±0.025 |
| M*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.13  |
| N*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.025 |
| U*     | ±0.13~±0.38 | ±0.08~±0.25 | ±0.13  |

\*As a rule, the sides of these inserts are as sintered. Tolerance differs with insert size, for the accuracy of class M, refer to the table on the right.

Triangular inserts with a facet (secondary cutting edge)

| Detailed dimension of M class insert<br>Insert height Tolerances (mm) |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| Inscribed circle  | T     | S     | C     | D     | V     |
| 6.35  | ±0.08 | -     | -     | -     | -     |
| 9.525   | ±0.08 | ±0.08 | ±0.11 | ±0.10 | ±0.13 |
| 12.70   | ±0.13 | ±0.13 | ±0.13 | ±0.15 | -     |
| 15.875  | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 19.05   | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 25.40   | -     | ±0.18 | -     | -     | -     |
| 31.75   | -     | ±0.25 | -     | -     | -     |

| Inscribed circle Tolerances (mm) |       |       |       |       |       |
|----------------------------------|-------|-------|-------|-------|-------|
| Inscribed circle                 | T     | S     | C     | D     | V     |
| 6.35                             | ±0.05 | -     | -     | -     | -     |
| 9.525                            | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 |
| 12.70                            | ±0.08 | ±0.08 | ±0.08 | ±0.08 | ±0.08 |
| 15.875                           | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 |
| 19.05                            | -     | -     | -     | -     | ±0.10 |
| 25.40                            | -     | ±0.13 | -     | -     | ±0.10 |
| 31.75                            | -     | ±0.20 | -     | -     | ±0.12 |

3 - Tolerances symbol

| A   | B   | C  | D   | E                     |
|-----|-----|----|-----|-----------------------|
|     |     |    |     |                       |
|     |     |    |     |                       |
| 3°  | 5°  | 7° | 15° | 20°                   |
| 25° | 30° | 0  | 11° | Other clearance angle |

2 - Normal clearance symbol

|      |   |   |   |   |
|------|---|---|---|---|
| ISO  | C | N | M | M |
| ANSI | C | N | M | M |

| 4 - Insert symbol |  |   |                            |       |                          |           |   |                          |                      |        |           |              |                            |                            |  |
|-------------------|--|---|----------------------------|-------|--------------------------|-----------|---|--------------------------|----------------------|--------|-----------|--------------|----------------------------|----------------------------|--|
| symbol            | Type                                   | Hole type                                 | Chip breaker               | Shape | symbol                   | Type      | Hole type                                 | Chip breaker             | Shape                | symbol | Type      | Hole type    | Chip breaker               | Shape                      |  |
| W                 | with hole                              | Round hole / one countersink (40°-60°)    | Without chip breaker       |       | H                        | with hole | Round hole / one countersink (70°-90°)    | Chip breaker on one side |                      | G      | with hole | Round hole   | Chip breaker on both sides |                            |  |
| T                 |  |   | Chip breaker on one side   |       | C                        |           | Round hole / double countersink (70°-90°) | Without chip breaker     |                      | N      |           | -            | Without chip breaker       |                            |  |
| Q                 |  | Round hole / double countersink (40°-60°) | Without chip breaker       |       | J                        |           | Round hole                                | Round hole               | Without chip breaker |        | R         | without hole | -                          | Chip breaker on one side   |  |
| U                 |  |   | Chip breaker on both sides |       | A                        |           |   |                          | Without chip breaker |        | F         |              |                            | Chip breaker on both sides |  |
| B                 | Round hole / one countersink (70°-90°) | Without chip breaker                      |                            | M     | Chip breaker on one side |           | X   | -                        | -                    | -      | -         | On request   |                            |                            |  |

# RAILWAY INSERTS ISO IDENTIFICATION SYSTEM

Sistema de identificação ISO para pastilhas para a indústria ferroviária | Codificación ISO para plaquitas para ferrocarril

| R's  | 35°<br>V's | 55°<br>D's | 80°<br>C's | 90°<br>S's | 60°<br>T's | 80°<br>W's | IC     |       | ANSI   |
|------|------------|------------|------------|------------|------------|------------|--------|-------|--------|
|      |            |            |            |            |            |            | mm     | inch  | Symbol |
| -    | 06         | 04         | -          | 03         | 06         | 02         | 3,97   | 5/32  | 1,20   |
| -    | 08         | 05         | 04         | 04         | 08         | L3         | 4,76   | 3/16  | 1,50   |
| -    | 09         | 06         | 05         | 05         | 09         | 03         | 5,56   | 7/32  | 1,80   |
| 06** | -          | -          | -          | -          | -          | -          | 6,00   | 0,236 |        |
| 06*  | 11         | 07         | 06         | 06         | 11         | 04         | 6,35   | 1/4   | 2,00   |
| 07*  | 13         | 09         | 08         | 07         | 13         | 05         | 7,94   | 5/16  | 2,50   |
| 08*  | -          | -          | -          | -          | -          | -          | 8,00   | 0,315 |        |
| 09*  | 16         | 11         | 09         | 09         | 16         | 06         | 9,525  | 3/8   | 3,00   |
| 10** | -          | -          | -          | -          | -          | -          | 10,00  | 0,394 |        |
| 12** | -          | -          | -          | -          | -          | -          | 12,00  | 0,472 |        |
| 12*  | 22         | 15         | 12         | 12         | 22         | 08         | 12,70  | 1/2   | 4,00   |
| 15*  | 27         | 19         | 16         | 15         | 27         | 10         | 15,875 | 5/8   | 5,00   |
| 16** | -          | -          | -          | -          | -          | -          | 16,00  | 0,63  |        |
| 19*  | 33         | 23         | 19         | 19         | 33         | 13         | 19,05  | 3/4   | 6,00   |
| 20** | -          | -          | -          | -          | -          | -          | 20,00  | 0,787 |        |
| 25** | -          | -          | -          | -          | -          | -          | 25,00  | 0,984 |        |
| 25*  | 44         | 31         | 25         | 25         | 44         | 17         | 25,40  | 1,00  | 8,00   |
| 31*  | 54         | 38         | 32         | 31         | 54         | 21         | 31,75  | 1 1/4 | 10,00  |
| 32** | -          | -          | -          | -          | -          | -          | 32,00  | 1,26  |        |

\* ANSI designation only (Radius Designation is R0)

\*\* Metric designation only (Radius Designation is M0)

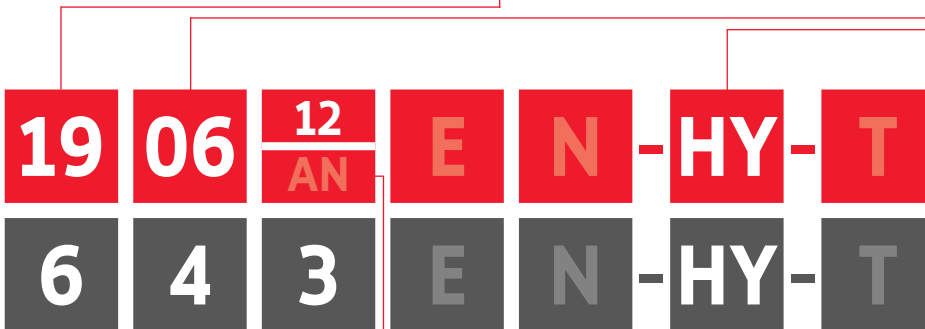
According to International Standard ISO 1832 - 2012(E)

"Indexable inserts for cutting tools - Designation"

| ISO | mm    | ANSI | inch  |
|-----|-------|------|-------|
| 01  | 1.59  | 1    | 0.062 |
| T1  | 1.98  | 1.2  | 0.078 |
| 02  | 2.38  | 1.5  | 0.094 |
| 03  | 3.18  | 2    | 0.125 |
| T3  | 3.97  | 2.5  | 0.156 |
| 04  | 4.76  | 3    | 0.188 |
| 05  | 5.56  | 3.5  | 0.219 |
| 06  | 6.35  | 4    | 0.250 |
| 07  | 7.94  | 5    | 0.312 |
| 09  | 9.52  | 6    | 0.375 |
| 12  | 12.70 | 8    | 0.500 |

5 - Insert size symbol

6 - Insert thickness symbol



| 10 - Chip breaker geometries |    |    |     |     |     |
|------------------------------|----|----|-----|-----|-----|
| NEGATIVE<br>Chip breakers    | HY | HZ | RMM | RRM | RHR |
|                              |    |    |     |     |     |
| POSITIVE<br>Chip breakers    | RM | RR | ST  |     |     |
|                              |    |    |     |     |     |

|                      |            |
|----------------------|------------|
| T                    | Tangential |
| *only when required. |            |

| 7 - Insert corner symbol |              |      |      |
|--------------------------|--------------|------|------|
| ISO                      | mm           | inch | ANSI |
| 00                       | Sharp nose   |      | 0    |
| 01                       | 0.10         | .004 | 0.2  |
| 02                       | 0.20         | .008 | 0.5  |
| 04                       | 0.40         | .015 | 1    |
| 08                       | 0.80         | .032 | 2    |
| 12                       | 1.2          | .047 | 3    |
| 16                       | 1.6          | .062 | 4    |
| 20                       | 2.0          | .078 | 5    |
| 24                       | 2.4          | .094 | 6    |
| 28                       | 2.8          | .109 | 7    |
| 32                       | 3.2          | .125 | 8    |
| 00 (inch or MO/ metric)  | Round insert |      | 0    |

| 7.1* - Insert edges symbol                              |         |   |         |
|---|---------|---|---------|
| For inserts having secondary edges two digits are used: |         |   |         |
| 1 <sup>st</sup> digit is secondary edge                 |         | 2 <sup>nd</sup> digit is secondary edges relief angle |         |
| A   | 45°     | A   | 3°      |
| D   | 60°     | B   | 5°      |
| E   | 75°     | C   | 7°      |
| F   | 85°     | D   | 15°     |
| P   | 90°     | E   | 20°     |
| Z   | special | F   | 25°     |
| *only when required.                                    |         | G   | 30°     |
|   |         | N   | 0°      |
|   |         | P   | 11°     |
|   |         | Z   | special |



| 8* - Cutting edge information |                       |        |
|-------------------------------|-----------------------|--------|
| Shape                         | Honing                | Symbol |
|                               | No honing             | F      |
|                               | With honing           | E      |
|                               | Chamfered No honing   | T      |
|                               | Chamfered with honing | S      |
| *only when required.          |                       |        |

| 9* - Cutting direction |       |        |
|------------------------|-------|--------|
| Shape                  | Hand  | Symbol |
|                        | Right | R      |
|                        | Left  | L      |
|                        | None  | N      |
| *only when required.   |       |        |

# CN - RHOMBIC 80° NEGATIVE

RÔMBICA 80° NEGATIVA | RÓMBICA 80° NEGATIVA

TURNING

|   |                         |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |
|---|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |                         |                | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |  |
|   |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>CNMM-HY<br>Heavy to Roughing | 1121608                 | CNMM 190612-HY |        |        | ○       | ⊗      |         |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121252                 | CNMM 190616-HY |        | ⊗      | ○       | ○      |         |        |        |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121434                 | CNMM 190624-HY |        |        | ○       | ⊗      | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>CNMM-HZ<br>Heavy to Roughing | 1121248                 | CNMM 250924-HY |        | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121607                 | CNMM 190612-HZ |        |        | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|   | 1121251                 | CNMM 190616-HZ |        | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|   | 1121435                 | CNMM 190624-HZ |        | ⊗      | ○       | ⊗      | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
| 1121247   | CNMM 250924-HZ          |                | ⊗      | ○      | ⊗       | ○      |         | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |        |  |

⊗ First choice | 1ª Escolha | 1ª Opción     
 ○ Available under request | Disponível sob consulta | Disponible bajo consulta     
 Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock Items | Itens de stock     
 ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Negative inserts



Positive inserts

PCBN & PCD inserts

Heavy turning

# SN - SQUARE 90° NEGATIVE

QUADRADA 90° NEGATIVA | ESQUADRA 90° NEGATIVA

|   |                         |                | P      |        |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |
|---|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|   |                         |                | CVD    |        |         |        |         |        |        | PVD    | CVD    |        |        |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |  |
|   |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquetas   | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>SNMM-HY<br>Heavy to Roughing | 1121606                 | SNMM 190612-HY |        | ⊗      | ○       | ⊗      | ○       |        | ⊗      |        |        |        | ⊗      |        |        |        |        |        |        |        | ⊗      |        |        |        |        |        |  |
|   | 1121250                 | SNMM 190616-HY |        | ⊗      | ○       | ⊗      | ○       |        |        |        |        |        | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121452                 | SNMM 190624-HY |        |        | ○       | ○      | ○       |        |        |        |        |        | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|   | 1121160                 | SNMM 250724-HY |        |        | ⊗       | ⊗      | ○       |        | ⊗      |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1121161   | SNMM 250924-HY          |                |        | ○      | ○       | ○      |         | ⊗      |        |        |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| <br>SNMM-HZ<br>Heavy to Roughing | 1121605                 | SNMM 190612-HZ |        | ⊗      | ○       | ○      | ○       |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|   | 1121249                 | SNMM 190616-HZ |        |        | ○       | ⊗      | ○       |        | ⊗      |        |        |        |        |        |        |        |        |        |        | ⊗      | ○      |        |        |        |        |        |  |
|   | 1121440                 | SNMM 190624-HZ |        |        | ○       | ⊗      | ○       | ○      |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ⊗      |        |        |        |        |        |  |
|   | 1121158                 | SNMM 250724-HZ |        | ⊗      | ○       | ⊗      | ⊗       |        | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ○      |        |        |        |        |  |
|   | 1123786                 | SNMM 250732-HZ |        |        | ○       | ⊗      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ○      |        |        |        |        |  |
| 1121159   | SNMM 250924-HZ          |                | ⊗      | ○      | ⊗       | ○      |         | ⊗      |        |        |        |        |        |        |        |        |        |        |        | ⊗      | ○      |        |        |        |        |        |  |

⊗ First choice | 1ª Escolha | 1ª Opción     
 ○ Available under request | Disponível sob consulta | Disponible bajo consulta     
 Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

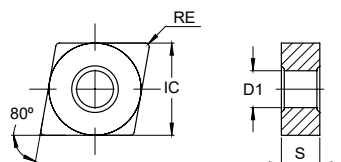
⊗ Stock Items | Itens de stock     
 ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

External Toolholders

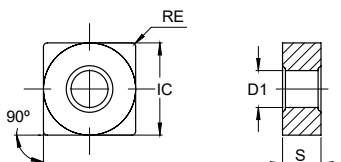
Internal Toolholders

Automatic Lathes

Spare Parts



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| CNMM 190612-HY | CNMM 643-HY    | 19,050  | 6,35 | 1,20 | 7,94 | 6,00   | 2,00 | 12,00 | 0,50        | 0,35 | 0,80 |
| CNMM 190616-HY | CNMM 644-HY    | 19,050  | 6,35 | 1,60 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 1,00 |
| CNMM 190624-HY | CNMM 646-HY    | 19,050  | 6,35 | 2,40 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 1,20 |
| CNMM 250924-HY | CNMM 866-HY    | 25,400  | 9,52 | 2,40 | 9,12 | 8,00   | 2,50 | 15,00 | 0,70        | 0,40 | 1,40 |
| CNMM 190612-HZ | CNMM 643-HZ    | 19,050  | 6,35 | 1,20 | 7,94 | 10,00  | 2,40 | 12,00 | 0,65        | 0,50 | 0,80 |
| CNMM 190616-HZ | CNMM 644-HZ    | 19,050  | 6,35 | 1,60 | 7,94 | 10,00  | 2,40 | 12,00 | 0,80        | 0,50 | 1,10 |
| CNMM 190624-HZ | CNMM 646-HZ    | 19,050  | 6,35 | 2,40 | 7,94 | 10,00  | 3,20 | 12,00 | 1,00        | 0,60 | 1,60 |
| CNMM 250924-HZ | CNMM 866-HZ    | 25,400  | 9,52 | 2,40 | 9,12 | 10,00  | 3,20 | 17,00 | 1,00        | 0,60 | 1,60 |






| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |      |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|------|------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE   | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| SNMM 190612-HY | SNMM 643-HY    | 19,050  | 6,35 | 1,20 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 0,90 |
| SNMM 190616-HY | SNMM 644-HY    | 19,050  | 6,35 | 1,60 | 7,94 | 6,00   | 2,00 | 12,00 | 0,60        | 0,35 | 1,20 |
| SNMM 190624-HY | SNMM 646-HY    | 19,050  | 6,35 | 2,40 | 7,94 | 6,00   | 2,00 | 12,00 | 1,00        | 0,60 | 1,60 |
| SNMM 250724-HY | SNMM 856-HY    | 25,400  | 7,94 | 2,40 | 9,12 | 8,50   | 2,50 | 15,00 | 1,00        | 0,60 | 1,60 |
| SNMM 250924-HY | SNMM 866-HY    | 25,400  | 9,52 | 2,40 | 9,12 | 8,50   | 3,00 | 15,00 | 1,00        | 0,60 | 1,60 |
| SNMM 190612-HZ | SNMM 643-HZ    | 19,050  | 6,35 | 1,20 | 7,94 | 10,00  | 2,40 | 13,00 | 0,60        | 0,35 | 0,90 |
| SNMM 190616-HZ | SNMM 644-HZ    | 19,050  | 6,35 | 1,60 | 7,94 | 10,00  | 2,40 | 13,00 | 0,60        | 0,35 | 1,20 |
| SNMM 190624-HZ | SNMM 646-HZ    | 19,050  | 6,35 | 2,40 | 7,94 | 10,00  | 3,20 | 13,00 | 1,00        | 0,60 | 1,60 |
| SNMM 250724-HZ | SNMM 856-HZ    | 25,400  | 7,94 | 2,40 | 9,12 | 10,00  | 3,20 | 17,00 | 1,00        | 0,60 | 1,60 |
| SNMM 250732-HZ | SNMM 858-HZ    | 25,400  | 7,94 | 3,20 | 9,12 | 10,00  | 3,20 | 17,00 | 1,20        | 0,80 | 1,80 |
| SNMM 250924-HZ | SNMM 866-HZ    | 25,400  | 9,52 | 2,40 | 9,12 | 10,00  | 3,20 | 17,00 | 1,00        | 0,60 | 1,60 |

# LNIX - RECTANGULAR 90° NEGATIVE

RECTANGULAR 90° NEGATIVA | RETANGULAR 90° NEGATIVA

TURNING

|   |                   |                | P       |                 |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|---|-------------------|----------------|---------|-----------------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   |                   |                | CVD     |                 |         |        |         |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |
|   |                   | (2) Grade code | T6      | R2              | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference  | PHG105  | PHG115          | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| LNIX-RMM<br><br>Medium         |                   |                | 1123640 | LNIX 321248-RMM |         | ○      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| LNIX-RRM<br><br>Roughing       |                   |                | 1123639 | LNIX 321248-RRM |         | ⊗      | ○       | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        | ○      |        |        |        |        |
| LNIX-RHR<br><br>Heavy Roughing |                   |                | 1123643 | LNIX 321248-RHR |         | ○      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

⊗ First choice | 1ª Escolha | 1ª Opción      ○ Available under request | Disponível sob consulta | Disponible bajo consulta      Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code  
 ⊗ Stock Items | Itens de stock      ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

# LNIX-T - TANGENTIAL 90° NEGATIVE

TANGENCIAL 90° NEGATIVA | TANGENCIAL 90° NEGATIVA




External Toolholders

Internal Toolholders

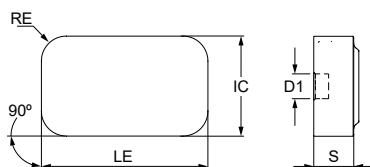
Automatic Lathes

Spare Parts

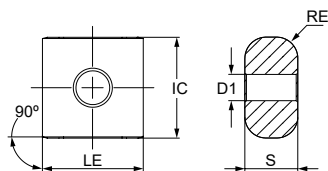
Technical Data

|   |                   |                | P       |                   |         |        |         |        |        | M      |        |        |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |
|---|-------------------|----------------|---------|-------------------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   |                   |                | CVD     |                   |         |        |         |        | PVD    | CVD    |        |        | PVD    |        |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |
|   |                   | (2) Grade code | T6      | R2                | 5D      | R3     | 1D      | S9     | V5     | G1     | U4     | U5     | V6     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |
| Inserts<br>Pastilhas<br>Plaquitas   | (1) Geometry code | ISO Reference  | PHG105  | PHG115            | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHS215 | PHS225 | PHS240 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |
| LNIX-RMM-T<br><br>Medium         |                   |                | 1121953 | LNIX 191940-RMM-T |         | ⊗      | ○       | ⊗      | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   |                   |                | 1122005 | LNIX 301940-RMM-T |         | ⊗      | ○       | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| LNIX-RRM-T<br><br>Roughing       |                   |                | 1120404 | LNIX 191940-RRM-T |         | ⊗      | ○       | ⊗      | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   |                   |                | 1123985 | LNIX 301940-RRM-T |         | ⊗      | ○       | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| LNIX-RHR-T<br><br>Heavy Roughing |                   |                | 1191628 | LNIX 191940-RHR-T |         | ⊗      | ○       | ⊗      | ⊗      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   |                   |                | 1191969 | LNIX 301940-RHR-T |         | ⊗      | ○       | ⊗      | ○      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

⊗ First choice | 1ª Escolha | 1ª Opción      ○ Available under request | Disponível sob consulta | Disponible bajo consulta      Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code  
 ⊗ Stock Items | Itens de stock      ⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



| ISO Reference   | ANSI Reference  | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |       |      |       |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|-----------------|-----------------|---|-------|------|-------|------|--|------|-------|-------------|------|------|
|                 |                 | LE  | IC    | RE   | S     | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| LNUX 321248-RMM | LNUX 321248-RMM | 31,75   | 19,05 | 4,76 | 12,70 | 7,87 | 3,00   | 1,50 | 18,00 | 0,80        | 0,30 | 1,50 |
| LNUX 321248-RRM | LNUX 321248-RRM | 31,75   | 19,05 | 4,76 | 12,70 | 7,87 | 3,00   | 1,50 | 18,00 | 1,00        | 0,80 | 1,50 |
| LNUX 321248-RHR | LNUX 321248-RHR | 31,75   | 19,05 | 4,76 | 12,70 | 7,87 | 3,00   | 1,50 | 18,00 | 1,20        | 0,50 | 1,80 |




| ISO Reference     | ANSI Reference    | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |       |      |       |      | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|-------------------|-------------------|---|-------|------|-------|------|--|------|-------|-------------|------|------|
|                   |                   | LE  | IC    | RE   | S     | D1   | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| LNUX 191940-RMM-T | LNUX 191940-RMM-T | 19,05   | 19,05 | 4,00 | 10,00 | 6,35 | 2,50   | 1,60 | 8,00  | 0,80        | 0,30 | 1,50 |
| LNUX 301940-RMM-T | LNUX 301940-RMM-T | 30,00   | 19,05 | 4,00 | 12,00 | 6,35 | 3,00   | 1,60 | 12,00 | 0,80        | 0,30 | 1,50 |
| LNUX 191940-RRM-T | LNUX 191940-RRM-T | 19,05   | 19,05 | 4,00 | 10,00 | 6,35 | 5,50   | 2,50 | 10,00 | 1,00        | 0,80 | 1,50 |
| LNUX 301940-RRM-T | LNUX 301940-RRM-T | 30,00   | 19,05 | 4,00 | 12,00 | 6,35 | 4,50   | 2,50 | 13,00 | 1,00        | 0,50 | 2,00 |
| LNUX 191940-RHR-T | LNUX 191940-RHR-T | 19,05   | 19,05 | 4,00 | 10,00 | 6,35 | 5,50   | 2,50 | 10,00 | 1,20        | 0,50 | 1,80 |
| LNUX 301940-RHR-T | LNUX 301940-RHR-T | 30,00   | 19,05 | 4,00 | 12,00 | 6,35 | 6,50   | 3,00 | 15,00 | 1,20        | 0,50 | 1,80 |

# RC - ROUND R° POSITIVE

REDONDA R° POSITIVA | REDONDA R° POSITIVA

TURNING

|  |                         |                | P      |        |         |        |         |        |        |        |        |        |        | M      |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |
|--|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
|  |                         |                | CVD    |        |         |        |         |        |        | PVD    |        |        |        | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |  |
|  |                         | (2) Grade code | T6     | L7     | 5D      | L8     | 1D      | S9     | V5     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |
| Inserts<br>Pastilhas<br>Plaquitas  | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PH5115 | PH2G115 | PH5125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHP910 | PH7920 | PHP920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |
| <br>RCMR-RR<br>Roughing to Medium | 1122009                 | RCMR 2507M0-RR |        | ⊕      |         | ⊕      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
|  | 1122008                 | RCMR 3209M0-RR |        | ⊕      |         | ⊕      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |

⊕ First choice | 1ª Escolha | 1ª Opción     
 ○ Available under request | Disponível sob consulta | Disponible bajo consulta     
 Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code  
⊕ Stock Items | Itens de stock     
⊕ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

Negative inserts

Positive inserts




PCBN & PCD inserts

Heavy turning

# RC - ROUND R° POSITIVE

REDONDA R° POSITIVA | REDONDA R° POSITIVA

External Toolholders

|  |                         |                | P      |        |         |        |         |        |        |        |        |        |        | M      |        |        |        |        | K      |        |        |        | N      | S      |        |        |        |        |  |  |
|--|-------------------------|----------------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|
|  |                         |                | CVD    |        |         |        |         |        |        | PVD    |        |        |        | CVD    |        | PVD    |        |        | UNC    | CVD    |        |        | UNC    | PVD    |        |        |        |        |  |  |
|  |                         | (2) Grade code | T6     | R2     | 5D      | R3     | 1D      | S9     | V5     | G1     | X5     | G4     | T1     | U4     | U5     | G1     | X6     | G4     | Y3     | 25     | L5     | L6     | L9     | 10     | G1     | X6     | G4     | Y3     |  |  |
| Inserts<br>Pastilhas<br>Plaquitas  | (1)<br>Geometry<br>code | ISO Reference  | PHG105 | PHG115 | PH2G115 | PHG125 | PH2G125 | PHG135 | PHG140 | PH7910 | PHP910 | PH7920 | PHP920 | PHS215 | PHS225 | PH7910 | PHH910 | PH7920 | PHH920 | PH0705 | PH5705 | PH5320 | PH5740 | PH0910 | PH7910 | PHH910 | PH7920 | PHH920 |  |  |
| <br>RCMX-ST<br>Roughing to Medium | 1121428                 | RCMX 2006M0-ST |        | ⊕      | ○       | ⊕      | ○       | ⊕      | ⊕      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|  | 1121429                 | RCMX 2507M0-ST |        | ⊕      | ⊕       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|  | 1123910                 | RCMX 3009M0-ST |        |        | ○       | ○      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|  | 1121430                 | RCMX 3209M0-ST |        |        | ○       | ⊕      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
| <br>RCMX-RM<br>Roughing to Medium | 1123678                 | RCMX 3209M0-RM |        | ⊕      | ○       | ⊕      |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
|  | 1123667                 | RCMX 2507M0-RR |        | ⊕      | ○       | ⊕      | ○       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |
| <br>RCMX-RR<br>Roughing to Medium | 1123666                 | RCMX 3209M0-RR |        |        | ⊕       | ⊕      |         | ⊕      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |  |

⊕ First choice | 1ª Escolha | 1ª Opción     
 ○ Available under request | Disponível sob consulta | Disponible bajo consulta     
 Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code  
⊕ Stock Items | Itens de stock     
⊕ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

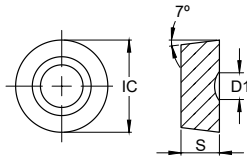
Internal Toolholders

Automatic Lathes

Spare Parts

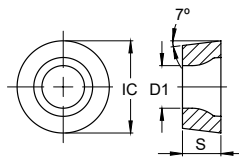
Technical Data

RELIEF ANGLE 7°



| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |    |       | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|----|-------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE | D1    | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| RCMR 2507M0-RR | RCMR 2507M0-RR | 25,00   | 7,94 | -  | 9,00  | 5,00   | 3,20 | 8,00  | 1,80        | 0,80 | 2,50 |
| RCMR 3209M0-RR | RCMR 3209M0-RR | 32,00   | 9,52 | -  | 12,00 | 6,50   | 3,20 | 13,00 | 1,80        | 0,80 | 2,50 |

RELIEF ANGLE 7°

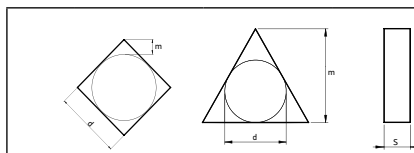


| ISO Reference  | ANSI Reference | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |    |       | Cutting Conditions<br>Condições de Corte<br>Condiciones de Corte |      |       |             |      |      |
|----------------|----------------|---|------|----|-------|--|------|-------|-------------|------|------|
|                |                | IC  | S    | RE | D1    | AP (mm)  | MIN  | MAX   | FN (mm/rev) | MIN  | MAX  |
| RCMX 2006M0-ST | RCMX 2006M0-ST | 20,00   | 6,35 | -  | 6,50  | 5,00   | 2,00 | 8,00  | 0,63        | 0,20 | 2,00 |
| RCMX 2507M0-ST | RCMX 2507M0-ST | 25,00   | 7,94 | -  | 7,20  | 6,30   | 2,50 | 10,00 | 0,79        | 0,25 | 2,50 |
| RCMX 3209M0-ST | RCMX 3209M0-ST | 30,00   | 9,55 | -  | 10,00 | 7,00   | 3,00 | 11,00 | 0,85        | 0,30 | 2,80 |
| RCMX 3209M0-ST | RCMX 3209M0-ST | 32,00   | 9,52 | -  | 9,50  | 8,00   | 3,20 | 12,80 | 1,01        | 0,32 | 3,20 |
| RCMX 3209M0-RM | RCMX 3209M0-RM | 32,00   | 9,52 | -  | 9,50  | 6,50   | 3,20 | 13,00 | 1,80        | 0,80 | 2,50 |
| RCMX 2507M0-RR | RCMX 2507M0-RR | 25,00   | 7,94 | -  | 7,20  | 5,00   | 3,20 | 8,00  | 1,80        | 0,80 | 2,50 |
| RCMX 3209M0-RR | RCMX 3209M0-RR | 32,00   | 9,52 | -  | 9,50  | 6,50   | 3,20 | 13,00 | 1,80        | 0,80 | 2,50 |



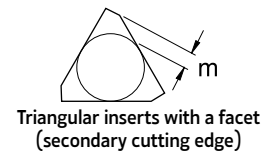
|   |  |   |         |
|---|--|---|---------|
| H |  | M |         |
| O |  | V |         |
| P |  | W |         |
| S |  | L |         |
| T |  | A |         |
| C |  | B |         |
| D |  | K |         |
| E |  | R |         |
| F |  | X | Special |

1- Insert shape symbol



| Symbol | m (mm)      | d (mm)      | s (mm) |
|--------|-------------|-------------|--------|
| A      | ±0.005      | ±0.025      | ±0.025 |
| F      | ±0.005      | ±0.013      | ±0.025 |
| C      | ±0.013      | ±0.025      | ±0.025 |
| H      | ±0.013      | ±0.013      | ±0.025 |
| E      | ±0.025      | ±0.025      | ±0.025 |
| G      | ±0.025      | ±0.025      | ±0.13  |
| J      | ±0.005      | ±0.05~±0.13 | ±0.025 |
| K*     | ±0.013      | ±0.05~±0.13 | ±0.025 |
| L*     | ±0.025      | ±0.05~±0.13 | ±0.025 |
| M*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.13  |
| N*     | ±0.08~±0.20 | ±0.05~±0.13 | ±0.025 |
| U*     | ±0.13~±0.38 | ±0.08~±0.25 | ±0.13  |

\*As a rule, the sides of these inserts are as sintered. Tolerance differs with insert size, for the accuracy of class M, refer to the table on the right.



Triangular inserts with a facet (secondary cutting edge)

| Detailed dimension of M class insert<br>Insert height Tolerances (mm) |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| Inscribed circle  | T     | S     | C     | D     | V     |
| 6.35  | ±0.08 | -     | -     | -     | -     |
| 9.525   | ±0.08 | ±0.08 | ±0.11 | ±0.10 | ±0.13 |
| 12.70   | ±0.13 | ±0.13 | ±0.13 | ±0.15 | -     |
| 15.875  | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 19.05   | ±0.15 | ±0.15 | ±0.15 | ±0.18 | -     |
| 25.40   | -     | ±0.18 | -     | -     | -     |
| 31.75   | -     | ±0.25 | -     | -     | -     |

| Inscribed circle Tolerances (mm) |       |       |       |       |       |
|----------------------------------|-------|-------|-------|-------|-------|
| Inscribed circle                 | T     | S     | C     | D     | V     |
| 6.35                             | ±0.05 | -     | -     | -     | -     |
| 9.525                            | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 |
| 12.70                            | ±0.08 | ±0.08 | ±0.08 | ±0.08 | ±0.08 |
| 15.875                           | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 |
| 19.05                            | -     | -     | -     | -     | ±0.10 |
| 25.40                            | -     | ±0.13 | -     | -     | ±0.10 |
| 31.75                            | -     | ±0.20 | -     | -     | ±0.12 |

3 - Tolerances symbol

| A | B | C | D | E                     |
|---|---|---|---|-----------------------|
|   |   |   |   |                       |
|   |   |   |   | Other clearance angle |

2 - Normal clearance symbol



| 4 - Insert symbol |  |   |                            |       |                          |           |   |                          |                            |        |           |              |                            |                            |  |
|-------------------|--|---|----------------------------|-------|--------------------------|-----------|---|--------------------------|----------------------------|--------|-----------|--------------|----------------------------|----------------------------|--|
| symbol            | Type                                   | Hole type                                 | Chip breaker               | Shape | symbol                   | Type      | Hole type                                 | Chip breaker             | Shape                      | symbol | Type      | Hole type    | Chip breaker               | Shape                      |  |
| W                 | with hole                              | Round hole / one countersink (40°-60°)    | Without chip breaker       |       | H                        | with hole | Round hole / one countersink (70°-90°)    | Chip breaker on one side |                            | G      | with hole | Round hole   | Chip breaker on both sides |                            |  |
| T                 |  |   | Chip breaker on one side   |       | C                        |           | Round hole / double countersink (70°-90°) | Without chip breaker     |                            | N      |           | -            | Without chip breaker       |                            |  |
| Q                 |  | Round hole / double countersink (40°-60°) | Without chip breaker       |       | J                        |           | Round hole                                | Round hole               | Chip breaker on both sides |        | R         | without hole | -                          | Chip breaker on one side   |  |
| U                 |  |   | Chip breaker on both sides |       | A                        |           |   |                          | Without chip breaker       |        | F         |              |                            | Chip breaker on both sides |  |
| B                 | Round hole / one countersink (70°-90°) | Without chip breaker                      |                            | M     | Chip breaker on one side |           | X   | -                        | -                          | -      | -         | -            | On request                 |                            |  |

# SCARFING INSERTS ISO IDENTIFICATION SYSTEM

Sistema de identificación ISO para pastillas de Scarfing | Codificación ISO para plaquitas de Scarfing

| R's  | 35°<br>V's | 55°<br>D's | 80°<br>C's | 90°<br>S's | 60°<br>T's | 80°<br>W's | IC     |       | ANSI   |
|------|------------|------------|------------|------------|------------|------------|--------|-------|--------|
|      |            |            |            |            |            |            | mm     | inch  | Symbol |
| -    | 06         | 04         | -          | 03         | 06         | 02         | 3,97   | 5/32  | 1,20   |
| -    | 08         | 05         | 04         | 04         | 08         | L3         | 4,76   | 3/16  | 1,50   |
| -    | 09         | 06         | 05         | 05         | 09         | 03         | 5,56   | 7/32  | 1,80   |
| 06** | -          | -          | -          | -          | -          | -          | 6,00   | 0,236 |        |
| 06*  | 11         | 07         | 06         | 06         | 11         | 04         | 6,35   | 1/4   | 2,00   |
| 07*  | 13         | 09         | 08         | 07         | 13         | 05         | 7,94   | 5/16  | 2,50   |
| 08*  | -          | -          | -          | -          | -          | -          | 8,00   | 0,315 |        |
| 09*  | 16         | 11         | 09         | 09         | 16         | 06         | 9,525  | 3/8   | 3,00   |
| 10** | -          | -          | -          | -          | -          | -          | 10,00  | 0,394 |        |
| 12** | -          | -          | -          | -          | -          | -          | 12,00  | 0,472 |        |
| 12*  | 22         | 15         | 12         | 12         | 22         | 08         | 12,70  | 1/2   | 4,00   |
| 15*  | 27         | 19         | 16         | 15         | 27         | 10         | 15,875 | 5/8   | 5,00   |
| 16** | -          | -          | -          | -          | -          | -          | 16,00  | 0,63  |        |
| 19*  | 33         | 23         | 19         | 19         | 33         | 13         | 19,05  | 3/4   | 6,00   |
| 20** | -          | -          | -          | -          | -          | -          | 20,00  | 0,787 |        |
| 25** | -          | -          | -          | -          | -          | -          | 25,00  | 0,984 |        |
| 25*  | 44         | 31         | 25         | 25         | 44         | 17         | 25,40  | 1,00  | 8,00   |
| 31*  | 54         | 38         | 32         | 31         | 54         | 21         | 31,75  | 1 1/4 | 10,00  |
| 32** | -          | -          | -          | -          | -          | -          | 32,00  | 1,26  |        |

\* ANSI designation only (Radius Designation is R0)

\*\* Metric designation only (Radius Designation is M0)

According to International Standard ISO 1832 - 2012(E)

"Indexable inserts for cutting tools - Designation"

| ISO | mm    | ANSI | inch  |
|-----|-------|------|-------|
| 01  | 1.59  | 1    | 0.062 |
| T1  | 1.98  | 1.2  | 0.078 |
| 02  | 2.38  | 1.5  | 0.094 |
| 03  | 3.18  | 2    | 0.125 |
| T3  | 3.97  | 2.5  | 0.156 |
| 04  | 4.76  | 3    | 0.188 |
| 05  | 5.56  | 3.5  | 0.219 |
| 06  | 6.35  | 4    | 0.250 |
| 07  | 7.94  | 5    | 0.312 |
| 09  | 9.52  | 6    | 0.375 |
| 12  | 12.70 | 8    | 0.500 |

5 - Insert size symbol

6 - Insert thickness symbol



| 10 - Profiling Radius |             |
|-----------------------|-------------|
| Example: R025         | PRFRAD = 25 |

| 7 - Insert corner symbol |              |      |      |
|--------------------------|--------------|------|------|
| ISO                      | mm           | inch | ANSI |
| 00                       | Sharp nose   |      | 0    |
| 01                       | 0.10         | .004 | 0.2  |
| 02                       | 0.20         | .008 | 0.5  |
| 04                       | 0.40         | .015 | 1    |
| 08                       | 0.80         | .032 | 2    |
| 12                       | 1.2          | .047 | 3    |
| 16                       | 1.6          | .062 | 4    |
| 20                       | 2.0          | .078 | 5    |
| 24                       | 2.4          | .094 | 6    |
| 28                       | 2.8          | .109 | 7    |
| 32                       | 3.2          | .125 | 8    |
| 00 (inch or MO/ metric)  | Round insert |      | 0    |

| 7.1* - Insert edges symbol                              |         |   |         |
|---|---------|---|---------|
| For inserts having secondary edges two digits are used: |         |   |         |
| 1 <sup>st</sup> digit is secondary edge                 |         | 2 <sup>nd</sup> digit is secondary edges relief angle |         |
| A   | 45°     | A   | 3°      |
| D   | 60°     | B   | 5°      |
| E   | 75°     | C   | 7°      |
| F   | 85°     | D   | 15°     |
| P   | 90°     | E   | 20°     |
| Z   | special | F   | 25°     |
|   |         | G   | 30°     |
|   |         | N   | 0°      |
|   |         | P   | 11°     |
|   |         | Z   | special |

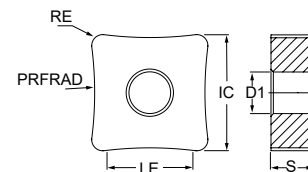
\*only when required.


| 8* - Cutting edge information |                       |        |
|-------------------------------|-----------------------|--------|
| Shape                         | Honing                | Symbol |
|                               | No honing             | F      |
|                               | With honing           | E      |
|                               | Chamfered No honing   | T      |
|                               | Chamfered with honing | S      |

\*only when required.

| 9* - Cutting direction |       |        |
|------------------------|-------|--------|
| Shape                  | Hand  | Symbol |
|                        | Right | R      |
|                        | Left  | L      |
|                        | None  | N      |

\*only when required.



|  |                         |                  |                   | P      | M      | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |    |     |      |        | Tube Diameter (mm) |
|--|-------------------------|------------------|-------------------|--------|--------|---|------|----|-----|------|--------|--------------------|
|  |                         |                  |                   | CVD    | CVD    |   |      |    |     |      |        |                    |
|  |                         |                  |                   | L8     | L8     |   |      |    |     |      |        |                    |
|  |                         |                  |                   | PH5125 | PH5125 | IC  | S    | LE | RE  | D1   | PRFRAD |                    |
| Inserts<br>Pastilhas<br>Plaquitas  | (1)<br>Geometry<br>code | ISO<br>Reference | ANSI<br>Reference |        |        |   |      |    |     |      |        |                    |
|  | 1123927                 | SNMA 150612-R020 | SNMA 543-R020     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 20     | 23-29              |
|  | 1123928                 | SNMA 150612-R022 | SNMA 543-R022     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 22     | 25-32              |
|  | 1123929                 | SNMA 150612-R025 | SNMA 543-R025     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 25     | 29-36              |
|  | 1123930                 | SNMA 150612-R027 | SNMA 543-R027     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 27     | 31-39              |
|  | 1123931                 | SNMA 150612-R030 | SNMA 543-R030     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 30     | 35-44              |
|  | 1123932                 | SNMA 150612-R035 | SNMA 543-R035     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 35     | 40-51              |
|  | 1123933                 | SNMA 150612-R040 | SNMA 543-R040     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 40     | 46-58              |
|  | 1123934                 | SNMA 150612-R050 | SNMA 543-R050     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 50     | 58-73              |
|  | 1123935                 | SNMA 150612-R060 | SNMA 543-R060     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 60     | 69-87              |
|  | 1123936                 | SNMA 150612-R070 | SNMA 543-R070     | ○      | ○      | 15,88   | 6,35 | 10 | 1,2 | 6,35 | 70     | 80-95              |
| SNMA<br><br>Roughing | 1123937                 | SNMA 190612-R030 | SNMA 643-R030     | ○      | ○      | 19,05   | 6,35 | 12 | 1,2 | 7,94 | 30     | 35-44              |
|  | 1123938                 | SNMA 190612-R040 | SNMA 643-R040     | ○      | ○      | 19,05   | 6,35 | 12 | 1,2 | 7,94 | 40     | 46-58              |
|  | 1123939                 | SNMA 190612-R050 | SNMA 643-R050     | ○      | ○      | 19,05   | 6,35 | 12 | 1,2 | 7,94 | 50     | 58-73              |
|  | 1123940                 | SNMA 190612-R060 | SNMA 643-R060     | ○      | ○      | 19,05   | 6,35 | 12 | 1,2 | 7,94 | 60     | 69-87              |
|  | 1123941                 | SNMA 190612-R070 | SNMA 643-R070     | ○      | ○      | 19,05   | 6,35 | 12 | 1,2 | 7,94 | 70     | 80-95              |
|  | 1123942                 | SNMA 190612-R080 | SNMA 643-R080     | ○      | ○      | 19,05   | 6,35 | 12 | 1,2 | 7,94 | 80     | 92-116             |
|  | 1123943                 | SNMA 190612-R090 | SNMA 643-R090     | ○      | ○      | 19,05   | 6,35 | 12 | 1,2 | 7,94 | 90     | 104-131            |
|  | 1123944                 | SNMA 250924-R000 | SNMA 866-R000     | ○      | ○      | 25,40   | 9,52 | 17 | 2,4 | 9,12 | 0      | -                  |
|  | 1123945                 | SNMA 250924-R060 | SNMA 866-R060     | ○      | ○      | 25,40   | 9,52 | 17 | 2,4 | 9,12 | 60     | 69-87              |
|  | 1123946                 | SNMA 250924-R070 | SNMA 866-R070     | ○      | ○      | 25,40   | 9,52 | 17 | 2,4 | 9,12 | 70     | 80-95              |
|  | 1123947                 | SNMA 250924-R080 | SNMA 866-R080     | ○      | ○      | 25,40   | 9,52 | 17 | 2,4 | 9,12 | 80     | 92-116             |
|  | 1123948                 | SNMA 250924-R100 | SNMA 866-R100     | ○      | ○      | 25,40   | 9,52 | 17 | 2,4 | 9,12 | 100    | 115-145            |
|  | 1123949                 | SNMA 250924-R150 | SNMA 866-R150     | ○      | ○      | 25,40   | 9,52 | 17 | 2,4 | 9,12 | 150    | 165-215            |
|  | 1123950                 | SNMA 250924-R200 | SNMA 866-R200     | ○      | ○      | 25,40   | 9,52 | 17 | 2,4 | 9,12 | 200    | 230-290            |

🔴 First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

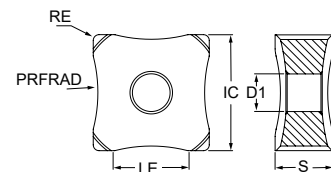
Insert Order Code: <sup>(1)</sup> Geometry code + <sup>(2)</sup> Grade code


🟢 Stock Items | Itens de stock

🟡 Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

# SCARFING - SNMX

NEGATIVE INSERTS | PASTILHAS NEGATIVAS | PLAQUITAS NEGATIVAS



|   |                   |                  |                | P      | M      | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |       |    |     |      |        | Tube Diameter (mm) |
|---|-------------------|------------------|----------------|--------|--------|---|-------|----|-----|------|--------|--------------------|
|   |                   |                  |                | CVD    | CVD    |   |       |    |     |      |        |                    |
|   |                   | (2) Grade code   |                | L8     | L8     |   |       |    |     |      |        |                    |
| Inserts<br>Pastilhas<br>Plaquetas   | (1) Geometry code | ISO Reference    | ANSI Reference | PH5125 | PH5125 | IC  | S     | LE | RE  | D1   | PRFRAD |                    |
|   | 1123879           | SNMX 150708-R000 | SNMX 552-R000  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 0      | -                  |
|   | 1123880           | SNMX 150708-R007 | SNMX 552-R007  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 7      | 08-10              |
|   | 1123881           | SNMX 150708-R009 | SNMX 552-R009  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 9      | 10-13              |
|   | 1123882           | SNMX 150708-R011 | SNMX 552-R011  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 11     | 13-16              |
|   | 1123883           | SNMX 150708-R013 | SNMX 552-R013  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 13     | 15-19              |
|   | 1123884           | SNMX 150708-R015 | SNMX 552-R015  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 15     | 17-22              |
|   | 1123885           | SNMX 150708-R018 | SNMX 552-R018  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 18     | 21-26              |
|   | 1123886           | SNMX 150708-R020 | SNMX 552-R020  | ⊗      | ⊗      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 20     | 23-29              |
|   | 1123887           | SNMX 150708-R022 | SNMX 552-R022  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 22     | 25-32              |
|   | 1123888           | SNMX 150708-R025 | SNMX 552-R025  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 25     | 29-36              |
|   | 1123889           | SNMX 150708-R027 | SNMX 552-R027  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 27     | 31-39              |
|   | 1123890           | SNMX 150708-R030 | SNMX 552-R030  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 30     | 35-44              |
|   | 1123891           | SNMX 150708-R035 | SNMX 552-R035  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 35     | 40-51              |
|   | 1123892           | SNMX 150708-R040 | SNMX 552-R040  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 40     | 46-58              |
|   | 1123893           | SNMX 150708-R045 | SNMX 552-R045  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 45     | 52-65              |
|   | 1123894           | SNMX 150708-R050 | SNMX 552-R050  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 50     | 58-73              |
|   | 1123895           | SNMX 150708-R060 | SNMX 552-R060  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 60     | 69-87              |
| SNMX<br> | 1124461           | SNMX 150708-R070 | SNMX 552-R070  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 70     | 80-95              |
|   | 1124462           | SNMX 150708-R075 | SNMX 552-R075  | ○      | ○      | 15,88   | 7,94  | 10 | 0,8 | 5,16 | 75     | 86-102             |
| Medium to Finishing   | 1123896           | SNMX 190912-R000 | SNMX 663-R000  | ○      | ○      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 0      | -                  |
|   | 1122012           | SNMX 190912-R020 | SNMX 663-R020  | ⊗      | ⊗      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 20     | 23-29              |
|   | 1123897           | SNMX 190912-R030 | SNMX 663-R030  | ⊗      | ⊗      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 30     | 35-44              |
|   | 1123898           | SNMX 190912-R040 | SNMX 663-R040  | ⊗      | ⊗      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 40     | 46-58              |
|   | 1123899           | SNMX 190912-R050 | SNMX 663-R050  | ⊗      | ⊗      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 50     | 58-73              |
|   | 1122013           | SNMX 190912-R060 | SNMX 663-R060  | ○      | ○      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 60     | 69-87              |
|   | 1123900           | SNMX 190912-R070 | SNMX 663-R070  | ○      | ○      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 70     | 80-95              |
|   | 1123901           | SNMX 190912-R080 | SNMX 663-R080  | ○      | ○      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 80     | 92-116             |
|   | 1123902           | SNMX 190912-R090 | SNMX 663-R090  | ○      | ○      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 90     | 104-131            |
|   | 1123903           | SNMX 190912-R100 | SNMX 663-R100  | ○      | ○      | 19,05   | 9,12  | 12 | 1,2 | 6,35 | 100    | 115-145            |
|   | 1123864           | SNMX 251216-R000 | SNMX 884-R000  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 0      | -                  |
|   | 1123904           | SNMX 251216-R050 | SNMX 884-R050  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 50     | 58-73              |
|   | 1122015           | SNMX 251216-R080 | SNMX 884-R080  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 80     | 92-116             |
|   | 1123905           | SNMX 251216-R090 | SNMX 884-R090  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 90     | 104-131            |
|   | 1123906           | SNMX 251216-R100 | SNMX 884-R100  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 100    | 115-145            |
|   | 1122016           | SNMX 251216-R120 | SNMX 884-R120  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 120    | 138-174            |
|   | 1123907           | SNMX 251216-R150 | SNMX 884-R150  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 150    | 165-215            |
|   | 1123908           | SNMX 251216-R200 | SNMX 884-R200  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 200    | 230-290            |
|   | 1123909           | SNMX 251216-R250 | SNMX 884-R250  | ⊗      | ⊗      | 25,40   | 12,70 | 17 | 1,6 | 9,12 | 250    | 275-315            |

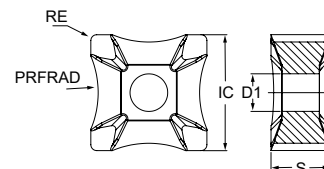
⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock



|                                   |                   |                  |                 | P      | M      | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |    |     |      |        | Tube Diameter (mm) |
|-----------------------------------|-------------------|------------------|-----------------|--------|--------|---|------|----|-----|------|--------|--------------------|
|                                   |                   |                  |                 | CVD    | CVD    |   |      |    |     |      |        |                    |
|                                   |                   |                  |                 | L8     | L8     |   |      |    |     |      |        |                    |
|                                   |                   | (2) Grade code   |                 | PH5125 | PH5125 | IC  | S    | A  | Re  | D1   | PRFRAD |                    |
| Inserts<br>Pastilhas<br>Plaquetas | (1) Geometry code | ISO Reference    | ANSI Reference  |        |        |   |      |    |     |      |        |                    |
|                                   | 1123951           | SNMG 15M808-R000 | SNMG 55.12-R000 | ○      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 0      | -                  |
|                                   | 1123952           | SNMG 15M808-R007 | SNMG 55.12-R007 | ○      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 7      | 08-10              |
|                                   | 1123953           | SNMG 15M808-R009 | SNMG 55.12-R009 | ○      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 9      | 10-13              |
|                                   | 1123954           | SNMG 15M808-R011 | SNMG 55.12-R011 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 11     | 13-16              |
|                                   | 1123955           | SNMG 15M808-R013 | SNMG 55.12-R013 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 13     | 15-19              |
|                                   | 1123956           | SNMG 15M808-R015 | SNMG 55.12-R015 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 15     | 17-22              |
|                                   | 1123957           | SNMG 15M808-R018 | SNMG 55.12-R018 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 18     | 21-26              |
|                                   | 1123958           | SNMG 15M808-R020 | SNMG 55.12-R020 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 20     | 23-29              |
|                                   | 1123959           | SNMG 15M808-R022 | SNMG 55.12-R022 | ○      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 22     | 25-32              |
|                                   | 1123960           | SNMG 15M808-R025 | SNMG 55.12-R025 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 25     | 29-36              |
|                                   | 1123961           | SNMG 15M808-R027 | SNMG 55.12-R027 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 27     | 31-39              |
|                                   | 1123962           | SNMG 15M808-R030 | SNMG 55.12-R030 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 30     | 35-44              |
|                                   | 1123963           | SNMG 15M808-R035 | SNMG 55.12-R035 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 35     | 40-51              |
|                                   | 1123964           | SNMG 15M808-R040 | SNMG 55.12-R040 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 40     | 46-58              |
|                                   | 1123965           | SNMG 15M808-R045 | SNMG 55.12-R045 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 45     | 52-65              |
|                                   | 1123966           | SNMG 15M808-R050 | SNMG 55.12-R050 | ○      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 50     | 58-73              |
|                                   | 1123967           | SNMG 15M808-R060 | SNMG 55.12-R060 | ⊗      | ○      | 15,88   | 8,15 | 10 | 0,8 | 5,16 | 60     | 69-87              |
|                                   | 1123968           | SNMG 19M808-R000 | SNMG 65.13-R000 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 20     | -                  |
|                                   | 1123969           | SNMG 19M808-R010 | SNMG 65.13-R010 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 10     | 12-15              |
|                                   | 1123970           | SNMG 19M808-R020 | SNMG 65.13-R020 | ⊗      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 20     | 23-29              |
|                                   | 1123971           | SNMG 19M808-R030 | SNMG 65.13-R030 | ⊗      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 30     | 35-44              |
|                                   | 1123972           | SNMG 19M808-R040 | SNMG 65.13-R040 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 40     | 46-58              |
|                                   | 1123973           | SNMG 19M808-R050 | SNMG 65.13-R050 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 50     | 58-73              |
|                                   | 1123974           | SNMG 19M808-R060 | SNMG 65.13-R060 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 60     | 69-87              |
|                                   | 1123975           | SNMG 19M808-R070 | SNMG 65.13-R070 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 70     | 80-95              |
|                                   | 1123976           | SNMG 19M808-R080 | SNMG 65.13-R080 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 80     | 92-116             |
|                                   | 1123977           | SNMG 19M808-R090 | SNMG 65.13-R090 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 90     | 104-131            |
|                                   | 1123978           | SNMG 19M808-R100 | SNMG 65.13-R100 | ○      | ○      | 19,05   | 8,15 | 12 | 0,8 | 8,00 | 100    | 115-145            |



SNMG

Finishing

⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: (1) Geometry code + (2) Grade code

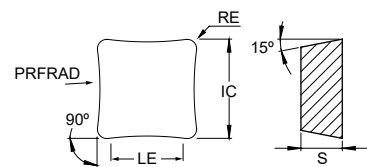
⊗ Stock Items | Itens de stock


⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

# SCARFING - SDMX

POSITIVE INSERTS | PASTILHAS POSITIVAS | PLAQUITAS POSITIVAS

RELIEF ANGLE 15°



| Inserts<br>Pastilhas<br>Plaquetas  | (1)<br>Geometry<br>code | (2) Grade code   |                   | P      | M      | Dimensions (mm)<br>Dimensões (mm)<br>Dimensiones (mm) |      |    |      |    |        | Tube<br>Diameter<br>(mm) |
|--|-------------------------|------------------|-------------------|--------|--------|---|------|----|------|----|--------|--------------------------|
|  |                         |                  |                   | CVD    | CVD    | IC  | S    | LE | RE   | D1 | PRFRAD |                          |
|  |                         |                  |                   | L8     | L8     |   |      |    |      |    |        |                          |
|  |                         | ISO<br>Reference | ANSI<br>Reference | PH5125 | PH5125 |   |      |    |      |    |        |                          |
| SDMX<br><br>Medium to Finishing | 1124752                 | SDMX 250616-R000 | SDMX 250616-R000  | ○      | ○      | 25,40   | 6,35 | 20 | 1,60 | -  | 0      | -                        |
|  | 1124822                 | SDMX 250616-R080 | SDMX 250616-R080  | ⊗      | ⊗      | 25,40   | 6,35 | 20 | 1,60 | -  | 80     | 92-116                   |
|  | 1124753                 | SDMX 250616-R180 | SDMX 250616-R180  | ○      | ○      | 25,40   | 6,35 | 20 | 1,60 | -  | 180    | 210-270                  |
|  | 1124754                 | SDMX 250616-R300 | SDMX 250616-R300  | ⊗      | ⊗      | 25,40   | 6,35 | 20 | 1,60 | -  | 300    | 340-410                  |
|  | 1124755                 | SDMX 250616-R400 | SDMX 250616-R400  | ○      | ○      | 25,40   | 6,35 | 20 | 1,60 | -  | 400    | 440-520                  |
|  | 1124756                 | SDMX 250616-R550 | SDMX 250616-R550  | ○      | ○      | 25,40   | 6,35 | 20 | 1,60 | -  | 550    | 600-700                  |
|  | 1124757                 | SDMX 350900-R000 | SDMX 350900-R000  | ○      | ○      | 35,00   | 9,60 | 30 | -    | -  | 0      | -                        |
|  | 1124758                 | SDMX 350900-R105 | SDMX 350900-R105  | ○      | ○      | 35,00   | 9,60 | 30 | -    | -  | 105    | 115-145                  |
|  | 1124759                 | SDMX 350900-R145 | SDMX 350900-R145  | ○      | ○      | 35,00   | 9,60 | 30 | -    | -  | 145    | 160-210                  |
|  | 1124760                 | SDMX 350900-R300 | SDMX 350900-R300  | ○      | ○      | 35,00   | 9,60 | 30 | -    | -  | 300    | 340-410                  |
|  | 1124761                 | SDMX 350900-R400 | SDMX 350900-R400  | ○      | ○      | 35,00   | 9,60 | 30 | -    | -  | 400    | 440-520                  |
|  | 1124762                 | SDMX 350900-R550 | SDMX 350900-R550  | ○      | ○      | 35,00   | 9,60 | 30 | -    | -  | 550    | 600-700                  |

⊗ First choice | 1ª Escolha | 1ª Opción

○ Available under request | Disponível sob consulta | Disponible bajo consulta

Insert Order Code: <sup>(1)</sup>Geometry code + <sup>(2)</sup>Grade code

⊗ Stock Items | Itens de stock

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

TOOLHOLDERS

# EXTERNAL



These external turning toolholders offer various fixing styles to meet the diverse needs of the industry. Thanks to their robustness and versatility, they ensure reliability and high productivity. They enable precise finishes and tight tolerances, directly contributing to manufacturing efficiency.

Estes suportes de torneamento externo oferecem estilos de fixação variados para as mais diversas necessidades da indústria. Graças à sua robustez e versatilidade, garantem fiabilidade e elevada produtividade. Permitem acabamentos precisos e tolerâncias apertadas, contribuindo diretamente para a eficiência dos processos de fabrico.

Estos porta herramienta de torneado externo ofrecen una variedad de estilos de fijación para satisfacer las diversas necesidades de la industria. Gracias a su robustez y versatilidad, garantizan confiabilidad y alta productividad. Permiten acabados precisos y tolerancias ajustadas, contribuyendo directamente a la eficiencia de los procesos de fabricación.

## Top Clamp Toolholders (C) > page 652

- > Highly rigid top clamp with shim

Grampo altamente rígido com calço | Brida altamente rígida con calzo



## Dimple Lock Toolholders (D) > page 667

- > Stable and rigid top clamp for negative inserts with a through hole

Grampo estável e rígido para pastilhas negativas com furo passante | Brida estable y rígida para plaquitas negativos con agujero pasante

- > With or without directional coolant

Com ou sem refrigeração direcional | Con o sin refrigeración direccional



## Wedge Clamp (M) &

## Double Lock (M-K) Toolholders > page 679

- > Double security clamping with eccentric pin, common for negative inserts

Dupla fixação de segurança com pino excêntrico, comum para pastilhas negativas | Doble sujeción de seguridad con pasador excéntrico, común para plaquitas negativas



## Lever Lock Toolholders (P) > page 694

- > Locking design for negative inserts, avoiding chip interference

Design de bloqueio para pastilhas negativas, evitando interferência de aparas | Diseño de bloqueo para plaquitas negativas, evitando interferencia de virutas



## Center Screw Toolholders (S) > page 717

- > Solution for ensuring easy insert exchange without interference

Solução ideal para garantir a troca fácil da pastilha sem interferência | Solución para garantizar un intercambio fácil de la plaquita sin interferencias

- > With or without directional coolant

Com ou sem refrigeração direcional | Con o sin refrigeración direccional



## PSC System (PSC) > page 743

- > Fast, easy tool changing

Troca rápida de ferramenta | Cambio rápido de herramienta







Enhance productivity  
**with external toolholders**

# CODE KEY FOR EXTERNAL TURNING TOOLHOLDERS

Sistema de codificação para suportes de torneamento externo (ISO) | Codificación de herramientas de torneado exterior (ISO)

|            |          |          |          |          |          |           |           |          |           |          |           |
|------------|----------|----------|----------|----------|----------|-----------|-----------|----------|-----------|----------|-----------|
| <b>PSC</b> | <b>P</b> | <b>C</b> | <b>L</b> | <b>N</b> | <b>R</b> | <b>25</b> | <b>25</b> | <b>M</b> | <b>12</b> | <b>-</b> | <b>A</b>  |
| <b>1</b>   | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b>  | <b>8</b>  | <b>9</b> | <b>10</b> | <b>-</b> | <b>11</b> |

**1 - Modular System** (Only for PSC system)  
**PSC - Polygonal Shank Coupling**

**2 - Inserts Clamping System**

**3 - Insert Shape**

|                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|
| 80°<br><b>C</b> | 55°<br><b>D</b> | 75°<br><b>E</b> | 55°<br><b>K</b> |
| <b>R</b>        | 90°<br><b>S</b> | 60°<br><b>T</b> | 35°<br><b>V</b> |
| 80°<br><b>W</b> |                 |                 |                 |

**5 - Inserts Clearance Angle**

|                |                |                |                 |
|----------------|----------------|----------------|-----------------|
| 5°<br><b>B</b> | 7°<br><b>C</b> | 0°<br><b>N</b> | 11°<br><b>P</b> |
|----------------|----------------|----------------|-----------------|

**6 - Tool Hand**

**9 - Length of Holder (mm)**

|  |          |     |          |         |
|--|----------|-----|----------|---------|
|  | <b>D</b> | 60  | <b>P</b> | 170     |
|  | <b>E</b> | 70  | <b>R</b> | 200     |
|  | <b>F</b> | 80  | <b>S</b> | 250     |
|  | <b>G</b> | 90  | <b>T</b> | 300     |
|  | <b>H</b> | 100 | <b>U</b> | 350     |
|  | <b>K</b> | 125 | <b>V</b> | 400     |
|  | <b>L</b> | 140 | <b>X</b> | Special |
|  | <b>M</b> | 150 |          |         |

**4 - Toolholder Leading Angle**

|                  |                      |                     |
|------------------|----------------------|---------------------|
| 90°<br><b>A</b>  | 75°<br><b>B</b>      | 90°<br><b>C</b>     |
| 45°<br><b>D</b>  | 60°<br><b>E</b>      | 90°<br><b>F</b>     |
| 90°<br><b>G</b>  | 107° 30'<br><b>H</b> | 93°<br><b>J</b>     |
| 75°<br><b>K</b>  | 95°<br><b>L</b>      | 50°<br><b>M</b>     |
| 63°<br><b>N</b>  | 117° 30'<br><b>Q</b> | 75°<br><b>R</b>     |
| 45°<br><b>S</b>  | 60°<br><b>T</b>      | 72° 30'<br><b>V</b> |
| 113°<br><b>X</b> | 100°<br><b>Z</b>     |                     |

**7 - Height of Shank (mm)**

**8 - Width of Shank (mm)**

**10 - Length of Inserts Cutting Edge (mm)**

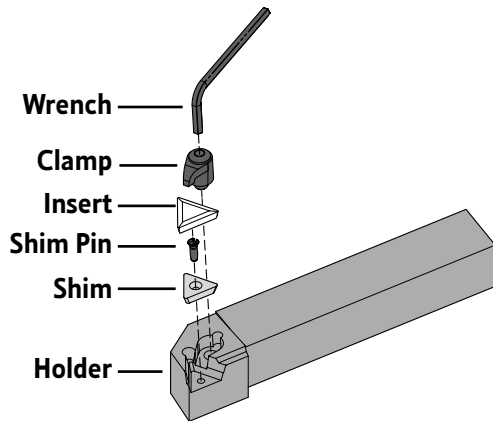
**11 - Bar Type** (Suppressed when without internal coolant)

|          |                                   |  |
|----------|-----------------------------------|--|
| <b>A</b> | Steel shank with internal coolant |  |
|----------|-----------------------------------|--|

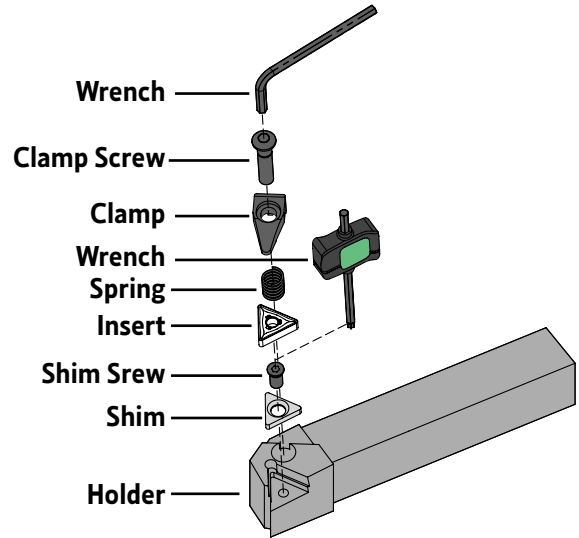
# CLAMPING SYSTEMS FOR EXTERNAL TOOLHOLDERS

Sistemas de fixação para ferramentas de torneamento externo | Sistemas de fijación para herramientas de torneado exterior

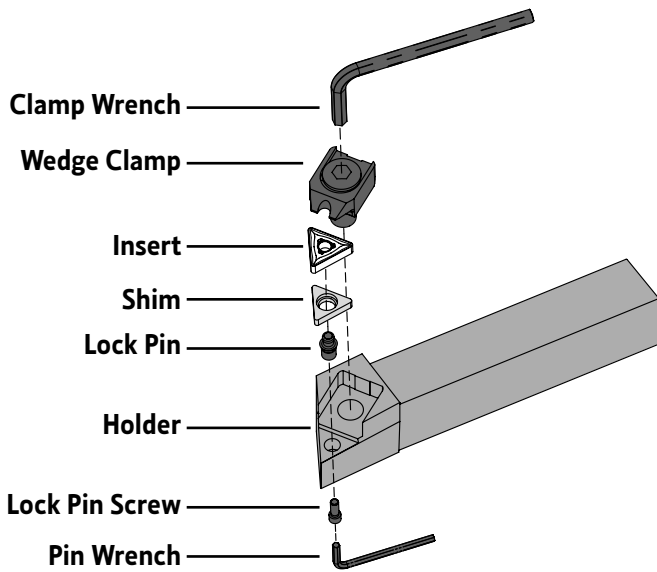
(C) TOP CLAMP SYSTEM



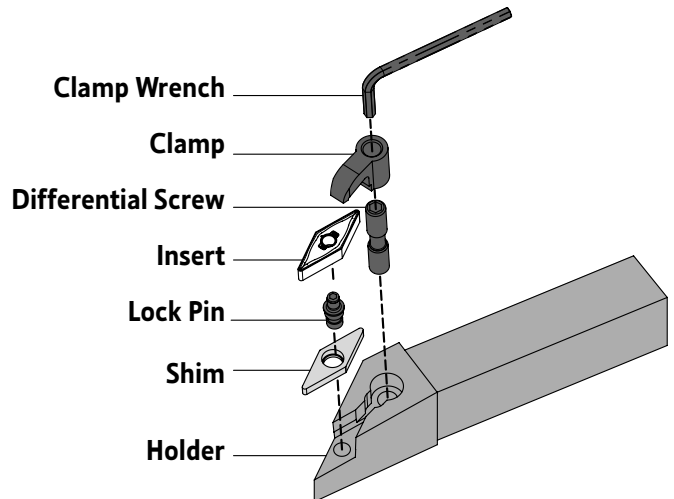
(D) DIMPLE LOCK SYSTEM



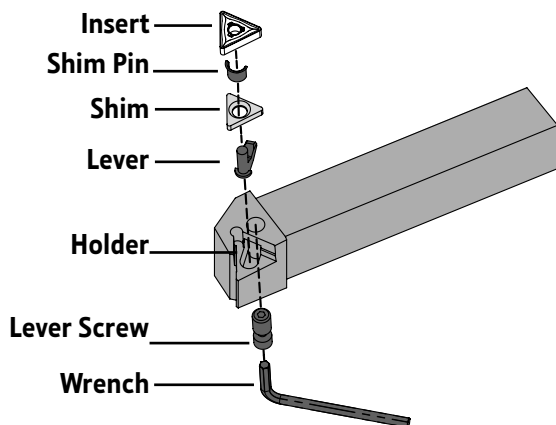
(M) WEDGE CLAMP SYSTEM



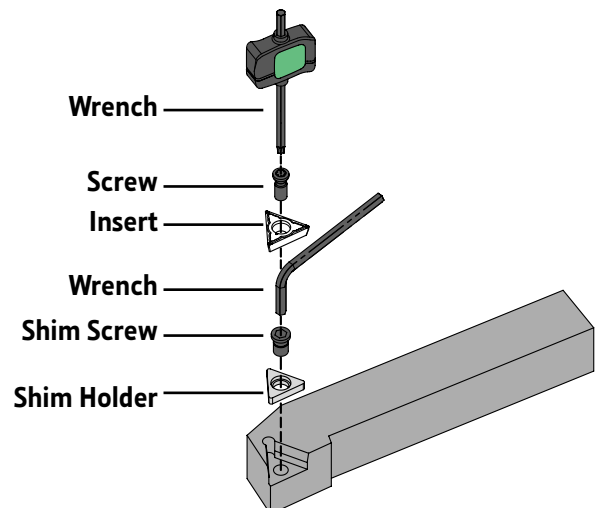
(M-K) DOUBLE LOCK SYSTEM



(P) LEVER LOCK SYSTEM

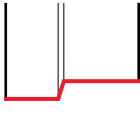
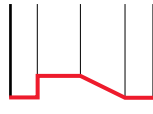
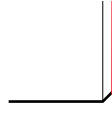
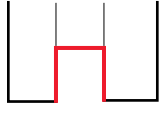
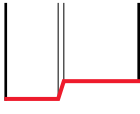
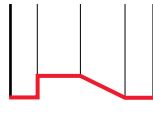
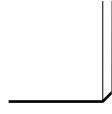
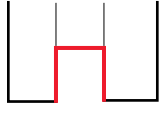


(S) CENTER SCREW SYSTEM



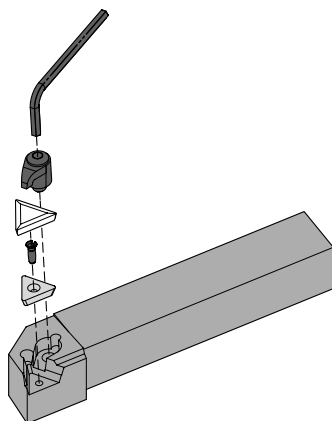
# SUITABLE CLAMPING SYSTEM DEFINITION

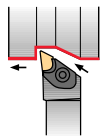
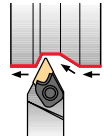
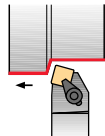
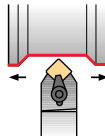
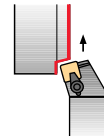
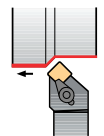
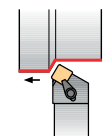
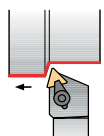
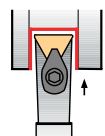
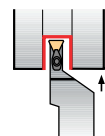
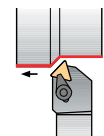
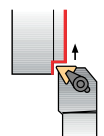
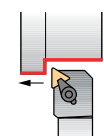
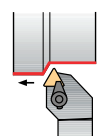
Definição do sistema de fixação | Definición del sistema de Fijación

| Operation          |   | Longitudinal turning  | Profiling  | Facing  | Plunging  |
|--------------------|---|---|--|---|---|
|                    |   |  |  |  |  |
| External machining |   |  |  |  |  |
| Negative inserts   | (C)<br>TOP CLAMP SYSTEM                                       | ●   | ●  | ●   | ●   |
|                    | (D)<br>DIMPLE LOCK SYSTEM                                     | ● ●   | ● ●  | ● ●   |   |
|                    | (M)<br>WEDGE CLAMP SYSTEM<br>-<br>(M-K)<br>DOUBLE LOCK SYSTEM | ●   | ●  | ●   |   |
|                    | (P)<br>LEVER LOCK SYSTEM                                      | ●   | ●  | ●   |   |
| Positive inserts   | (C)<br>TOP CLAMP SYSTEM                                       | ●   | ●  | ●   | ●   |
|                    | (P)<br>LEVER LOCK SYSTEM                                      |   | ●  |   |   |
|                    | (S)<br>CENTER SCREW SYSTEM                                    | ● ●   | ● ●  | ● ●   |   |

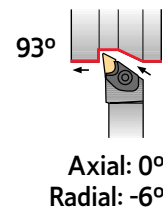
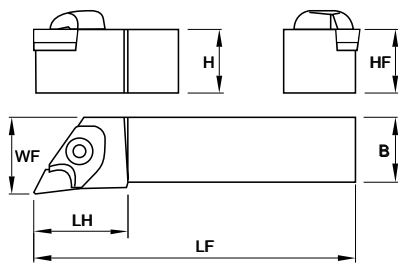
● ● Recommended Insert Shape

● Alternative Insert Shape



|   |   |   |   |   |   |
|---|---|---|---|---|---|
| <p><b>CKJN 93°</b></p>  <p>PAGE C - 653 KNUX 1604...</p>                              | <p><b>CKNN 63°</b></p>  <p>PAGE C - 654 KNUX 1604...</p>                              | <p><b>CSBP 75°</b></p>  <p>PAGE C - 655 SP. 0903..<br/>SP. 1203..<br/>SP. 1904..</p>    | <p><b>CSDP 45°</b></p>  <p>PAGE C - 656 SP. 0903..<br/>SP. 1203..</p>                 | <p><b>CSKP 75°</b></p>  <p>PAGE C - 657 SP. 0903..<br/>SP. 1203..<br/>SP. 1904..</p>  | <p><b>CSSP 45°</b></p>  <p>PAGE C - 658 SP. 0903..<br/>SP. 1203..<br/>SP. 1904..</p>  |
| <p><b>CSTP 60°</b></p>  <p>PAGE C - 659 SP.0903..<br/>SP.1203..</p>                  | <p><b>CTBP 75°</b></p>  <p>PAGE C - 660 TP. 1103..<br/>TP. 1603..<br/>TP. 2204..</p> | <p><b>CTCP N 90°</b></p>  <p>PAGE C - 661 TP. 1103..<br/>TP. 1603..<br/>TP. 2204..</p> | <p><b>CTCP 90°</b></p>  <p>PAGE C - 662 TP. 1103..<br/>TP. 1603..<br/>TP. 2204..</p> | <p><b>CTDP 45°</b></p>  <p>PAGE C - 663 TP. 1103..<br/>TP. 1603..<br/>TP. 2204..</p> | <p><b>CTFP 90°</b></p>  <p>PAGE C - 664 TP. 1103..<br/>TP. 1603..<br/>TP. 2204..</p> |
| <p><b>CTGP 90°</b></p>  <p>PAGE C - 665 TP. 1103..<br/>TP. 1603..<br/>TP. 2204..</p> | <p><b>CTTP 60°</b></p>  <p>PAGE C - 666 TP. 0902..<br/>TP. 1103..<br/>TP. 2204..</p> |   |   |   |   |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212034800  | 212034900 | CKJN R/L 2020 K16 | 20              | 20 | 125 | 34 | 30 | KNUX 1604.. | 0,390 |       |   |
| 212026300  | 212035000 | CKJN R/L 2525 M16 | 25              | 25 | 150 | 34 | 32 | KNUX 1604.. | 0,700 |       |   |
| 212010300  | 212260400 | CKJN R/L 3225 P16 | 32              | 25 | 170 | 34 | 32 | KNUX 1604.. | 1,000 |       |   |
| 212260500  | 212260600 | CKJN R/L 3232 P16 | 32              | 32 | 170 | 34 | 40 | KNUX 1604.. | 1,250 |       |   |
| 212260700  | 212260800 | CKJN R/L 4025 R16 | 40              | 25 | 200 | 34 | 32 | KNUX 1604.. | 1,500 |       |   |

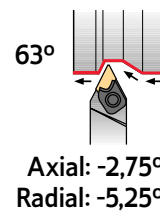
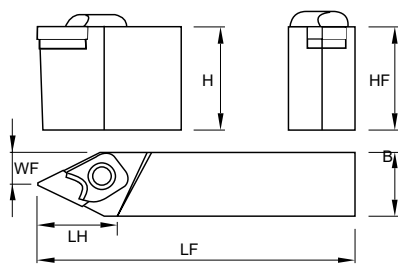
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |        |         |          |        |
|------------------|------------------|----------|----------------|--------|---------|----------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Spring | Clamp   | Screw    | Wrench |
| CKJN R 2020 K16  | CK160500         | BE03000  | BF04813        | M09513 | GAW1400 | DW142600 | SS40   |
| CKJN R 2525 M16  | CK160500         | BE03000  | BF04815        | M09513 | GAW1400 | DW142600 | SS40   |
| CKJN R 3225 P16  | CK160500         | BE03000  | BF04815        | M09513 | GAW1400 | DW142600 | SS40   |
| CKJN R 3232 P16  | CK160500         | BE03000  | BF04815        | M09513 | GAW1400 | DW142600 | SS40   |
| CKJN R 4025 R16  | CK160500         | BE03000  | BF04815        | M09513 | GAW1400 | DW142600 | SS40   |
| CKJN L 2020 K16  | CK160501         | BE03000  | BF04813        | M09513 | GAW1401 | DW142600 | SS40   |
| CKJN L 2525 M16  | CK160501         | BE03000  | BF04815        | M09513 | GAW1401 | DW142600 | SS40   |
| CKJN L 3225 P16  | CK160501         | BE03000  | BF04815        | M09513 | GAW1401 | DW142600 | SS40   |
| CKJN L 3232 P16  | CK160501         | BE03000  | BF04815        | M09513 | GAW1401 | DW142600 | SS40   |
| CKJN L 4025 R16  | CK160501         | BE03000  | BF04815        | M09513 | GAW1401 | DW142600 | SS40   |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF   |             |       | R     | L |
| 212260900  | 212261000 | CKNN R/L 4025 R16 | 40              | 25 | 200 | 37 | 14,3 | KNUX 1604.. | 1,500 |       |   |
| 212261100  | 212261200 | CKNN R/L 5032 S16 | 50              | 32 | 250 | 37 | 16,8 | KNUX 1604.. | 3,000 |       |   |

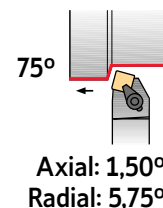
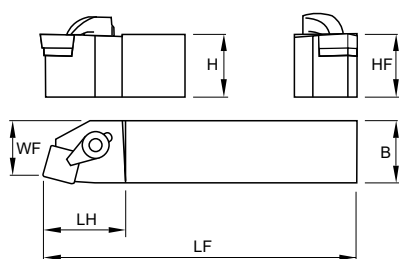
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |        |         |          |        |
|------------------|------------------|----------|----------------|--------|---------|----------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Spring | Clamp   | Screw    | Wrench |
| CKNN R 4025 R16  |                  |          |                |        |         |          |        |
| CKNN R 5032 S16  | CK160500         | BE03000  | BF04815        | M09513 | GAW1400 | DW142600 | SS40   |
| CKNN L 4025 R16  | CK160501         | BE03000  | BF04815        | M09513 | GAW1401 | DW142600 | SS40   |
| CKNN L 5032 S16  | CK160501         | BE03000  | BF04815        | M09513 | GAW1401 | DW142600 | SS40   |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert     | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |            |       | R     | L |
| 212042000  | 212261300 | CSBP R/L 1212 F09 | 12              | 12 | 80  | 22 | 11 | SP.0903..  | 0,070 | ⊗     | ⊗ |
| 212261400  | 212261500 | CSBP R/L 1616 H09 | 16              | 16 | 100 | 22 | 13 | SP.0903..  | 0,200 | ⊗     | ⊗ |
| 212261600  | 212261700 | CSBP R/L 2020 K09 | 20              | 20 | 125 | 22 | 17 | SP.0903..  | 0,400 | ⊗     | ⊗ |
| 212261800  | 212033900 | CSBP R/L 2020 K12 | 20              | 20 | 125 | 34 | 17 | SP..1203.. | 0,400 | ⊗     | ⊗ |
| 212034000  | 212034100 | CSBP R/L 2525 M12 | 25              | 25 | 150 | 34 | 22 | SP..1203.. | 0,700 | ⊗     | ⊗ |
| 212261900  | 212262000 | CSBP R/L 3225 P12 | 32              | 25 | 170 | 34 | 22 | SP..1203.. | 1,000 | ⊗     | ⊗ |
| 212262100  | 212262200 | CSBP R/L 3232 P19 | 32              | 32 | 170 | 40 | 27 | SP.1904..  | 1,250 | ⊗     | ⊗ |
| 212262300  | 212262400 | CSBP R/L 4040 S19 | 40              | 40 | 250 | 40 | 35 | SP.1904..  | 3,000 | ⊗     | ⊗ |
| 212262500  | 212262600 | CSBP R/L 5050 T19 | 50              | 50 | 300 | 40 | 43 | SP.1904..  | 5,650 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

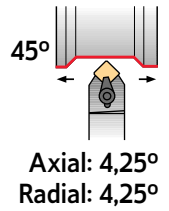
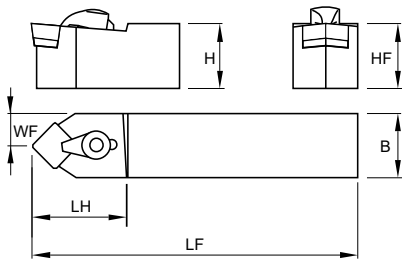
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Complementary Accessories - Flat Inserts |          |         |        |         |                |                |
|-------------------|--|----------|---------|--------|---------|----------------|----------------|
|                   | Shim                                     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
| CSBP R/L 1212 F09 | CS090300                                 | BE02100  | GS05001 | SS25   | GS05004 | QCS0900        | -              |
| CSBP R/L 1616 H09 | CS090300                                 | BE02100  | GS05001 | SS25   | GS05004 | QCS0900        | -              |
| CSBP R/L 2020 K09 | CS090300                                 | BE02100  | GS05001 | SS25   | GS05004 | QCS0900        | -              |
| CSBP R/L 2020 K12 | CS120300                                 | BE02100  | GS06000 | SS30   | GS05005 | QCS1200        | QCS1201        |
| CSBP R/L 2525 M12 | CS120300                                 | BE02100  | GS06000 | SS30   | GS05005 | QCS1200        | QCS1201        |
| CSBP R/L 3225 P12 | CS120300                                 | BE02100  | GS06000 | SS30   | GS05005 | QCS1200        | QCS1201        |
| CSBP R/L 3232 P19 | CS190300                                 | BE03000  | GS08000 | SS40   | GS08001 | QCS1900        | QCS1901        |
| CSBP R/L 4040 S19 | CS190300                                 | BE03000  | GS08000 | SS40   | GS08001 | QCS1900        | QCS1901        |
| CSBP R/L 5050 T19 | CS190300                                 | BE03000  | GS08000 | SS40   | GS08001 | QCS1900        | QCS1901        |



## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF   |             |       | R     | L |
| 212262700  | 212262800 | CSDP R/L 1010 E09 | 10              | 10 | 70  | 22 | 5,6  | SP.. 0903.. | 0,030 | ⊗     | ⊗ |
| 212262900  | 212263000 | CSDP R/L 1212 F09 | 12              | 12 | 80  | 22 | 7,6  | SP.. 0903.. | 0,070 | ⊗     | ⊗ |
| 212263100  | 212263200 | CSDP R/L 1616 H09 | 16              | 16 | 100 | 22 | 11,6 | SP.. 0903.. | 0,200 | ⊗     | ⊗ |
| 212263300  | 212263400 | CSDP R/L 2020 K12 | 20              | 20 | 125 | 28 | 14,0 | SP.. 1203.. | 0,400 | ⊗     | ⊗ |
| 212263500  | 212263600 | CSDP R/L 2525 M12 | 25              | 25 | 150 | 28 | 19,0 | SP.. 1203.. | 0,700 | ⊗     | ⊗ |
| 212263700  |           | CSDP N 1010 E09   | 10              | 10 | 70  | 22 | 5,0  | SP.. 0903.. | 0,030 | ⊗     |   |
| 212263800  |           | CSDP N 1212 F09   | 12              | 12 | 80  | 22 | 6,0  | SP.. 0903.. | 0,070 | ⊗     |   |
| 212263900  |           | CSDP N 1616 H09   | 16              | 16 | 100 | 22 | 8,0  | SP.. 0903.. | 0,200 | ⊗     |   |
| 212018400  |           | CSDP N 2020 K12   | 20              | 20 | 125 | 28 | 10,0 | SP.. 1203.. | 0,400 | ⊗     |   |
| 212264000  |           | CSDP N 2525 M12   | 25              | 25 | 150 | 28 | 12,5 | SP.. 1203.. | 0,700 | ⊗     |   |

⊗ Stock item | Produto de stock | Itens de stock

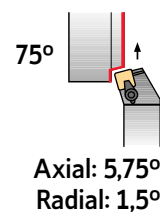
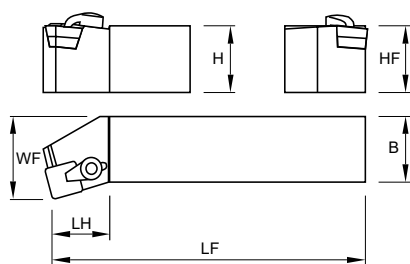
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

Complementary Accessories - Flat Inserts

| Cutter Reference  | Shim     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
|-------------------|----------|----------|---------|--------|---------|----------------|----------------|
| CSDP R/L 1010 E09 | -        | -        | GS05000 | SS25   | -       | QCS0901        | QCS0902        |
| CSDP R/L 1212 F09 | CS090300 | BE02100  | GS05001 | SS25   | GS05004 | QCS0901        | QCS0902        |
| CSDP R/L 1616 H09 | CS090300 | BE02100  | GS05001 | SS25   | GS05004 | QCS0901        | QCS0902        |
| CSDP R/L 2020 K12 | CS120300 | BE02100  | GS06000 | SS30   | GS05005 | QCS1202        | QCS1203        |
| CSDP R/L 2525 M12 | CS120300 | BE02100  | GS06000 | SS30   | GS05005 | QCS1202        | QCS1203        |
| CSDP N 1010 E09   | -        | -        | GS05000 | SS25   | -       | QCS0901        | QCS0902        |
| CSDP N 1212 F09   | CS090300 | BE02100  | GS05001 | SS25   | GS05004 | QCS0901        | QCS0902        |
| CSDP N 1616 H09   | CS090300 | BE02100  | GS05001 | SS25   | GS05004 | QCS0901        | QCS0902        |
| CSDP N 2020 K12   | CS120300 | BE02100  | GS06000 | SS30   | GS05005 | QCS1202        | QCS1203        |
| CSDP N 2525 M12   | CS120300 | BE02100  | GS06000 | SS30   | GS05005 | QCS1202        | QCS1203        |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert     | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |            |       | R     | L |
| 212042100  | 212264100 | CSKP R/L 1212 F09 | 12              | 12 | 80  | 18 | 16 | SP..0903.. | 0,070 | ⊗     | ⊗ |
| 212264200  | 212264300 | CSKP R/L 1616 H09 | 16              | 16 | 100 | 22 | 20 | SP..0903.. | 0,200 | ⊗     | ⊗ |
| 212264400  | 212264500 | CSKP R/L 2020 K09 | 20              | 20 | 125 | 22 | 25 | SP..0903.. | 0,400 | ⊗     | ⊗ |
| 212034200  | 212034300 | CSKP R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | SP..1203.. | 0,400 | ⊗     | ⊗ |
| 212036000  | 212034400 | CSKP R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | SP..1203.. | 0,700 | ⊗     | ⊗ |
| 212264600  | 212264700 | CSKP R/L 3225 P12 | 32              | 25 | 170 | 28 | 32 | SP..1203.. | 1,000 | ⊗     | ⊗ |
| 212264800  | 212264900 | CSKP R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | SP..1904.. | 1,250 | ⊗     | ⊗ |
| 212265000  | 212265100 | CSKP R/L 4040 S19 | 40              | 40 | 250 | 42 | 50 | SP..1904.. | 3,000 | ⊗     | ⊗ |
| 212265200  | 212265300 | CSKP R/L 5050 T19 | 50              | 50 | 300 | 42 | 60 | SP..1904.. | 5,650 | ⊗     | ⊗ |

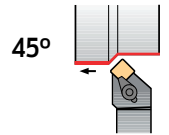
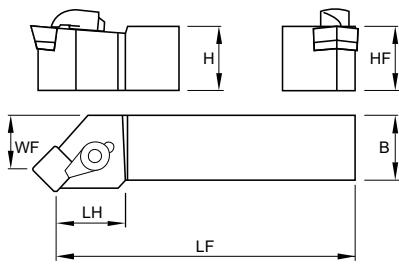
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Complementary Accessories - Flat Inserts |          |         |        |         |                |                |
|-------------------|--|----------|---------|--------|---------|----------------|----------------|
|                   | Shim                                     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
| CSKP R/L 1212 F09 | CS090300                                 | BE02100  | GS05001 | SS25   | GS05004 | QCS0900        | -              |
| CSKP R/L 1616 H09 | CS090300                                 | BE02100  | GS05001 | SS25   | GS05004 | QCS0900        | -              |
| CSKP R/L 2020 K09 | CS090300                                 | BE02100  | GS05001 | SS25   | GS05004 | QCS0900        | -              |
| CSKP R/L 2020 K12 | CS120300                                 | BE02100  | GS06000 | SS30   | GS05005 | QCS1200        | QCS1201        |
| CSKP R/L 2525 M12 | CS120300                                 | BE02100  | GS06000 | SS30   | GS05005 | QCS1200        | QCS1201        |
| CSKP R/L 3225 P12 | CS120300                                 | BE02100  | GS06000 | SS30   | GS05005 | QCS1200        | QCS1201        |
| CSKP R/L 3232 P19 | CS190300                                 | BE03000  | GS08000 | SS40   | GS08001 | QCS1900        | QCS1901        |
| CSKP R/L 4040 S19 | CS190300                                 | BE03000  | GS08000 | SS40   | GS08001 | QCS1900        | QCS1901        |
| CSKP R/L 5050 T19 | CS190300                                 | BE03000  | GS08000 | SS40   | GS08001 | QCS1900        | QCS1901        |

## (C) TOP CLAMP TOOLHOLDERS



Axial: 4,25°  
Radial: 4,25°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212019000  | 212018800 | CSSP R/L 1212 F09 | 12              | 12 | 80  | 22 | 16 | SP.. 0903.. | 0,070 |       |   |
| 212265400  | 212265500 | CSSP R/L 1616 H09 | 16              | 16 | 100 | 22 | 20 | SP.. 0903.. | 0,200 |       |   |
| 212034500  | 212034600 | CSSP R/L 2020 K12 | 20              | 20 | 125 | 22 | 25 | SP.. 1203.. | 0,400 |       |   |
| 212036100  | 212034700 | CSSP R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | SP.. 1203.. | 0,700 |       |   |
| 212265600  | 212265700 | CSSP R/L 3225 P12 | 32              | 25 | 170 | 28 | 32 | SP.. 1203.. | 1,000 |       |   |
| 212265800  | 212265900 | CSSP R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | SP.. 1904.. | 1,250 |       |   |
| 212266000  | 212266100 | CSSP R/L 4040 S19 | 40              | 40 | 250 | 42 | 50 | SP.. 1904.. | 3,000 |       |   |

Stock item | Produto de stock | Itens de stock

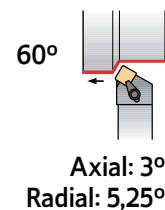
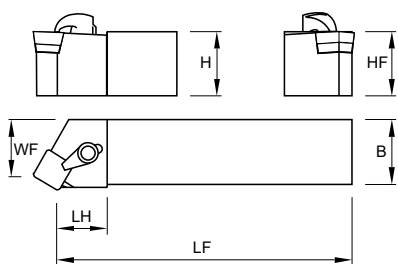
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

Complementary Accessories - Flat Inserts

| Cutter Reference  | Shim     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
|-------------------|----------|----------|---------|--------|---------|----------------|----------------|
|                   |          |          |         |        |         |                |                |
| CSSP R/L 1212 F09 | CS090300 | BE02100  | GS05001 | SS25   | GS05004 | QCS0901        | QCS0902        |
| CSSP R/L 1616 H09 | CS090300 | BE02100  | GS05001 | SS25   | GS05004 | QCS0901        | QCS0902        |
| CSSP R/L 2020 K12 | CS120300 | BE02100  | GS06000 | SS30   | GS05005 | QCS1202        | QCS1203        |
| CSSP R/L 2525 M12 | CS120300 | BE02100  | GS06000 | SS30   | GS05005 | QCS1202        | QCS1203        |
| CSSP R/L 3225 P12 | CS120300 | BE02100  | GS06000 | SS30   | GS05005 | QCS1202        | QCS1203        |
| CSSP R/L 3232 P19 | CS190300 | BE03000  | GS08000 | SS40   | GS08001 | QCS1902        | QCS1903        |
| CSSP R/L 4040 S19 | CS190300 | BE03000  | GS08000 | SS40   | GS08001 | QCS1902        | QCS1903        |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert    | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-----------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |           |       | R     | L |
| 212266200  | 212266300 | CSTP R/L 1616 H09 | 16              | 16 | 100 | 22 | 13 | SP.0903.. | 0,200 |       |   |
| 212266400  | 212266500 | CSTP R/L 2020 K09 | 20              | 20 | 125 | 22 | 17 | SP.0903.. | 0,350 |       |   |
| 212266600  | 212266700 | CSTP R/L 2020 K12 | 20              | 20 | 125 | 28 | 17 | SP.1203.. | 0,400 |       |   |
| 212266800  | 212266900 | CSTP R/L 2525 M12 | 25              | 25 | 150 | 28 | 22 | SP.1203.. | 0,700 |       |   |

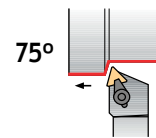
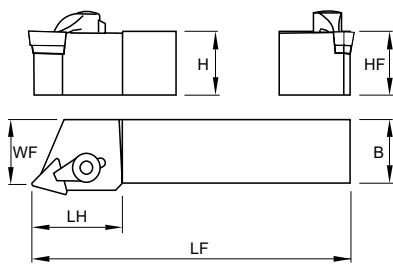
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Complementary Accessories - Flat Inserts |          |         |        |         |                |                |
|-------------------|--|----------|---------|--------|---------|----------------|----------------|
|                   | Shim                                     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
| CSTP R/L 1616 H09 | CS090300                                 | BE02100  | GS05001 | SS25   | GS05004 | QCS0900        | -              |
| CSTP R/L 2020 K09 | CS090300                                 | BE02100  | GS05001 | SS25   | GS05004 | QCS0900        | -              |
| CSTP R/L 2020 K12 | CS120300                                 | BE02100  | GS06000 | SS30   | GS05005 | QCS1200        | QCS1201        |
| CSTP R/L 2525 M12 | CS120300                                 | BE02100  | GS06000 | SS30   | GS05005 | QCS1200        | QCS1201        |

## (C) TOP CLAMP TOOLHOLDERS



Axial: 1,5°  
Radial: 5,75°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212267000  | 212267100 | CTBP R/L 1212 F11 | 12              | 12 | 80  | 18 | 11 | TP.. 1103.. | 0,070 |       |   |
| 212267200  | 212267300 | CTBP R/L 1616 H11 | 16              | 16 | 100 | 22 | 13 | TP.. 1103.. | 0,200 |       |   |
| 212267400  | 212267500 | CTBP R/L 2020 K16 | 20              | 20 | 125 | 28 | 17 | TP.. 1603.. | 0,400 |       |   |
| 212267600  | 212267700 | CTBP R/L 2525 M16 | 25              | 25 | 150 | 28 | 22 | TP.. 1603.. | 0,700 |       |   |

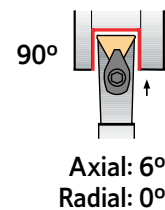
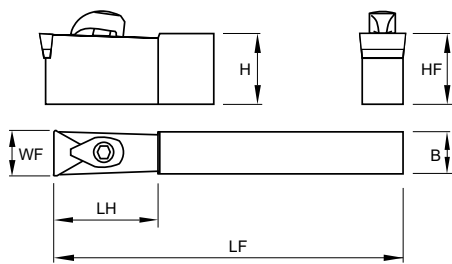
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Complementary Accessories - Flat Inserts |          |         |        |         |                |                |
|-------------------|--|----------|---------|--------|---------|----------------|----------------|
|                   | Shim                                     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
| CTBP R/L 1212 F11 | -  | -        | GS05001 | SS25   | GS05004 | QCT1100        | -              |
| CTBP R/L 1616 H11 | -  | -        | GS05001 | SS25   | GS05004 | QCT1100        | -              |
| CTBP R/L 2020 K16 | CT160301                                 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTBP R/L 2525 M16 | CT160301                                 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |

## (C) TOP CLAMP TOOLHOLDERS



TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

| Order Code | Reference       | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|----|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF |             |       |       |
| 212267800  | CTCP N 1009 E11 | 10              | 9  | 70  | 22 | 11 | TP.. 1103.. | 0,040 |       |
| 212267900  | CTCP N 2009 K11 | 20              | 9  | 125 | 22 | 11 | TP.. 1103.. | 0,150 |       |
| 212268000  | CTCP N 2509 R11 | 25              | 9  | 200 | 22 | 11 | TP.. 1103.. | 0,350 |       |
| 212268100  | CTCP N 2513 R16 | 25              | 13 | 200 | 28 | 16 | TP.. 1603.. | 0,500 |       |
| 212268200  | CTCP N 2518 R22 | 25              | 18 | 200 | 34 | 22 | TP.. 2204.. | 0,650 |       |
| 212268300  | CTCP N 4018 R22 | 40              | 18 | 200 | 34 | 22 | TP.. 2204.. | 1,100 |       |

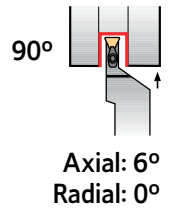
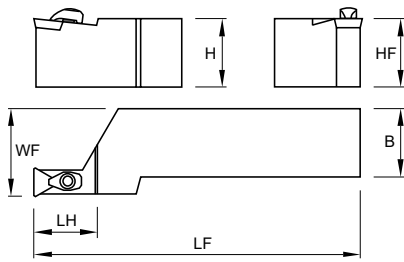
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Complementary Accessories - Flat Inserts |          |         |        |                |                |
|------------------|--|----------|---------|--------|----------------|----------------|
|                  | Shim                                     | Shim Pin | Clamp   | Wrench | Chip Breaker 1 | Chip Breaker 2 |
| CTCP N 1009 E11  | -  | -        | GS04000 | SS25   | QCT1100        | QCT1101        |
| CTCP N 2009 K11  | -  | -        | GS04000 | SS25   | QCT1100        | QCT1101        |
| CTCP N 2509 R11  | -  | -        | GS04000 | SS25   | QCT1100        | QCT1101        |
| CTCP N 2513 R16  | CT160301                                 | BE02100  | GS05002 | SS30   | QCT1600        | QCT1601        |
| CTCP N 2518 R22  | CT220301                                 | BE03000  | GS08000 | SS40   | QCT2200        | QCT2201        |
| CTCP N 4018 R22  | CT220301                                 | BE03000  | GS08000 | SS40   | QCT2200        | QCT2201        |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212268400  | 212268500 | CTCP R/L 1212 F11 | 12              | 12 | 80  | 22 | 16 | TP.. 1103.. | 0,070 |       |   |
| 212268600  | 212268700 | CTCP R/L 1616 H11 | 16              | 16 | 100 | 22 | 20 | TP.. 1103.. | 0,200 |       |   |
| 212268800  | 212268900 | CTCP R/L 2020 K11 | 20              | 20 | 125 | 22 | 25 | TP.. 1103.. | 0,400 |       |   |
| 212269000  | 212269100 | CTCP R/L 2525 M11 | 25              | 25 | 150 | 22 | 32 | TP.. 1103.. | 0,700 |       |   |
| 212269200  | 212269300 | CTCP R/L 3225 P16 | 32              | 25 | 170 | 28 | 32 | TP.. 1603.. | 1,000 |       |   |
| 212269400  | 212269500 | CTCP R/L 3232 P16 | 32              | 32 | 170 | 28 | 40 | TP.. 1603.. | 1,250 |       |   |
| 212269600  | 212269700 | CTCP R/L 3225 P22 | 32              | 25 | 170 | 34 | 32 | TP.. 2204.. | 1,000 |       |   |
| 212269800  | 212269900 | CTCP R/L 3232 P22 | 32              | 32 | 170 | 34 | 40 | TP.. 2204.. | 1,250 |       |   |

Stock item | Produto de stock | Itens de stock

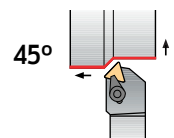
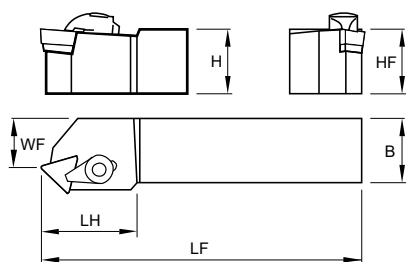
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

Complementary Accessories - Flat Inserts

| Cutter Reference  | Shim     | Shim Pin | Clamp   | Wrench | Chip Breaker 1 | Chip Breaker 2 |
|-------------------|----------|----------|---------|--------|----------------|----------------|
|                   |          |          |         |        |                |                |
| CTCP R/L 1212 F11 | -        | -        | GS04000 | SS25   | QCT1100        | QCT1101        |
| CTCP R/L 1616 H11 | -        | -        | GS04000 | SS25   | QCT1100        | QCT1101        |
| CTCP R/L 2020 K11 | -        | -        | GS04000 | SS25   | QCT1100        | QCT1101        |
| CTCP R/L 2525 M11 | -        | -        | GS04000 | SS25   | QCT1100        | QCT1101        |
| CTCP R/L 3225 P16 | CT160301 | BE02100  | GS05002 | SS30   | QCT1600        | QCT1601        |
| CTCP R/L 3232 P16 | CT160301 | BE02100  | GS05002 | SS30   | QCT1600        | QCT1601        |
| CTCP R/L 3225 P22 | CT220301 | BE03000  | GS08000 | SS40   | QCT2200        | QCT2201        |
| CTCP R/L 3232 P22 | CT220301 | BE03000  | GS08000 | SS40   | QCT2200        | QCT2201        |

## (C) TOP CLAMP TOOLHOLDERS



Axial: 4,25°  
Radial: 4,25°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF   |             |       | R     | L |
| 212270000  | 212270100 | CTDP R/L 1212 F11 | 12              | 12 | 80  | 20 | 6,3  | TP.. 1103.. | 0,070 | ⊗     | ⊗ |
| 212019400  | 212270200 | CTDP R/L 1616 H11 | 16              | 16 | 100 | 22 | 10,3 | TP.. 1103.. | 0,200 | ⊗     | ⊗ |
| 212270300  | 212270400 | CTDP R/L 2020 K16 | 20              | 20 | 125 | 28 | 12,2 | TP.. 1603.. | 0,400 | ⊗     | ⊗ |
| 212270500  | 212019300 | CTDP R/L 2525 M16 | 25              | 25 | 150 | 28 | 17,2 | TP.. 1603.. | 0,700 | ⊗     | ⊗ |
| 212270600  | 212270700 | CTDP R/L 3232 P16 | 32              | 32 | 170 | 28 | 23,5 | TP.. 1603.. | 1,250 | ⊗     | ⊗ |
| 212270800  | 212270900 | CTDP R/L 3232 P22 | 32              | 32 | 170 | 34 | 20,5 | TP.. 2204.. | 1,250 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

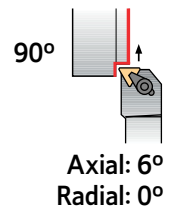
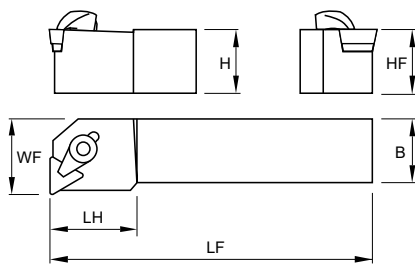
## SPARE PARTS Acessórios | Repuestos

Complementary Accessories - Flat Inserts

| Cutter Reference  | Shim     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
|-------------------|----------|----------|---------|--------|---------|----------------|----------------|
|                   |          |          |         |        |         |                |                |
| CTDP R/L 1212 F11 | -        | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTDP R/L 1616 H11 | -        | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTDP R/L 2020 K16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTDP R/L 2525 M16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTDP R/L 3232 P16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTDP R/L 3232 P22 | CT220301 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |



## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212271000  | 212271100 | CTFP R/L 1010 E11 | 10              | 10 | 70  | 16 | 12 | TP.. 1103.. | 0,030 | ⊗     | ⊗ |
| 212019800  | 212271200 | CTFP R/L 1212 F11 | 12              | 12 | 80  | 18 | 16 | TP.. 1103.. | 0,070 | ⊗     | ⊗ |
| 212019900  | 212271300 | CTFP R/L 1616 H11 | 16              | 16 | 100 | 22 | 20 | TP.. 1103.. | 0,200 | ⊗     | ⊗ |
| 212033600  | 212019500 | CTFP R/L 2020 K11 | 20              | 20 | 125 | 22 | 25 | TP.. 1103.. | 0,400 | ⊗     | ⊗ |
| 212033700  | 212024000 | CTFP R/L 2020 K16 | 20              | 20 | 125 | 22 | 25 | TP.. 1603.. | 0,400 | ⊗     | ⊗ |
| 212035900  | 212033800 | CTFP R/L 2525 M16 | 25              | 25 | 150 | 22 | 32 | TP.. 1603.. | 0,700 | ⊗     | ⊗ |
| 212271400  | 212271500 | CTFP R/L 3225 P16 | 32              | 25 | 170 | 22 | 32 | TP.. 1603.. | 1,000 | ⊗     | ⊗ |
| 212271600  | 212271700 | CTFP R/L 3232 P16 | 32              | 32 | 170 | 28 | 40 | TP.. 1603.. | 1,250 | ⊗     | ⊗ |
| 212271800  | 212271900 | CTFP R/L 4040 S16 | 40              | 40 | 250 | 34 | 50 | TP.. 1603.. | 3,000 | ⊗     | ⊗ |
| 212272000  | 212272100 | CTFP R/L 5050 T16 | 50              | 50 | 300 | 34 | 60 | TP.. 1603.. | 5,650 | ⊗     | ⊗ |
| 212272200  | 212272300 | CTFP R/L 3232 P22 | 32              | 32 | 170 | 34 | 40 | TP.. 2204.. | 1,250 | ⊗     | ⊗ |
| 212272400  | 212272500 | CTFP R/L 4040 S22 | 40              | 40 | 250 | 34 | 50 | TP.. 2204.. | 3,000 | ⊗     | ⊗ |
| 212272600  | 212272700 | CTFP R/L 5050 T22 | 50              | 50 | 300 | 34 | 60 | TP.. 2204.. | 5,650 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

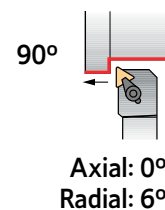
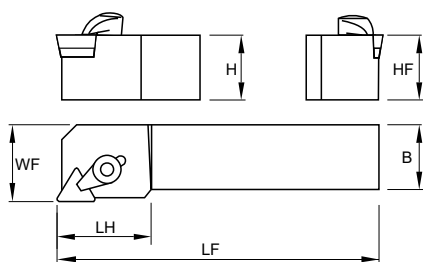
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

Complementary Accessories - Flat Inserts

| Cutter Reference  | Shim     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
|-------------------|----------|----------|---------|--------|---------|----------------|----------------|
|                   |          |          |         |        |         |                |                |
| CTFP R/L 1010 E11 | -        | -        | GS03000 | SS15   | -       | -              | -              |
| CTFP R/L 1212 F11 | -        | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTFP R/L 1616 H11 | -        | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTFP R/L 2020 K11 | -        | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTFP R/L 2020 K16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTFP R/L 2525 M16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTFP R/L 3225 P16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTFP R/L 3232 P16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTFP R/L 4040 S16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTFP R/L 5050 T16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTFP R/L 3232 P22 | CT220301 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |
| CTFP R/L 4040 S22 | CT220301 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |
| CTFP R/L 5050 T22 | CT220301 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212272800  | 212272900 | CTGP R/L 1010 E11 | 10              | 10 | 70  | 16 | 12 | TP.. 1103.. | 0,030 |       |   |
| 212273000  | 212020200 | CTGP R/L 1212 F11 | 12              | 12 | 80  | 18 | 16 | TP.. 1103.. | 0,070 |       |   |
| 212273100  | 212273200 | CTGP R/L 1616 H11 | 16              | 16 | 100 | 22 | 20 | TP.. 1103.. | 0,200 |       |   |
| 212033100  | 212033200 | CTGP R/L 2020 K11 | 20              | 20 | 125 | 22 | 25 | TP.. 1103.. | 0,400 |       |   |
| 212033300  | 212033400 | CTGP R/L 2020 K16 | 20              | 20 | 125 | 28 | 25 | TP.. 1603.. | 0,400 |       |   |
| 212035800  | 212033500 | CTGP R/L 2525 M16 | 25              | 25 | 150 | 28 | 32 | TP.. 1603.. | 0,700 |       |   |
| 212273300  | 212273400 | CTGP R/L 3225 P16 | 32              | 25 | 170 | 28 | 32 | TP.. 1603.. | 1,000 |       |   |
| 212273500  | 212273600 | CTGP R/L 3232 P22 | 32              | 32 | 170 | 34 | 40 | TP.. 2204.. | 1,250 |       |   |
| 212273700  | 212273800 | CTGP R/L 4040 S22 | 40              | 40 | 250 | 34 | 50 | TP.. 2204.. | 3,000 |       |   |
| 212273900  | 212274000 | CTGP R/L 5050 T22 | 50              | 50 | 300 | 34 | 60 | TP.. 2204.. | 5,650 |       |   |

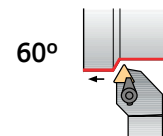
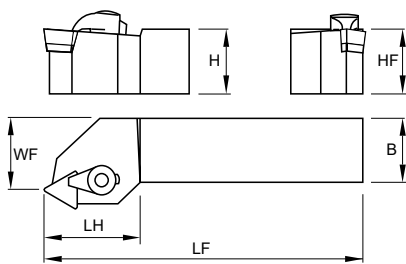
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Complementary Accessories - Flat Inserts |          |         |        |         |                |                |
|-------------------|--|----------|---------|--------|---------|----------------|----------------|
|                   | Shim                                     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
| CTGP R/L 1010 E11 | -  | -        | GS03000 | SS15   | -       | -              | -              |
| CTGP R/L 1212 F11 | -  | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTGP R/L 1616 H11 | -  | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTGP R/L 2020 K11 | -  | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTGP R/L 2020 K16 | CT160301                                 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTGP R/L 2525 M16 | CT160301                                 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTGP R/L 3225 P16 | CT160301                                 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTGP R/L 3232 P22 | CT220301                                 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |
| CTGP R/L 4040 S22 | CT220301                                 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |
| CTGP R/L 5050 T22 | CT220301                                 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |

## (C) TOP CLAMP TOOLHOLDERS



Axial: 3°  
Radial: 5,25°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212249500  | 212274100 | CTTP R/L 0808 D09 | 8               | 8  | 60  | 16 | 7  | TP.. 0902.. | 0,020 |       |   |
| 212274200  | 212274300 | CTTP R/L 1010 E09 | 10              | 10 | 70  | 16 | 9  | TP.. 0902.. | 0,030 |       |   |
| 212274400  | 212274500 | CTTP R/L 1010 E11 | 10              | 10 | 70  | 16 | 9  | TP.. 1103.. | 0,030 |       |   |
| 212274600  | 212274700 | CTTP R/L 1212 F11 | 12              | 12 | 80  | 18 | 11 | TP.. 1103.. | 0,070 |       |   |
| 212274800  | 212274900 | CTTP R/L 1616 H11 | 16              | 16 | 100 | 22 | 13 | TP.. 1103.. | 0,200 |       |   |
| 212275000  | 212275100 | CTTP R/L 2020 K11 | 20              | 20 | 125 | 22 | 17 | TP.. 1103.. | 0,400 |       |   |
| 212275200  | 212275300 | CTTP R/L 2020 K16 | 20              | 20 | 125 | 28 | 17 | TP.. 1603.. | 0,400 |       |   |
| 212247400  | 212275400 | CTTP R/L 2525 M16 | 25              | 25 | 150 | 28 | 22 | TP.. 1603.. | 0,700 |       |   |

Stock item | Produto de stock | Itens de stock

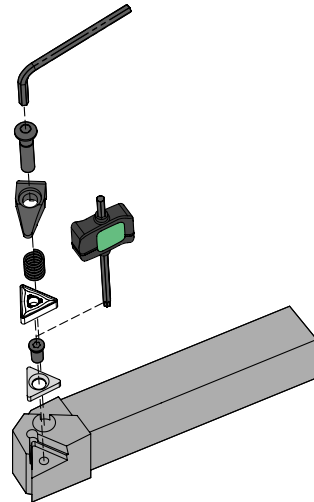
Available under request | Disponível sobre consulta | Disponible bajo consulta

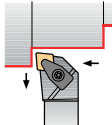
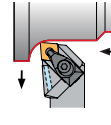
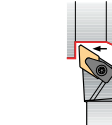
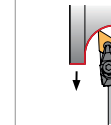


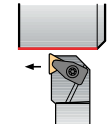
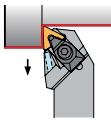
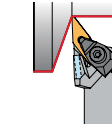

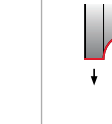
## SPARE PARTS Acessórios | Repuestos

Complementary Accessories - Flat Inserts

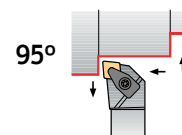
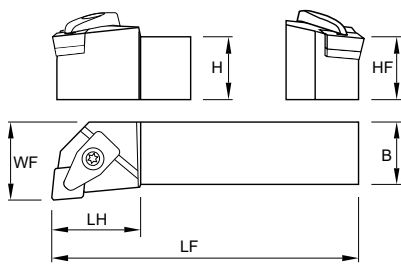
| Cutter Reference  | Shim     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
|-------------------|----------|----------|---------|--------|---------|----------------|----------------|
|                   |          |          |         |        |         |                |                |
| CTTP R/L 0808 D09 | -        | -        | GS03000 | SS15   | -       | -              | -              |
| CTTP R/L 1010 E09 | -        | -        | GS03000 | SS15   | -       | -              | -              |
| CTTP R/L 1010 E11 | -        | -        | GS03000 | SS15   | GS05004 | QCT1100        | QCT1101        |
| CTTP R/L 1212 F11 | -        | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTTP R/L 1616 H11 | -        | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTTP R/L 2020 K11 | -        | -        | GS05001 | SS25   | GS05004 | QCT1100        | QCT1101        |
| CTTP R/L 2020 K16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| CTTP R/L 2525 M16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |

# (D) DIMPLE LOCK SYSTEM



|  |  |   |   |   |   |
|--|--|---|---|---|---|
| <p><b>DCLN 95°</b></p>  <p>PAGE C - 668 CN.. 1204..<br/>CN.. 1906..</p>  | <p><b>NEW DCLN 95°-A</b></p>  <p>PAGE C - 669 CN.. 1204..<br/>CN.. 1606..</p>  | <p><b>DDJN 93°</b></p>  <p>PAGE C - 670 DN.. 1104..<br/>DN.. 1506..</p> | <p><b>NEW DDJN 93°-A</b></p>  <p>PAGE C - 671 DN.. 1104..<br/>DN.. 1506..</p> | <p><b>DSSN 45°</b></p>  <p>PAGE C - 672 SN.. 1204..<br/>SN.. 1906..</p>        | <p><b>NEW DSSN 45°-A</b></p>  <p>PAGE C - 673 SN.. 1204..<br/>SN.. 1906..</p> |
| <p><b>DTGN 90°</b></p>  <p>PAGE C - 674 TN.. 1604..<br/>TN.. 2204..</p> | <p><b>NEW DTJN 90°-A</b></p>  <p>PAGE C - 675 TN.. 1604..<br/>TN.. 2204..</p> | <p><b>NEW DVJN 93°-A</b></p>  <p>PAGE C - 676 VN.. 1604..</p>          | <p><b>DWLN 95°</b></p>  <p>PAGE C - 677 WN.. 0604..<br/>WN.. 0804..</p>      | <p><b>NEW DWLN 95°-A</b></p>  <p>PAGE C - 678 WN.. 0604..<br/>WN.. 0804..</p> |   |

## (D) DIMPLE LOCK TOOLHOLDERS



Axial: -6,5°  
Radial: -6,5°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212275500  | 212275600 | DCLN R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | CN.. 1204.. | 0,400 |       |   |
| 212219600  | 212246600 | DCLN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | CN.. 1204.. | 0,750 |       |   |
| 212275700  | 212249200 | DCLN R/L 3232 P12 | 32              | 32 | 170 | 28 | 40 | CN.. 1204.. | 1,300 |       |   |
| 212275800  | 212275900 | DCLN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | CN.. 1906.. | 1,300 |       |   |
| 212276000  | 212276100 | DCLN R/L 4040 S19 | 40              | 40 | 250 | 45 | 50 | CN.. 1906.. | 3,050 |       |   |

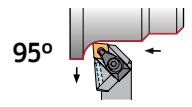
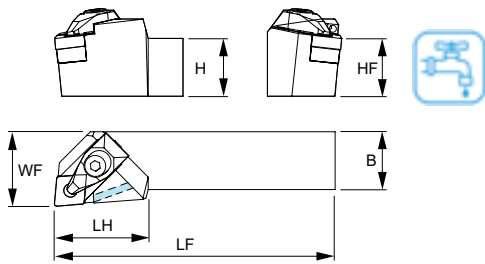
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench |
|-------------------|----------|------------|--------|---------|-------------|--------|
| DCLN R/L 2020 K12 | CC120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DCLN R/L 2525 M12 | CC120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DCLN R/L 3232 P12 | CC120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DCLN R/L 3232 P19 | CC190502 | T06015000  | M09513 | GA07003 | D0602900    | SS40   |
| DCLN R/L 4040 S19 | CC190502 | T06015000  | M09513 | GA07003 | D0602900    | SS40   |

## (D) DIMPLE LOCK TOOLHOLDERS



Axial: -6,5°  
Radial: -6,5°

| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212428600  | 212428700 | DCLN R/L 2020 K12-A | 20              | 20 | 125 | 34 | 25 | CN.. 1204.. | 0,400 | ○     | ○ |
| 212428800  | 212428900 | DCLN R/L 2525 M12-A | 25              | 25 | 150 | 34 | 32 | CN.. 1204.. | 0,750 | ○     | ○ |
| 212429000  | 212429100 | DCLN R/L 3232 P12-A | 32              | 32 | 170 | 34 | 40 | CN.. 1204.. | 1,300 | ○     | ○ |
| 212429200  | 212429300 | DCLN R/L 3232 P16-A | 32              | 32 | 170 | 42 | 40 | CN.. 1606.. | 1,250 | ○     | ○ |

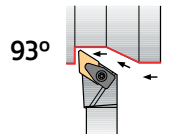
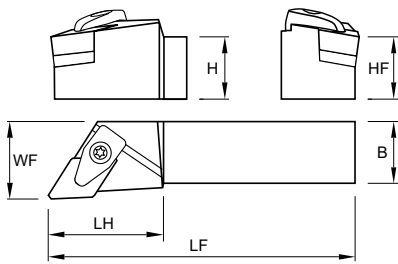
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench | Cooling Screw 1 | Cooling Screw 2 | Cooling Screw 3 |
|---------------------|----------|------------|--------|---------|-------------|--------|-----------------|-----------------|-----------------|
| DCLN R/L 2020 K12-A | CC120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | H0600475        | H1000875        | T1000875        |
| DCLN R/L 2525 M12-A | CC120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | H0600475        | H1000875        | T1000875        |
| DCLN R/L 3232 P12-A | CC120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | -               | H1000875        | -               |
| DCLN R/L 3232 P16-A | CC160501 | T0601575   | M09513 | GA07004 | D0602900    | SS40   | -               | H1000875        | -               |

## (D) DIMPLE LOCK TOOLHOLDERS



Axial: -6,25°  
Radial: -6,75°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212422900  | 212423000 | DDJN R/L 2020 K11 | 20              | 20 | 125 | 34 | 25 | DN.. 1104.. | 0,400 |       |   |
| 212065900  | 212276200 | DDJN R/L 2020 K15 | 20              | 20 | 125 | 34 | 25 | DN.. 1506.. | 0,400 |       |   |
| 212219300  | 212168000 | DDJN R/L 2525 M15 | 25              | 25 | 150 | 34 | 32 | DN.. 1506.. | 0,750 |       |   |
| 212276300  | 212249400 | DDJN R/L 3232 P15 | 32              | 32 | 170 | 34 | 40 | DN.. 1506.. | 1,300 |       |   |

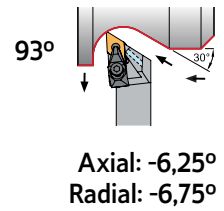
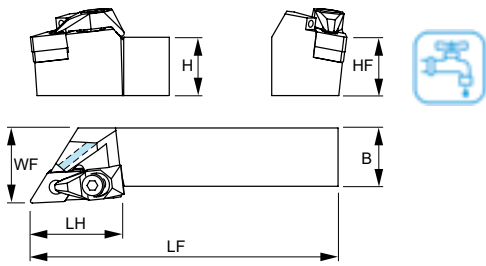
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench |
|-------------------|----------|------------|--------|---------|-------------|--------|
| DDJN R/L 2020 K11 | CD110302 | T05008000  | M06511 | GA05001 | D0500801    | SS40   |
| DDJN R/L 2020 K15 | CD150501 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DDJN R/L 2525 M15 | CD150501 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DDJN R/L 3232 P15 | CD150501 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212429400  | 212429500 | DDJN R/L 2020 K11-A | 20              | 20 | 125 | 34 | 25 | DN.. 1104.. | 0,400 | ○     | ○ |
| 212429600  | 212429700 | DDJN R/L 2020 K15-A | 20              | 20 | 125 | 42 | 25 | DN.. 1506.. | 0,400 | ⊗     | ⊗ |
| 212429800  | 212429900 | DDJN R/L 2525 M15-A | 25              | 25 | 150 | 42 | 32 | DN.. 1506.. | 0,750 | ⊗     | ⊗ |
| 212430000  | 212430100 | DDJN R/L 3232 P15-A | 32              | 32 | 170 | 42 | 40 | DN.. 1506.. | 1,300 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

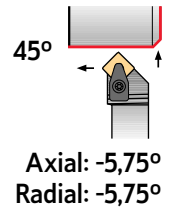
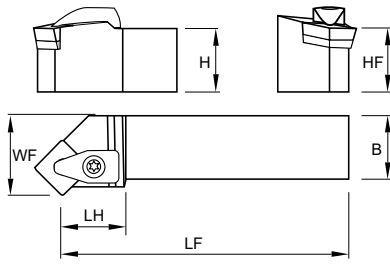
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench | Cooling Screw 1 | Cooling Screw 2 | Cooling Screw 3 |
|---------------------|----------|------------|--------|---------|-------------|--------|-----------------|-----------------|-----------------|
| DDJN R/L 2020 K11-A | CD110302 | T05008000  | M06511 | GA05001 | D0500801    | SS40   | H0600475        | H1000875        | T1000875        |
| DDJN R/L 2020 K15-A | CD150501 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | H0600475        | H1000875        | T1000875        |
| DDJN R/L 2525 M15-A | CD150501 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | H0600475        | H1000875        | T1000875        |
| DDJN R/L 3232 P15-A | CD150501 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | -               | H1000875        | -               |



## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212066000  | 212276400 | DSSN R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | SN.. 1204.. | 0,400 | ⊗     | ⊗ |
| 212245800  | 212276500 | DSSN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | SN.. 1204.. | 0,750 | ⊗     | ⊗ |
| 212276600  | 212276700 | DSSN R/L 3225 P12 | 32              | 25 | 170 | 28 | 32 | SN.. 1204.. | 1,050 | ○     | ⊗ |
| 212276800  | 212276900 | DSSN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | SN.. 1906.. | 1,300 | ⊗     | ⊗ |
| 212277000  | 212277100 | DSSN R/L 4040 S19 | 40              | 40 | 250 | 45 | 50 | SN.. 1906.. | 3,050 | ○     | ○ |

⊗ Stock Items | Itens de stock

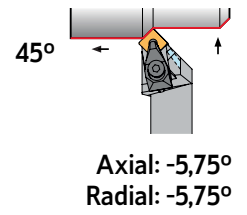
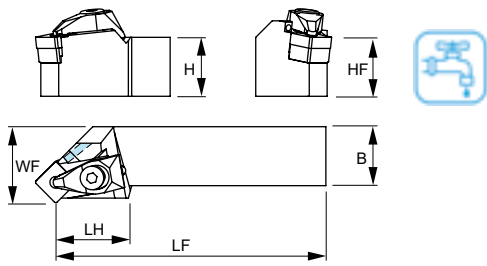
○ Available under request | Disponível sob consulta | Disponible bajo consulta

⊗ Stock available until sold out | Stock disponível até acabar o stock | Stock disponible hasta acabar el stock

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench |
|-------------------|----------|------------|--------|---------|-------------|--------|
| DSSN R/L 2020 K12 | CS120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DSSN R/L 2525 M12 | CS120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DSSN R/L 3225 P12 | CS120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DSSN R/L 3232 P19 | CS190501 | T06015000  | M09513 | GA07003 | D0602900    | SS40   |
| DSSN R/L 4040 S19 | CS190400 | P0801411   | M09513 | GA07001 | D0702800    | SS40   |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212430200  | 212430300 | DSSN R/L 2020 K12-A | 20              | 20 | 125 | 28 | 25 | SN.. 1204.. | 0,400 | ○     | ○ |
| 212430400  | 212430500 | DSSN R/L 2525 M12-A | 20              | 20 | 150 | 28 | 32 | SN.. 1204.. | 0,750 | ○     | ○ |
| 212430600  | 212430700 | DSSN R/L 3232 P19-A | 32              | 32 | 170 | 38 | 40 | SN.. 1906.. | 1,300 | ○     | ○ |

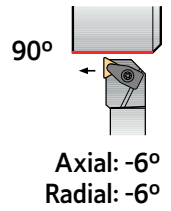
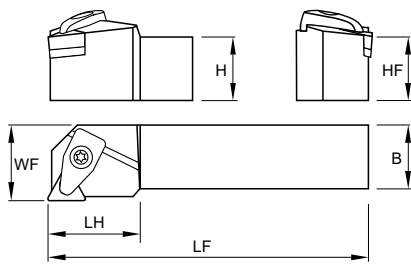
📦 Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench | Cooling Screw 1 | Cooling Screw 2 | Cooling Screw 3 |
|---------------------|----------|------------|--------|---------|-------------|--------|-----------------|-----------------|-----------------|
| DSSN R/L 2020 K12-A | CS120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | H0600475        | H1000875        | T1000875        |
| DSSN R/L 2525 M12-A | CS120600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | H0600475        | H1000875        | T1000875        |
| DSSN R/L 3232 P19-A | CS190501 | T06015000  | M09513 | GA07003 | D0602900    | SS40   | -               | H1000875        | -               |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212277200  | 212277300 | DTGN R/L 2020 K16 | 20              | 20 | 125 | 28 | 25 | TN.. 1604.. | 0,400 |       |   |
| 212219500  | 212277400 | DTGN R/L 2525 M16 | 25              | 25 | 150 | 28 | 32 | TN.. 1604.. | 0,750 |       |   |
| 212277500  | 212277600 | DTGN R/L 2525 M22 | 25              | 25 | 150 | 34 | 32 | TN.. 2204.. | 0,750 |       |   |
| 212277700  | 212277800 | DTGN R/L 3232 P22 | 32              | 32 | 170 | 34 | 40 | TN.. 2204.. | 1,300 |       |   |

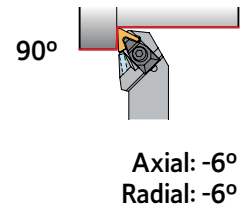
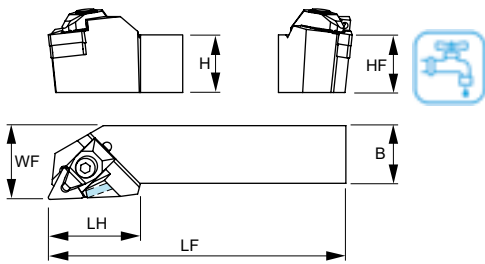
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench |
|-------------------|----------|------------|--------|---------|-------------|--------|
| DTGN R/L 2020 K16 | CT160600 | T05008000  | M06511 | GA05001 | D0500801    | SS40   |
| DTGN R/L 2525 M16 | CT160600 | T05008000  | M06511 | GA05001 | D0500801    | SS40   |
| DTGN R/L 2525 M22 | CT220600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DTGN R/L 3232 P22 | CT220600 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212430800  | 212430900 | DTJN R/L 2020 K16-A | 20              | 20 | 125 | 32 | 25 | TN.. 1604.. | 0,400 | ○     | ○ |
| 212431000  | 212431100 | DTJN R/L 2525 M16-A | 20              | 20 | 150 | 32 | 32 | TN.. 1604.. | 0,700 | ○     | ○ |

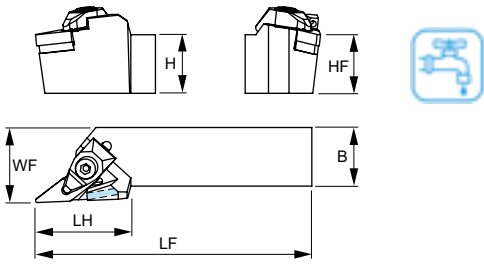
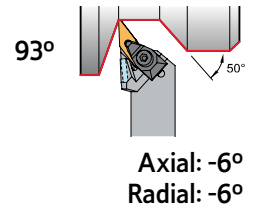
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench | Cooling Screw 1 | Cooling Screw 2 | Cooling Screw 3 |
|---------------------|----------|------------|--------|---------|-------------|--------|-----------------|-----------------|-----------------|
| DTJN R/L 2020 K16-A | CT160600 | T05008000  | M06511 | GA05001 | D0500801    | SS40   | H0600475        | H1000875        | T1000875        |
| DTJN R/L 2525 M16-A | CT160600 | T05008000  | M06511 | GA05001 | D0500801    | SS40   | H0600475        | H1000875        | T1000875        |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert     | WT    | Stock                 |                       |
|------------|-----------|---------------------|-----------------|----|-----|----|----|------------|-------|-----------------------|-----------------------|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |            |       | R                     | L                     |
| 212432000  | 212432100 | DVJN R/L 2020 K16-A | 20              | 20 | 125 | 34 | 25 | VN..1604.. | 0,400 | <input type="radio"/> | <input type="radio"/> |
| 212432200  | 212432300 | DVJN R/L 2525 M16-A | 25              | 25 | 150 | 34 | 32 | VN..1604.. | 0,700 | <input type="radio"/> | <input type="radio"/> |
| 212432400  | 212432500 | DVJN R/L 3232 P16-A | 32              | 32 | 170 | 34 | 40 | VN..1604.. | 1,250 | <input type="radio"/> | <input type="radio"/> |

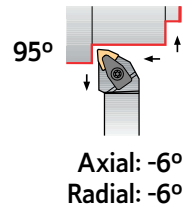
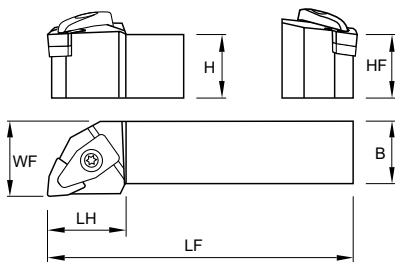
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench | Cooling Screw 1 | Cooling Screw 2 | Cooling Screw 3 |
|---------------------|----------|------------|--------|---------|-------------|--------|-----------------|-----------------|-----------------|
| DVJN R/L 2020 K16-A | CV160301 | T05008000  | M06511 | GA05001 | D0500801    | SS40   | H0600475        | H1000875        | T1000875        |
| DVJN R/L 2525 M16-A | CV160301 | T05008000  | M06511 | GA05001 | D0500801    | SS40   | H0600475        | H1000875        | T1000875        |
| DVJN R/L 3232 P16-A | CV160301 | T05008000  | M06511 | GA05001 | D0500801    | SS40   | -               | H1000875        | -               |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212425100  | 212425200 | DWLN R/L 2020 K06 | 20              | 20 | 125 | 34 | 25 | WN.. 0604.. | 0,400 |       |   |
| 212425300  | 212425400 | DWLN R/L 2525 M06 | 25              | 25 | 150 | 34 | 25 | WN.. 0604.. | 0,400 |       |   |
| 212277900  | 212278000 | DWLN R/L 2020 K08 | 20              | 20 | 125 | 34 | 25 | WN.. 0804.. | 0,400 |       |   |
| 212219400  | 212246300 | DWLN R/L 2525 M08 | 25              | 25 | 150 | 34 | 32 | WN.. 0804.. | 0,750 |       |   |
| 212278100  | 212278200 | DWLN R/L 3232 P08 | 32              | 32 | 170 | 34 | 40 | WN.. 0804.. | 1,300 |       |   |

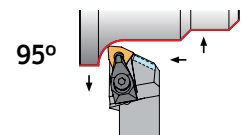
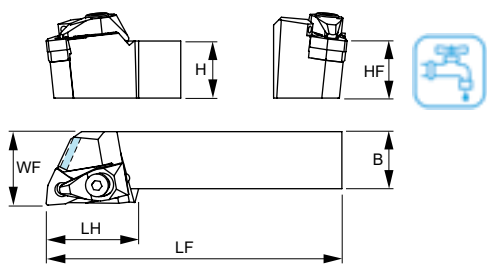
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench |
|-------------------|----------|------------|--------|---------|-------------|--------|
| DWLN R/L 2020 K06 | CW060302 | T05008000  | M06511 | GA05001 | D0500801    | SS40   |
| DWLN R/L 2525 M06 | CW060302 | T05008000  | M06511 | GA05001 | D0500801    | SS40   |
| DWLN R/L 2020 K08 | CW080500 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DWLN R/L 2525 M08 | CW080500 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| DWLN R/L 3232 P08 | CW080500 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |

## (D) DIMPLE LOCK TOOLHOLDERS



Axial: -6°  
Radial: -6°

| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212431200  | 212431300 | DWLN R/L 2020 K06-A | 20              | 20 | 125 | 32 | 25 | WN.. 0604.. | 0,400 | ○     | ○ |
| 212431400  | 212431500 | DWLN R/L 2020 K08-A | 20              | 20 | 125 | 32 | 25 | WN.. 0804.. | 0,400 | ○     | ○ |
| 212431600  | 212431700 | DWLN R/L 2525 M08-A | 25              | 25 | 150 | 32 | 32 | WN.. 0804.. | 0,700 | ○     | ○ |
| 212431800  | 212431900 | DWLN R/L 3232 P08-A | 32              | 32 | 170 | 32 | 38 | WN.. 0804.. | 1,250 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

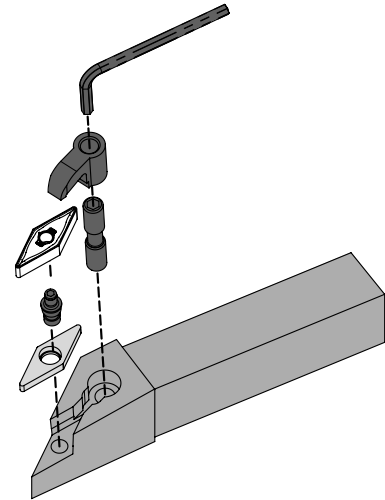
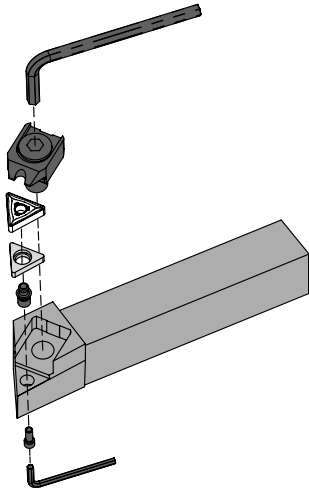
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

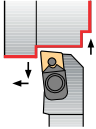
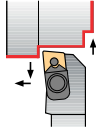
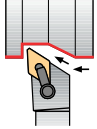
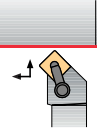
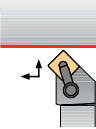
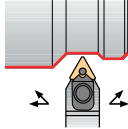
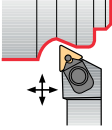
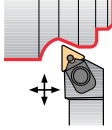
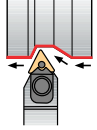
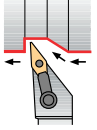
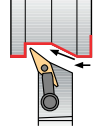
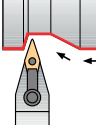
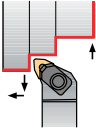
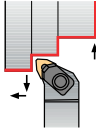
## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench | Cooling Screw 1 | Cooling Screw 2 | Cooling Screw 3 |
|---------------------|----------|------------|--------|---------|-------------|--------|-----------------|-----------------|-----------------|
| DWLN R/L 2020 K06-A | CW060302 | T05008000  | M06511 | GA05001 | D0500801    | SS40   | H0600475        | H1000875        | T1000875        |
| DWLN R/L 2020 K08-A | CW080500 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | H0600475        | H1000875        | T1000875        |
| DWLN R/L 2525 M08-A | CW080500 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | H0600475        | H1000875        | T1000875        |
| DWLN R/L 3232 P08-A | CW080500 | T06010000  | M09513 | GA07002 | D0602900    | SS40   | -               | H1000875        | -               |

# (M) WEDGE CLAMP SYSTEM

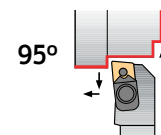
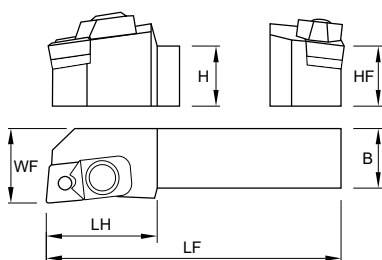
# (M-K) DOUBLE LOCK SYSTEM



|  |  |  |  |   |   |
|--|--|--|--|---|---|
| <p><b>MCLN 95°</b></p>  <p>PAGE C - 680 CN.. 1204..<br/>CN.. 1906..</p>  | <p><b>MCLN-K 95°</b></p>  <p>PAGE C - 681 CN.. 1204..<br/>CN.. 1906..</p>  | <p><b>MDJN-K 93°</b></p>  <p>PAGE C - 682 DN.. 1506..</p>                | <p><b>MSSN-K 45°</b></p>  <p>PAGE C - 683 SN.. 1204..</p>  | <p><b>MSSN 45°</b></p>  <p>PAGE C - 684 SN.. 1204..<br/>SN.. 1906..</p> | <p><b>MTEN 60°</b></p>  <p>PAGE C - 685 TN.. 1604..<br/>TN.. 2204..</p> |
| <p><b>MTJN 93°</b></p>  <p>PAGE C - 686 TN.. 1604..<br/>TN.. 2204..</p> | <p><b>MTJN-K 93°</b></p>  <p>PAGE C - 687 TN.. 1604..<br/>TN.. 2204..</p> | <p><b>MTNN 63°</b></p>  <p>PAGE C - 688 TN.. 1604..<br/>TN.. 2204..</p> | <p><b>MVJN-K 93°</b></p>  <p>PAGE C - 689 VN.. 1604..</p> | <p><b>MVQN-K 117°30'</b></p>  <p>PAGE C - 690 VN.. 1604..</p>          | <p><b>MVVN-K 72°30'</b></p>  <p>PAGE C - 691 VN.. 1604..</p>           |
| <p><b>MWLN 95°</b></p>  <p>PAGE C - 692 WN.. 0604..<br/>WN.. 0804..</p> | <p><b>MWLN-K 95°</b></p>  <p>PAGE C - 693 WN.. 0804..</p>                 |  |  |   |   |



## (M) WEDGE CLAMP SYSTEM



Axial: -8°  
Radial: -6,5°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212245900  | 212278300 | MCLN R/L 2020 K12 | 20              | 20 | 125 | 34 | 25 | CN.. 1204.. | 0,450 |       |   |
| 212246000  | 212010500 | MCLN R/L 2525 M12 | 25              | 25 | 150 | 34 | 32 | CN.. 1204.. | 0,800 |       |   |
| 212278400  | 212278500 | MCLN R/L 3225 P12 | 32              | 25 | 170 | 34 | 32 | CN.. 1204.. | 1,200 |       |   |
| 212278600  | 212278700 | MCLN R/L 2525 M19 | 25              | 25 | 150 | 42 | 32 | CN.. 1906.. | 0,800 |       |   |
| 212278800  | 212278900 | MCLN R/L 3225 P19 | 32              | 25 | 170 | 42 | 32 | CN.. 1906.. | 1,200 |       |   |
| 212279000  | 212279100 | MCLN R/L 4040 S19 | 40              | 40 | 250 | 42 | 50 | CN.. 1906.. | 3,100 |       |   |

Stock item | Produto de stock | Itens de stock

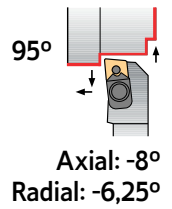
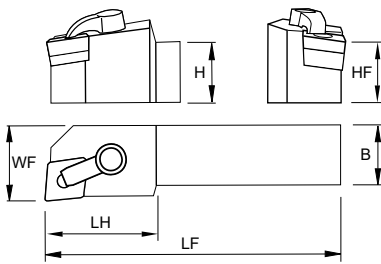
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Lock Pin | lock Pin Screw | Wedge Clamp | Wrench |
|-------------------|----------|----------|----------------|-------------|--------|
| MCLN R/L 2020 K12 | CC120500 | BC06000  | D0400900       | GW08002     | SS50   |
| MCLN R/L 2525 M12 | CC120500 | BC06000  | D0400900       | GW08002     | SS50   |
| MCLN R/L 3225 P12 | CC120500 | BC06000  | D0400900       | GW08002     | SS50   |
| MCLN R/L 2525 M19 | CC190500 | BC08000  | D0602200       | GW08003     | SS50   |
| MCLN R/L 3225 P19 | CC190500 | BC08000  | D0602200       | GW08003     | SS50   |
| MCLN R/L 4040 S19 | CC190500 | BC08000  | D0602200       | GW08003     | SS50   |

# MCLN-K 95° Toolholders | Ferros de torno | Herramientas de torneado

(M-K) DOUBLE LOCK SYSTEM



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212286200  | 212286300 | MCLN R/L 2020 K12-K | 20              | 20 | 125 | 28 | 25 | CN.. 1204.. | 0,450 |       |   |
| 212286400  | 212286500 | MCLN R/L 2525 M12-K | 25              | 25 | 150 | 28 | 32 | CN.. 1204.. | 0,800 |       |   |
| 212286600  | 212286700 | MCLN R/L 3225 P12-K | 32              | 25 | 170 | 28 | 32 | CN.. 1204.. | 1,200 |       |   |
| 212286800  | 212286900 | MCLN R/L 2525 M19-K | 25              | 25 | 150 | 42 | 32 | CN.. 1906.. | 0,800 |       |   |
| 212287000  | 212287100 | MCLN R/L 3232 P19-K | 32              | 32 | 170 | 42 | 40 | CN.. 1906.. | 1,400 |       |   |

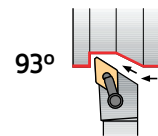
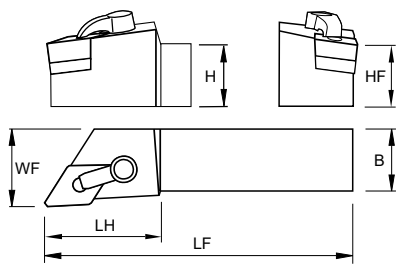
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Lock Pin | Lock Pin Wrench | Clamp   | Differential Screw | Clamp Wrench |
|---------------------|----------|----------|-----------------|---------|--------------------|--------------|
| MCLN R/L 2020 K12-K | CC120500 | BS1-400  | SS25            | GA06000 | F0602900           | SS30         |
| MCLN R/L 2525 M12-K | CC120500 | BS1-400  | SS25            | GA06000 | F0602900           | SS30         |
| MCLN R/L 3225 P12-K | CC120500 | BS1-400  | SS25            | GA06000 | F0602900           | SS30         |
| MCLN R/L 2525 M19-K | CC190502 | BS3-800  | SS40            | GA06003 | F0802900           | SS40         |
| MCLN R/L 3232 P19-K | CC190502 | BS3-800  | SS40            | GA06003 | F0802900           | SS40         |

(M-K) DOUBLE LOCK SYSTEM



Axial: -6°  
Radial: -7°

| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212287200  | 212287300 | MDJN R/L 2020 K15-K | 20              | 20 | 125 | 34 | 25 | DN.. 1506.. | 0,450 |       |   |
| 212287400  | 212287500 | MDJN R/L 2525 M15-K | 25              | 25 | 150 | 34 | 32 | DN.. 1506.. | 0,800 |       |   |
| 212287600  | 212287700 | MDJN R/L 3225 P15-K | 32              | 25 | 170 | 34 | 32 | DN.. 1506.. | 1,200 |       |   |

Stock item | Produto de stock | Itens de stock

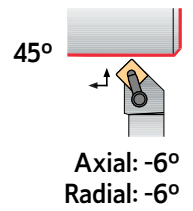
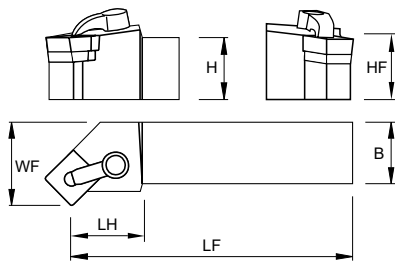
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Lock Pin | Lock Pin Wrench | Clamp   | Differential Screw | Clamp Wrench |
|---------------------|----------|----------|-----------------|---------|--------------------|--------------|
| MDJN R/L 2020 K15-K | CD150501 | BS1-401  | SS25            | GA06001 | F0602900           | SS30         |
| MDJN R/L 2525 M15-K | CD150501 | BS1-401  | SS25            | GA06001 | F0602900           | SS30         |
| MDJN R/L 3225 P15-K | CD150501 | BS1-401  | SS25            | GA06001 | F0602900           | SS30         |

# MSSN-K 45° Toolholders | Ferros de torno | Herramientas de torneado

(M-K) DOUBLE LOCK SYSTEM



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212287800  | 212287900 | MSSN R/L 2020 K12-K | 20              | 20 | 125 | 28 | 27 | SN.. 1204.. | 0,450 | ⊗     | ⊗ |
| 212288000  | 212288100 | MSSN R/L 2525 M12-K | 25              | 25 | 150 | 28 | 32 | SN.. 1204.. | 0,800 | ⊗     | ⊗ |

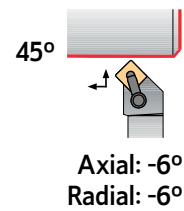
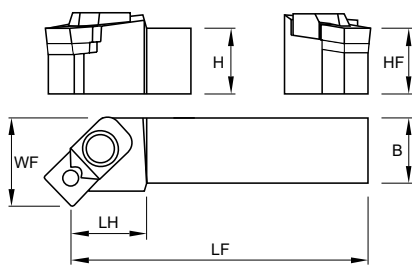
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Lock Pin | Lock Pin Wrench | Clamp   | Differential Screw | Clamp Wrench |
|---------------------|----------|----------|-----------------|---------|--------------------|--------------|
| MSSN R/L 2020 K12-K | CS120500 | BS1-400  | SS25            | GA06000 | F0602900           | SS30         |
| MSSN R/L 2525 M12-K | CS120500 | BS1-400  | SS25            | GA06000 | F0602900           | SS30         |

## (M) WEDGE CLAMP SYSTEM



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212279200  | 212279300 | MSSN R/L 2020 K12 | 20              | 20 | 125 | 34 | 27 | SN.. 1204.. | 0,450 |       |   |
| 212279400  | 212279500 | MSSN R/L 2525 M12 | 25              | 25 | 150 | 34 | 32 | SN.. 1204.. | 0,800 |       |   |
| 212279600  | 212279700 | MSSN R/L 3225 P12 | 32              | 25 | 170 | 34 | 32 | SN.. 1204.. | 1,200 |       |   |
| 212279800  | 212279900 | MSSN R/L 2525 M19 | 25              | 25 | 150 | 42 | 32 | SN.. 1906.. | 0,800 |       |   |
| 212280000  | 212280100 | MSSN R/L 3225 P19 | 32              | 25 | 170 | 42 | 32 | SN.. 1906.. | 1,200 |       |   |
| 212280200  | 212280300 | MSSN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | SN.. 1906.. | 1,400 |       |   |
| 212280400  | 212280500 | MSSN R/L 4040 S19 | 40              | 40 | 250 | 42 | 50 | SN.. 1906.. | 3,100 |       |   |

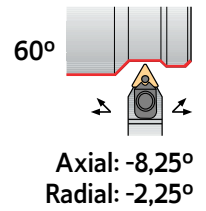
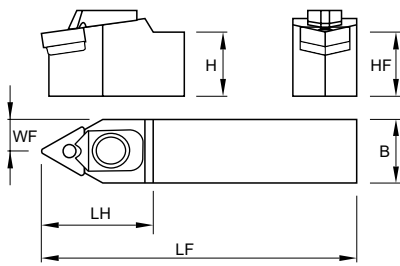
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Lock Pin | Lock Pin Screw | Wedge Clamp | Wrench |
|-------------------|----------|----------|----------------|-------------|--------|
| MSSN R/L 2020 K12 | CS120400 | BC06000  | D0400900       | GW08001     | SS50   |
| MSSN R/L 2525 M12 | CS120400 | BC06000  | D0400900       | GW08001     | SS50   |
| MSSN R/L 3225 P12 | CS120400 | BC06000  | D0400900       | GW08001     | SS50   |
| MSSN R/L 2525 M19 | CS190400 | BC08000  | D0601400       | GW08003     | SS50   |
| MSSN R/L 3225 P19 | CS190400 | BC08000  | D0601400       | GW08003     | SS50   |
| MSSN R/L 3232 P19 | CS190400 | BC08000  | D0601400       | GW08003     | SS50   |
| MSSN R/L 4040 S19 | CS190400 | BC08000  | D0601400       | GW08003     | SS50   |

## (M) WEDGE CLAMP SYSTEM



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF   |             |       | R     | L |
| 212280600  | 212280700 | MTEN R/L 2020 K16 | 20              | 20 | 125 | 34 | 10,5 | TN.. 1604.. | 0,450 | ⊗     | ⊗ |
| 212054800  | 212280900 | MTEN R/L 2525 M16 | 25              | 25 | 150 | 34 | 13,0 | TN.. 1604.. | 0,800 | ⊗     | ⊗ |
| 212281000  | 212281100 | MTEN R/L 3225 P16 | 32              | 25 | 170 | 34 | 13,0 | TN.. 1604.. | 1,200 | ⊗     | ⊗ |
| 212168800  | 212281300 | MTEN R/L 2525 M22 | 25              | 25 | 150 | 42 | 13,0 | TN.. 2204.. | 0,800 | ⊗     | ⊗ |
| 212281500  | 212281600 | MTEN R/L 3225 P22 | 32              | 25 | 170 | 42 | 13,0 | TN.. 2204.. | 1,200 | ⊗     | ⊗ |
| 212281800  | 212281900 | MTEN R/L 3232 P22 | 32              | 32 | 170 | 42 | 16,5 | TN.. 2204.. | 1,400 | ⊗     | ⊗ |
| 212282100  | 212282200 | MTEN R/L 4025 R22 | 40              | 25 | 200 | 42 | 13,0 | TN.. 2204.. | 1,500 | ⊗     | ⊗ |
| 212282400  | 212282500 | MTEN R/L 5032 S22 | 50              | 32 | 250 | 45 | 16,5 | TN.. 2204.. | 2,950 | ⊗     | ⊗ |
| 212280800  |           | MTEN N 2020 K16   | 20              | 20 | 125 | 34 | 10,5 | TN.. 1604.. | 0,450 | ⊗     |   |
| 212169700  |           | MTEN N 2525 M16   | 25              | 25 | 150 | 34 | 13,0 | TN.. 1604.. | 0,800 | ⊗     |   |
| 212281200  |           | MTEN N 3225 P16   | 32              | 25 | 170 | 34 | 13,0 | TN.. 1604.. | 1,200 | ⊗     |   |
| 212281400  |           | MTEN N 2525 M22   | 25              | 25 | 150 | 42 | 13,0 | TN.. 2204.. | 0,800 | ⊗     |   |
| 212281700  |           | MTEN N 3225 P22   | 32              | 25 | 170 | 42 | 13,0 | TN.. 2204.. | 1,200 | ⊗     |   |
| 212282000  |           | MTEN N 3232 P22   | 32              | 32 | 170 | 42 | 16,5 | TN.. 2204.. | 1,400 | ⊗     |   |
| 212282300  |           | MTEN N 4025 R22   | 40              | 25 | 200 | 42 | 13,0 | TN.. 2204.. | 1,500 | ⊗     |   |
| 212282600  |           | MTEN N 5032 S22   | 50              | 32 | 250 | 45 | 16,5 | TN.. 2204.. | 2,950 | ⊗     |   |

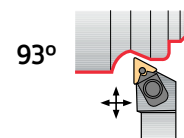
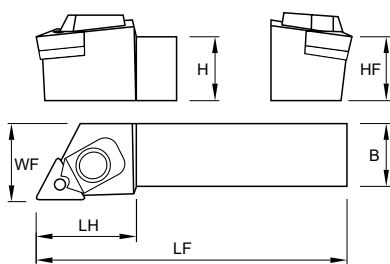
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Lock Pin | Lock Pin Screw | Wedge Clamp | Wrench |
|---------------------|----------|----------|----------------|-------------|--------|
| MTEN R/L/N 2020 K16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTEN R/L/N 2525 M16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTEN R/L/N 3225 P16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTEN R/L/N 2525 M22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTEN R/L/N 3225 P22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTEN R/L/N 3232 P22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTEN R/L/N 4025 R22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTEN R/L/N 5032 S22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |

## (M) WEDGE CLAMP SYSTEM



Axial: -6°  
Radial: -6°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212054100  | 212282700 | MTJN R/L 2020 K16 | 20              | 20 | 125 | 34 | 25 | TN.. 1604.. | 0,450 |       |   |
| 212026100  | 212047700 | MTJN R/L 2525 M16 | 25              | 25 | 150 | 34 | 32 | TN.. 1604.. | 0,800 |       |   |
| 212010600  | 212282800 | MTJN R/L 3225 P16 | 32              | 25 | 170 | 34 | 32 | TN.. 1604.. | 1,200 |       |   |
| 212282900  | 212283000 | MTJN R/L 2525 M22 | 25              | 25 | 150 | 42 | 32 | TN.. 2204.. | 0,800 |       |   |
| 212283100  | 212283200 | MTJN R/L 3225 P22 | 32              | 25 | 170 | 42 | 32 | TN.. 2204.. | 1,200 |       |   |
| 212283300  | 212283400 | MTJN R/L 3232 P22 | 32              | 32 | 170 | 42 | 40 | TN.. 2204.. | 1,400 |       |   |
| 212283500  | 212283600 | MTJN R/L 4025 R22 | 40              | 25 | 200 | 42 | 32 | TN.. 2204.. | 1,500 |       |   |
| 212010700  | 212283700 | MTJN R/L 5032 S22 | 50              | 32 | 250 | 45 | 40 | TN.. 2204.. | 2,950 |       |   |

Stock item | Produto de stock | Itens de stock

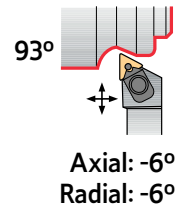
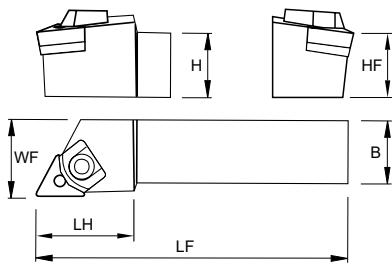
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Lock Pin | Lock Pin Screw | Wedge Clamp | Wrench |
|-------------------|----------|----------|----------------|-------------|--------|
| MTJN R/L 2020 K16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTJN R/L 2525 M16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTJN R/L 3225 P16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTJN R/L 2525 M22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTJN R/L 3225 P22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTJN R/L 3232 P22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTJN R/L 4025 R22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTJN R/L 5032 S22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |

# MTJN-K 93° Toolholders | Ferros de torno | Herramientas de torneado

(M-K) DOUBLE LOCK SYSTEM



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212289300  | 212289400 | MTJN R/L 2020 K16-K | 20              | 20 | 125 | 22 | 25 | TN.. 1604.. | 0,450 |       |   |
| 212228600  | 212289500 | MTJN R/L 2525 M16-K | 25              | 25 | 150 | 22 | 32 | TN.. 1604.. | 0,800 |       |   |
| 212169600  | 212289600 | MTJN R/L 2525 M22-K | 25              | 25 | 150 | 28 | 32 | TN.. 2204.. | 0,800 |       |   |
| 212289700  | 212289800 | MTJN R/L 3225 P22-K | 32              | 25 | 170 | 28 | 32 | TN.. 2204.. | 1,200 |       |   |
| 212289900  | 212290000 | MTJN R/L 3232 P22-K | 32              | 32 | 170 | 28 | 40 | TN.. 2204.. | 1,400 |       |   |
| 212290100  | 212290200 | MTJN R/L 4025 R22-K | 40              | 25 | 200 | 34 | 32 | TN.. 2204.. | 1,500 |       |   |
| 212290300  | 212290400 | MTJN R/L 5032 S22-K | 50              | 32 | 250 | 34 | 40 | TN.. 2204.. | 2,950 |       |   |

Stock item | Produto de stock | Itens de stock

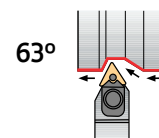
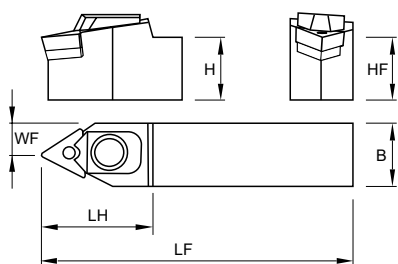
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Lock Pin | Lock Pin Screw | Wedge Clamp | Wrench |
|---------------------|----------|----------|----------------|-------------|--------|
| MTJN R/L 2020 K16-K | CT160302 | BC04500  | D0300700       | GW05001     | SS25   |
| MTJN R/L 2525 M16-K | CT160302 | BC04500  | D0300700       | GW05001     | SS25   |
| MTJN R/L 2525 M22-K | CT220500 | BC06000  | D0400900       | GW06001     | SS30   |
| MTJN R/L 3225 P22-K | CT220500 | BC06000  | D0400900       | GW06001     | SS30   |
| MTJN R/L 3232 P22-K | CT220500 | BC06000  | D0400900       | GW06001     | SS30   |
| MTJN R/L 4025 R22-K | CT220500 | BC06000  | D0400900       | GW06001     | SS30   |
| MTJN R/L 5032 S22-K | CT220500 | BC06000  | D0400900       | GW06001     | SS30   |



## (M) WEDGE CLAMP SYSTEM



Axial: -8°  
Radial: -2,5°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF   |             |       | R     | L |
| 212283800  | 212283900 | MTNN R/L 2020 K16 | 20              | 20 | 125 | 34 | 10,0 | TN.. 1604.. | 0,450 |       |   |
| 212284000  | 212043900 | MTNN R/L 2525 M16 | 25              | 25 | 150 | 34 | 12,5 | TN.. 1604.. | 0,800 |       |   |
| 212284100  | 212284200 | MTNN R/L 3225 P16 | 32              | 25 | 170 | 34 | 12,5 | TN.. 1604.. | 1,200 |       |   |
| 212284300  | 212284400 | MTNN R/L 2525 M22 | 25              | 25 | 150 | 42 | 12,5 | TN.. 2204.. | 0,800 |       |   |
| 212284500  | 212284600 | MTNN R/L 3225 P22 | 32              | 25 | 170 | 42 | 12,5 | TN.. 2204.. | 1,200 |       |   |
| 212284700  | 212284800 | MTNN R/L 3232 P22 | 32              | 32 | 170 | 42 | 16,0 | TN.. 2204.. | 1,400 |       |   |
| 212284900  | 212285000 | MTNN R/L 4025 R22 | 40              | 25 | 200 | 42 | 12,5 | TN.. 2204.. | 1,500 |       |   |
| 212285100  | 212285200 | MTNN R/L 5032 S22 | 50              | 32 | 250 | 45 | 16,0 | TN.. 2204.. | 2,950 |       |   |

Stock item | Produto de stock | Itens de stock

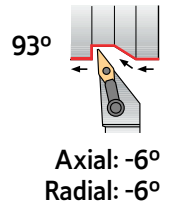
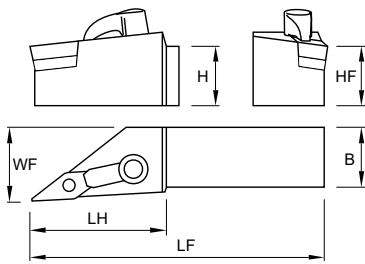
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Lock Pin | Lock Pin Screw | Wedge Clamp | Wrench |
|-------------------|----------|----------|----------------|-------------|--------|
| MTNN R/L 2020 K16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTNN R/L 2525 M16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTNN R/L 3225 P16 | CT160302 | BC04500  | D0300700       | GW08001     | SS50   |
| MTNN R/L 2525 M22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTNN R/L 3225 P22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTNN R/L 3232 P22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTNN R/L 4025 R22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| MTNN R/L 5032 S22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |

# MVJN-K 93° Toolholders | Ferros de torno | Herramientas de torneado

(M-K) DOUBLE LOCK SYSTEM



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212050100  | 212057700 | MVJN R/L 2020 K16-K | 20              | 20 | 125 | 43 | 25 | VN.. 1604.. | 0,450 | ⊗     | ⊗ |
| 212246100  | 212288200 | MVJN R/L 2525 M16-K | 25              | 25 | 150 | 43 | 32 | VN.. 1604.. | 0,800 | ⊗     | ⊗ |
| 212288300  | 212288400 | MVJN R/L 3225 P16-K | 32              | 25 | 170 | 43 | 32 | VN.. 1604.. | 1,200 | ⊗     | ⊗ |

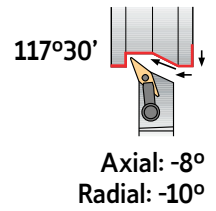
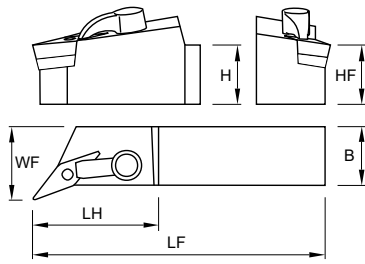
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Lock Pin | Lock Pin Wrench | Clamp   | Differential Screw | Clamp Wrench |
|---------------------|----------|----------|-----------------|---------|--------------------|--------------|
| MVJN R/L 2020 K16-K | CV160301 | BS05000  | SS20            | GA06002 | F0602900           | SS30         |
| MVJN R/L 2525 M16-K | CV160301 | BS05000  | SS20            | GA06002 | F0602900           | SS30         |
| MVJN R/L 3225 P16-K | CV160301 | BS05000  | SS20            | GA06002 | F0602900           | SS30         |

(M-K) DOUBLE LOCK SYSTEM



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert     | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |            |       | R     | L |
| 212288500  | 212288600 | MVQN R/L 2020 K16-K | 20              | 20 | 125 | 43 | 25 | VN..1604.. | 0,450 |       |   |
| 212288700  | 212288800 | MVQN R/L 2525 M16-K | 25              | 25 | 150 | 43 | 32 | VN..1604.. | 0,800 |       |   |
| 212288900  | 212289000 | MVQN R/L 3225 P16-K | 32              | 25 | 170 | 43 | 32 | VN..1604.. | 1,200 |       |   |

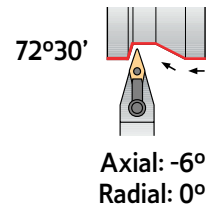
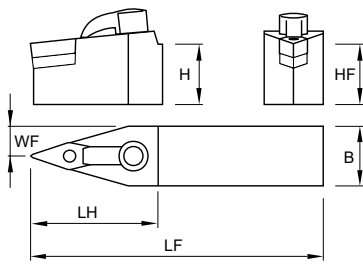
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Lock Pin | Lock Pin Wrench | Clamp   | Differential Screw | Clamp Wrench |
|---------------------|----------|----------|-----------------|---------|--------------------|--------------|
| MVQN R/L 2020 K16-K | CV160301 | BS05000  | SS20            | GA06002 | F0602900           | SS30         |
| MVQN R/L 2525 M16-K | CV160301 | BS05000  | SS20            | GA06002 | F0602900           | SS30         |
| MVQN R/L 3225 P16-K | CV160301 | BS05000  | SS20            | GA06002 | F0602900           | SS30         |

(M-K) DOUBLE LOCK SYSTEM















| Order Code | Reference         | Dimensions (mm) |    |     |    |      | Insert     | WT    | Stock |   |
|------------|-------------------|-----------------|----|-----|----|------|------------|-------|-------|---|
|            |                   | HF = H          | B  | LF  | LH | WF   |            |       | R     | L |
| 212289100  | MVVN N 2020 K16-K | 20              | 20 | 125 | 43 | 10,0 | VN..1604.. | 0,450 | ⊗     | ⊗ |
| 212289200  | MVVN N 2525 M16-K | 25              | 25 | 150 | 43 | 12,5 | VN..1604.. | 0,800 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

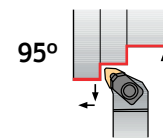
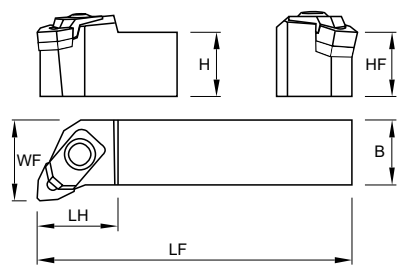
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS

Acessórios | Repuestos

| Cutter Reference  | Shim   | Lock Pin  | Lock Pin Wrench  | Clamp   | Differential Screw   | Clamp Wrench   |
|-------------------|--|---|--|---|--|--|
| MVVN N 2020 K16-K |  CV160301 |  BS05000 |  SS20 |  GA06002 |  F0602900 |  SS30 |
| MVVN N 2525 M16-K |  CV160301 |  BS05000 |  SS20 |  GA06002 |  F0602900 |  SS30 |

## (M) WEDGE CLAMP SYSTEM



Axial: -6,5°  
Radial: -6,5°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212285300  | 212285400 | MWLN R/L 1616 H06 | 16              | 16 | 100 | 15 | 20 | WN.. 0604.. | 0,200 |       |   |
| 212048200  | 212285500 | MWLN R/L 2020 K06 | 20              | 20 | 125 | 25 | 25 | WN.. 0604.. | 0,450 |       |   |
| 212285600  | 212285700 | MWLN R/L 2525 M06 | 25              | 25 | 150 | 25 | 32 | WN.. 0604.. | 0,800 |       |   |
| 212246200  | 212285800 | MWLN R/L 2020 K08 | 20              | 20 | 125 | 34 | 25 | WN.. 0804.. | 0,450 |       |   |
| 212054000  | 212042400 | MWLN R/L 2525 M08 | 25              | 25 | 150 | 34 | 32 | WN.. 0804.. | 0,800 |       |   |
| 212285900  | 212286000 | MWLN R/L 3225 P08 | 32              | 25 | 170 | 34 | 32 | WN.. 0804.. | 1,200 |       |   |
| 212010800  | 212286100 | MWLN R/L 3232 P08 | 32              | 32 | 170 | 34 | 40 | WN.. 0804.. | 1,400 |       |   |

Stock item | Produto de stock | Itens de stock

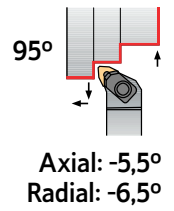
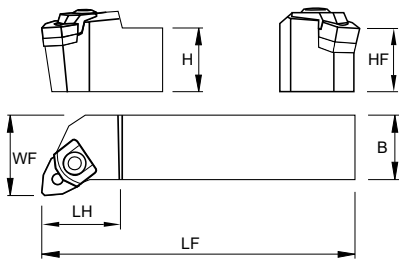
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Lock Pin | Lock Pin Screw | Wedge Clamp | Wrench |
|-------------------|----------|----------|----------------|-------------|--------|
| MWLN R/L 1616 H06 | CW060300 | BC04501  | D0300700       | GW05000     | SS25   |
| MWLN R/L 2020 K06 | CW060300 | BC04500  | D0300700       | GW05000     | SS25   |
| MWLN R/L 2525 M06 | CW060300 | BC04500  | D0300700       | GW05000     | SS25   |
| MWLN R/L 2020 K08 | CW080500 | BC06000  | D0400900       | GW08000     | SS50   |
| MWLN R/L 2525 M08 | CW080500 | BC06000  | D0400900       | GW08000     | SS50   |
| MWLN R/L 3225 P08 | CW080500 | BC06000  | D0400900       | GW08000     | SS50   |
| MWLN R/L 3232 P08 | CW080500 | BC06000  | D0400900       | GW08000     | SS50   |

# MWLN-K 95° Toolholders | Ferros de torno | Herramientas de torneado

(M-K) DOUBLE LOCK SYSTEM



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212290500  | 212290600 | MWLN R/L 2020 K08-K | 20              | 20 | 125 | 34 | 25 | WN.. 0804.. | 0,450 | ⊗     | ⊗ |
| 212250200  | 212290700 | MWLN R/L 2525 M08-K | 25              | 25 | 150 | 34 | 32 | WN.. 0804.. | 0,800 | ⊗     | ⊗ |
| 212290800  | 212290900 | MWLN R/L 3232 P08-K | 32              | 32 | 170 | 34 | 40 | WN.. 0804.. | 1,400 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Lock Pin | Lock Pin Screw | Wedge Clamp | Wrench |
|---------------------|----------|----------|----------------|-------------|--------|
| MWLN R/L 2020 K08-K | CW080500 | BC06000  | D0400900       | GW06000     | SS25   |
| MWLN R/L 2525 M08-K | CW080500 | BC06000  | D0400900       | GW06000     | SS25   |
| MWLN R/L 3232 P08-K | CW080500 | BC06000  | D0400900       | GW06000     | SS25   |

# C (P) LEVER LOCK SYSTEM

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

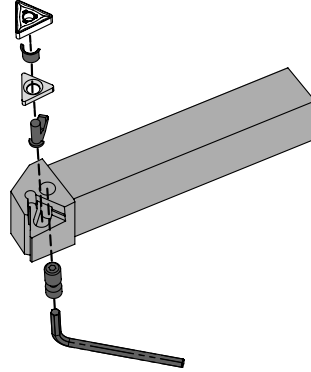
External Toolholders

Internal Toolholders

Automatic Lathes

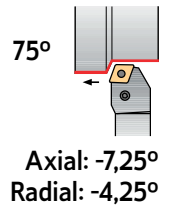
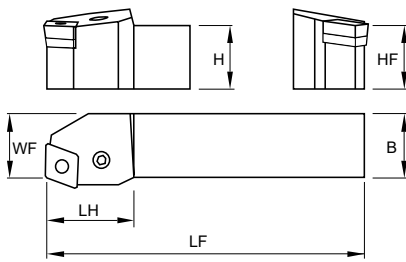
Spare Parts

Technical Data



|   |  |   |  |  |  |
|---|--|---|--|--|--|
| <p><b>PCBN 75°</b></p> <p>PAGE C - 695<br/>CN.. 1204..<br/>CN.. 1606..<br/>CN.. 1906..<br/>CN..2509..</p> | <p><b>PCFN 90°</b></p> <p>PAGE C - 696<br/>CN.. 1204..<br/>CN.. 1606..<br/>CN.. 1906..</p> | <p><b>PCKN 75°</b></p> <p>PAGE C - 697<br/>CN.. 1204...<br/>CN.. 1906..<br/>CN.. 2506..</p> | <p><b>PCLN 95°</b></p> <p>PAGE C - 698<br/>CN..0903..<br/>...<br/>CN..2509..</p> | <p><b>PCMN 50°</b></p> <p>PAGE C - 700<br/>SN.. 1204..<br/>SN.. 1906..</p>                 | <p><b>PCSN 45°</b></p> <p>PAGE C - 701<br/>CN.. 1204..<br/>CN.. 1606..<br/>CN.. 1906..</p> |
| <p><b>PDJN 93°</b></p> <p>PAGE C - 702<br/>DN.. 1104..<br/>DN.. 1504..<br/>DN.. 1506..</p>                | <p><b>PDNN 63°</b></p> <p>PAGE C - 703<br/>DN.. 1504..<br/>DN.. 1506..</p>                 | <p><b>PRDC</b></p> <p>PAGE C - 704<br/>RC.. 1003M0<br/>...<br/>RC.. 3209M0</p>              | <p><b>PRSC</b></p> <p>PAGE C - 706<br/>RC.. 10..32</p>                           | <p><b>PRSN</b></p> <p>PAGE C - 707<br/>RN.. 09..25</p>                                     | <p><b>PSBN 75°</b></p> <p>PAGE C - 708<br/>SN.. 0903..<br/>...<br/>SN.. 2507..</p>         |
| <p><b>PSDN 45°</b></p> <p>PAGE C - 709<br/>SN.. 0903..<br/>...<br/>SN.. 2507..</p>                        | <p><b>PSKN 75°</b></p> <p>PAGE C - 710<br/>SN.. 0903..<br/>...<br/>SN.. 2507..</p>         | <p><b>PSSN 45°</b></p> <p>PAGE C - 711<br/>SN.. 0903..<br/>...<br/>SN.. 2507..</p>          | <p><b>PTDN 45°</b></p> <p>PAGE C - 712<br/>TN.. 2204..</p>                       | <p><b>PTFN 90°</b></p> <p>PAGE C - 713<br/>TN.. 1604..<br/>TN.. 2204..<br/>TN.. 2706..</p> | <p><b>PTGN 90°</b></p> <p>PAGE C - 714<br/>TN.. 1604..<br/>...<br/>TN.. 3307..</p>         |
| <p><b>PTTN 60°</b></p> <p>PAGE C - 715<br/>TN.. 1604..<br/>TN.. 2204..</p>                                | <p><b>PWLN 95°</b></p> <p>PAGE C - 716<br/>WN.. 0604..<br/>WN.. 0804..</p>                 |   |  |  |  |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF   |             |       | R     | L |
| 212291000  | 212291100 | PCBN R/L 2020 K12 | 20              | 20 | 125 | 28 | 17   | CN.. 1204.. | 0,400 |       |   |
| 212011200  | 212010900 | PCBN R/L 2525 M12 | 25              | 25 | 150 | 28 | 22   | CN.. 1204.. | 0,750 |       |   |
| 212423100  | 212423200 | PCBN R/L 3225 P12 | 32              | 25 | 170 | 34 | 22,0 | CN.. 1204.. | 0,750 |       |   |
| 212291200  | 212291300 | PCBN R/L 2525 M16 | 25              | 25 | 150 | 34 | 22   | CN.. 1606.. | 0,750 |       |   |
| 212291400  | 212291500 | PCBN R/L 3225 P16 | 32              | 25 | 170 | 34 | 22   | CN.. 1606.. | 1,050 |       |   |
| 212291600  | 212291700 | PCBN R/L 3232 P16 | 32              | 32 | 170 | 34 | 27   | CN.. 1606.. | 1,300 |       |   |
| 212291800  | 212291900 | PCBN R/L 3225 P19 | 32              | 25 | 170 | 42 | 22   | CN.. 1906.. | 1,050 |       |   |
| 212011300  | 212011000 | PCBN R/L 3232 P19 | 32              | 32 | 170 | 42 | 27   | CN.. 1906.. | 1,300 |       |   |
| 212011400  | 212011100 | PCBN R/L 4040 S19 | 40              | 40 | 250 | 45 | 35   | CN.. 1906.. | 3,050 |       |   |
| 212387900  | 212388000 | PCBN R/L 4040 P25 | 40              | 40 | 250 | 48 | 41   | CN.. 2509.. | 3,100 |       |   |
| 212388100  | 212388200 | PCBN R/L 5050 T25 | 50              | 50 | 300 | 50 | 51   | CN.. 2509.. | 4,000 |       |   |

Stock item | Produto de stock | Itens de stock

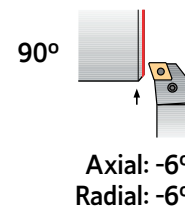
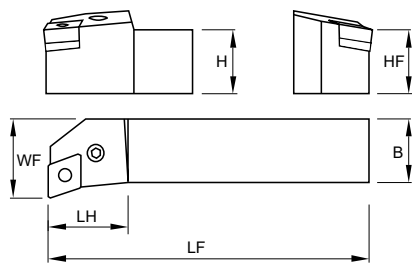
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PCBN R/L 2020 K12 |                  |          |                |         |             |        |
| PCBN R/L 2525 M12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PCBN R/L 3225 P12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PCBN R/L 2525 M16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCBN R/L 3225 P16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCBN R/L 3232 P16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCBN R/L 3225 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCBN R/L 3232 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCBN R/L 4040 S19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCBN R/L 4040 S25 | CC250700         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |
| PCBN R/L 5050 T25 | CC250700         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |



## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212292000  | 212292100 | PCFN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | CN.. 1204.. | 0,750 |       |   |
| 212292200  | 212292300 | PCFN R/L 2525 M16 | 25              | 25 | 150 | 34 | 32 | CN.. 1606.. | 0,750 |       |   |
| 212292400  | 212292500 | PCFN R/L 3225 P16 | 32              | 25 | 170 | 34 | 32 | CN.. 1606.. | 1,050 |       |   |
| 212292600  | 212292700 | PCFN R/L 3232 P16 | 32              | 32 | 170 | 34 | 40 | CN.. 1606.. | 1,300 |       |   |
| 212292800  | 212292900 | PCFN R/L 3225 P19 | 32              | 25 | 170 | 42 | 32 | CN.. 1906.. | 1,050 |       |   |
| 212293000  | 212293100 | PCFN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | CN.. 1906.. | 1,300 |       |   |
| 212293200  | 212293300 | PCFN R/L 4040 S19 | 40              | 40 | 250 | 45 | 50 | CN.. 1906.. | 3,050 |       |   |

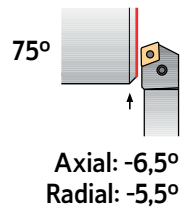
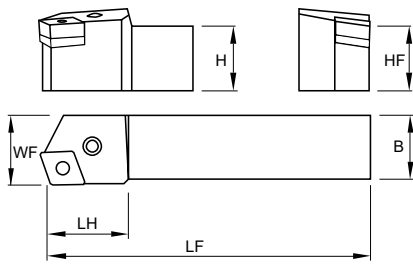
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PCFN R/L 2525 M12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PCFN R/L 2525 M16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCFN R/L 3225 P16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCFN R/L 3232 P16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCFN R/L 3225 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCFN R/L 3232 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCFN R/L 4040 S19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212011600  | 212293400 | PCKN R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | CN.. 1204.. | 0,400 | ⊗     | ⊗ |
| 212011700  | 212293500 | PCKN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | CN.. 1204.. | 0,750 | ⊗     | ⊗ |
| 212293600  | 212011500 | PCKN R/L 3225 P12 | 32              | 25 | 170 | 28 | 32 | CN.. 1204.. | 1,050 | ⊗     | ⊗ |
| 212293800  | 212293900 | PCKN R/L 3232 P19 | 32              | 32 | 170 | 34 | 40 | CN.. 1906.. | 1,300 | ⊗     | ⊗ |
| 212294000  | 212294100 | PCKN R/L 4040 S19 | 40              | 40 | 250 | 45 | 50 | CN.. 1906.. | 3,050 | ⊗     | ⊗ |
| 212294200  | 212294300 | PCKN R/L 4040 S25 | 40              | 40 | 250 | 45 | 50 | CN.. 2509.. | 3,050 | ⊗     | ⊗ |
| 212294400  | 212294500 | PCKN R/L 5050 T25 | 50              | 50 | 300 | 45 | 60 | CN.. 2509.. | 5,850 | ⊗     | ⊗ |

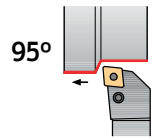
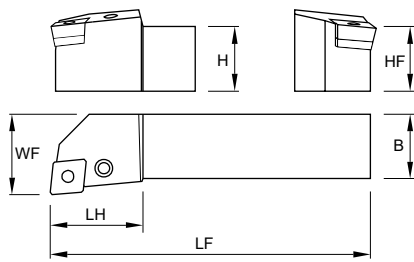
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PCKN R/L 2020 K12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PCKN R/L 2525 M12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PCKN R/L 3225 P12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PCKN R/L 3232 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCKN R/L 4040 S19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCKN R/L 4040 S25 | CC250700         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |
| PCKN R/L 5050 T25 | CC250700         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |

## (P) LEVER LOCK TOOLHOLDERS



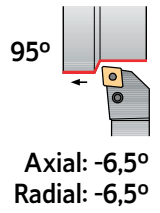
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Radial: -6,5°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212294600  | 212294700 | PCLN R/L 1616 H09 | 16              | 16 | 100 | 25 | 20 | CN.. 0903.. | 0,250 | ⊗     | ⊗ |
| 212294800  | 212294900 | PCLN R/L 2020 K09 | 20              | 20 | 125 | 27 | 25 | CN.. 0903.. | 0,400 | ⊗     | ⊗ |
| 212295000  | 212295100 | PCLN R/L 2525 M09 | 25              | 25 | 150 | 27 | 32 | CN.. 0903.. | 0,750 | ⊗     | ⊗ |
| 212012300  | 212011800 | PCLN R/L 1616 H12 | 16              | 16 | 100 | 26 | 20 | CN.. 1204.. | 0,250 | ⊗     | ⊗ |
| 212012400  | 212011900 | PCLN R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | CN.. 1204.. | 0,400 | ⊗     | ⊗ |
| 212044800  | 212031500 | PCLN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | CN.. 1204.. | 0,750 | ⊗     | ⊗ |
| 212295200  | 212295300 | PCLN R/L 3225 P12 | 32              | 25 | 170 | 28 | 32 | CN.. 1204.. | 1,050 | ⊗     | ⊗ |
| 212058200  | 212295400 | PCLN R/L 3232 P12 | 32              | 32 | 170 | 28 | 40 | CN.. 1204.. | 1,300 | ⊗     | ⊗ |
| 212036400  | 212168100 | PCLN R/L 2525 M16 | 25              | 25 | 150 | 34 | 32 | CN.. 1606.. | 0,750 | ⊗     | ⊗ |
| 212295500  | 212295600 | PCLN R/L 3225 P16 | 32              | 25 | 170 | 34 | 32 | CN.. 1606.. | 1,050 | ⊗     | ⊗ |
| 212295700  | 212012100 | PCLN R/L 3232 P16 | 32              | 32 | 170 | 34 | 40 | CN.. 1606.. | 1,300 | ⊗     | ⊗ |
| 212295800  | 212012200 | PCLN R/L 4040 S16 | 40              | 40 | 250 | 34 | 50 | CN.. 1606.. | 3,050 | ⊗     | ⊗ |
| 212058100  | 212295900 | PCLN R/L 2525 M19 | 25              | 25 | 150 | 42 | 32 | CN.. 1906.. | 0,750 | ⊗     | ⊗ |
| 212296000  | 212296100 | PCLN R/L 3225 P19 | 32              | 25 | 170 | 42 | 32 | CN.. 1906.. | 1,050 | ⊗     | ⊗ |
| 212058300  | 212296200 | PCLN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | CN.. 1906.. | 1,300 | ⊗     | ⊗ |
| 212058400  | 212296300 | PCLN R/L 4040 S19 | 40              | 40 | 250 | 45 | 50 | CN.. 1906.. | 3,050 | ⊗     | ⊗ |
| 212422700  | 212422800 | PCLN R/L 5050 T19 | 50              | 50 | 300 | 50 | 60 | CN.. 1906.. | 3,050 | ⊗     | ⊗ |
| 212296400  | 212296500 | PCLN R/L 4040 S25 | 40              | 40 | 250 | 45 | 50 | CN.. 2509.. | 3,050 | ⊗     | ⊗ |
| 212296600  | 212296700 | PCLN R/L 5050 T25 | 50              | 50 | 300 | 45 | 60 | CN.. 2509.. | 5,850 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

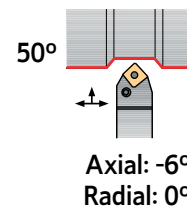
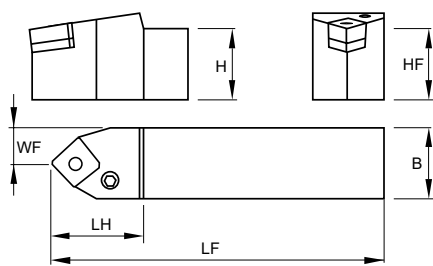
(P) LEVER LOCK TOOLHOLDERS



## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PCLN R/L 1616 H09 | CC090300         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PCLN R/L 2020 K09 | CC090300         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PCLN R/L 2525 M09 | CC090300         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PCLN R/L 1616 H12 | CC120301         | BE05500  | BF47509        | AC13200 | PA0801700   | SS30   |
| PCLN R/L 2020 K12 | CC120301         | BE05500  | BF47509        | AC13200 | PA0802100   | SS30   |
| PCLN R/L 2525 M12 | CC120301         | BE05500  | BF47509        | AC13200 | PA0802100   | SS30   |
| PCLN R/L 3225 P12 | CC120301         | BE05500  | BF47509        | AC13200 | PA0802100   | SS30   |
| PCLN R/L 3232 P12 | CC120301         | BE05500  | BF47509        | AC13200 | PA0802100   | SS30   |
| PCLN R/L 2525 M16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCLN R/L 3225 P16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCLN R/L 3232 P16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCLN R/L 4040 S16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCLN R/L 2525 M19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCLN R/L 3225 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCLN R/L 3232 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCLN R/L 4040 S19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCLN R/L 5050 T19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCLN R/L 4040 S25 | CC250700         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |
| PCLN R/L 5050 T25 | CC250700         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |

## (P) LEVER LOCK TOOLHOLDERS

































| Order Code | Reference       | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|------|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF   |             |       |       |
| 212296800  | PCMN N 2020 K12 | 20              | 20 | 125 | 34 | 10,0 | CN.. 1204.. | 0,400 | ⊗     |
| 212296900  | PCMN N 2525 M12 | 25              | 25 | 150 | 34 | 12,5 | CN.. 1204.. | 0,750 | ⊗     |
| 212297000  | PCMN N 3225 P12 | 32              | 25 | 170 | 34 | 12,5 | CN.. 1204.. | 1,050 | ⊗     |
| 212297100  | PCMN N 3232 P19 | 32              | 32 | 170 | 42 | 16,0 | CN.. 1906.. | 1,300 | ⊗     |
| 212297200  | PCMN N 4040 S19 | 40              | 40 | 250 | 42 | 20,0 | CN.. 1906.. | 3,050 | ⊗     |

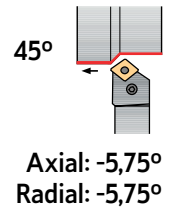
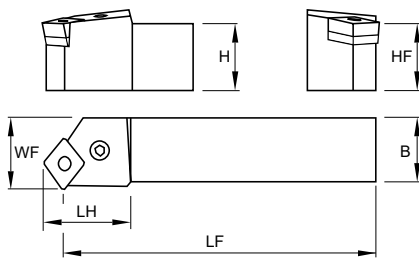
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately   |   |   |   |  |  |
|------------------|--|---|---|---|--|--|
|                  | Shim   | Shim Pin  | Shim Pin Punch  | Lever   | Lever Screw  | Wrench   |
| PCMN N 2020 K12  |  CC120301 |  BE05500 |  BF47509 |  AN13100 |  A0802100 |  SS30 |
| PCMN N 2525 M12  |  CC120301 |  BE05500 |  BF47509 |  AN13100 |  A0802100 |  SS30 |
| PCMN N 3225 P12  |  CC120301 |  BE05500 |  BF47509 |  AN13100 |  A0802100 |  SS30 |
| PCMN N 3232 P19  |  CC190500 |  BE08500 |  BF80012 |  AN20800 |  A1002700 |  SS40 |
| PCMN N 4040 S19  |  CC190500 |  BE08500 |  BF80012 |  AN20800 |  A1002700 |  SS40 |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212297300  | 212297400 | PCSN R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | CN.. 1204.. | 0,400 |       |   |
| 212297500  | 212012800 | PCSN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | CN.. 1204.. | 0,750 |       |   |
| 212297600  | 212297700 | PCSN R/L 2525 M16 | 25              | 25 | 150 | 34 | 32 | CN.. 1606.. | 0,750 |       |   |
| 212297800  | 212297900 | PCSN R/L 3225 P16 | 32              | 25 | 170 | 34 | 32 | CN.. 1606.. | 1,050 |       |   |
| 212013100  | 212298000 | PCSN R/L 3232 P16 | 32              | 32 | 170 | 34 | 40 | CN.. 1606.. | 1,300 |       |   |
| 212298100  | 212298200 | PCSN R/L 3225 P19 | 32              | 25 | 170 | 42 | 32 | CN.. 1906.. | 1,050 |       |   |
| 212298300  | 212298400 | PCSN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | CN.. 1906.. | 1,300 |       |   |
| 212298500  | 212298600 | PCSN R/L 4040 S19 | 40              | 40 | 250 | 45 | 50 | CN.. 1906.. | 3,050 |       |   |

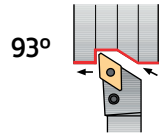
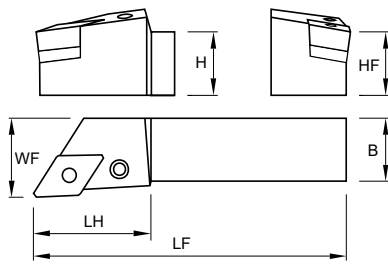
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PCSN R/L 2020 K12 |                  |          |                |         |             |        |
| PCSN R/L 2525 M12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PCSN R/L 2525 M16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCSN R/L 3225 P16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCSN R/L 3232 P16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PCSN R/L 3225 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCSN R/L 3232 P19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PCSN R/L 4040 S19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |

## (P) LEVER LOCK TOOLHOLDERS



Axial: 6,25°  
Radial: -6,75°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212057800  | 212298700 | PDJN R/L 1616 H11 | 16              | 16 | 100 | 28 | 20 | DN.. 1104.. | 0,250 |       |   |
| 212246900  | 212246800 | PDJN R/L 2020 K11 | 20              | 20 | 125 | 28 | 25 | DN.. 1104.. | 0,400 |       |   |
| 212247500  | 212247600 | PDJN R/L 2525 M11 | 25              | 25 | 150 | 28 | 32 | DN.. 1104.. | 0,750 |       |   |
| 212298800  | 212298900 | PDJN R/L 3225 P11 | 32              | 25 | 170 | 28 | 32 | DN.. 1104.. | 1,050 |       |   |
| 212013600  | 212013200 | PDJN R/L 2020 K15 | 20              | 20 | 125 | 34 | 25 | DN.. 1506.. | 0,400 |       |   |
| 212037300  | 212031600 | PDJN R/L 2525 M15 | 25              | 25 | 150 | 34 | 32 | DN.. 1506.. | 0,750 |       |   |
| 212299000  | 212013400 | PDJN R/L 3225 P15 | 32              | 25 | 170 | 34 | 32 | DN.. 1506.. | 1,050 |       |   |
| 212013800  | 212013500 | PDJN R/L 3232 P15 | 32              | 32 | 170 | 34 | 40 | DN.. 1506.. | 1,300 |       |   |
| 212299100  | 212299200 | PDJN R/L 4025 R15 | 40              | 25 | 200 | 34 | 32 | DN.. 1506.. | 1,850 |       |   |
| 212299300  | 212299400 | PDJN R/L 5032 S15 | 50              | 32 | 250 | 34 | 40 | DN.. 1506.. | 2,900 |       |   |

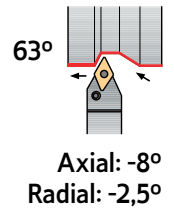
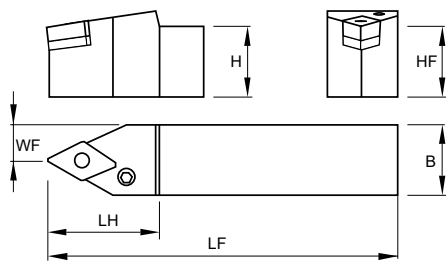
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |       |             |        | for inserts DN.. 1504.. |          |
|-------------------|------------------|----------|----------------|-------|-------------|--------|-------------------------|----------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever | Lever Screw | Wrench | Shim                    | Shim Pin |
| PDJN R/L 1616 H11 |                  |          |                |       |             |        | -                       | -        |
| PDJN R/L 2020 K11 |                  |          |                |       |             |        | -                       | -        |
| PDJN R/L 2525 M11 |                  |          |                |       |             |        | -                       | -        |
| PDJN R/L 3225 P11 |                  |          |                |       |             |        | -                       | -        |
| PDJN R/L 2020 K15 |                  |          |                |       |             |        | CD150500                | BE05401  |
| PDJN R/L 2525 M15 |                  |          |                |       |             |        | CD150500                | BE05401  |
| PDJN R/L 3225 P15 |                  |          |                |       |             |        | CD150500                | BE05401  |
| PDJN R/L 3232 P15 |                  |          |                |       |             |        | CD150500                | BE05401  |
| PDJN R/L 4025 R15 |                  |          |                |       |             |        | CD150500                | BE05401  |
| PDJN R/L 5032 S15 |                  |          |                |       |             |        | CD150500                | BE05401  |

(P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF   |             |       | R     | L |
| 212299500  | 212299600 | PDNN R/L 2020 K15 | 20              | 20 | 125 | 34 | 10,0 | DN.. 1506.. | 0,400 | ⊗     | ⊗ |
| 212299800  | 212299900 | PDNN R/L 2525 M15 | 25              | 25 | 150 | 34 | 12,5 | DN.. 1506.. | 0,750 | ⊗     | ⊗ |
| 212300100  | 212300200 | PDNN R/L 3225 P15 | 32              | 25 | 170 | 34 | 12,5 | DN.. 1506.. | 1,050 | ⊗     | ⊗ |
| 212300300  | 212300400 | PDNN R/L 3232 P15 | 32              | 32 | 170 | 34 | 16,0 | DN.. 1506.. | 1,300 | ⊗     | ⊗ |
| 212300600  | 212300700 | PDNN R/L 4025 S15 | 40              | 25 | 250 | 34 | 12,5 | DN.. 1506.. | 1,850 | ⊗     | ⊗ |
| 212300900  | 212301000 | PDNN R/L 5032 S15 | 50              | 32 | 250 | 34 | 16,0 | DN.. 1506.. | 2,900 | ⊗     | ⊗ |
| 212299700  |           | PDNN N 2020 K15   | 20              | 20 | 125 | 34 | 10,0 | DN.. 1506.. | 0,400 | ⊗     |   |
| 212300000  |           | PDNN N 2525 M15   | 25              | 25 | 150 | 34 | 12,5 | DN.. 1506.. | 0,750 | ⊗     |   |
| 212250000  |           | PDNN N 3225 P15   | 32              | 25 | 170 | 34 | 12,5 | DN.. 1506.. | 1,050 | ⊗     |   |
| 212300500  |           | PDNN N 3232 P15   | 32              | 32 | 170 | 34 | 16,0 | DN.. 1506.. | 1,300 | ⊗     |   |
| 212300800  |           | PDNN N 4025 S15   | 40              | 25 | 250 | 34 | 12,5 | DN.. 1506.. | 1,850 | ⊗     |   |
| 212301100  |           | PDNN N 5032 S15   | 50              | 32 | 250 | 34 | 16,0 | DN.. 1506.. | 2,900 | ⊗     |   |

⊗ Stock item | Produto de stock | Itens de stock

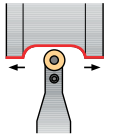
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

SPARE PARTS Acessórios | Repuestos

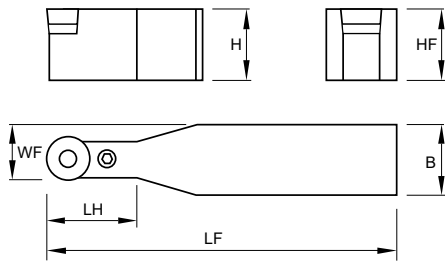
| Cutter Reference    | Order separately |          |                |         |             |        | for inserts DN.. 1504.. |          |
|---------------------|------------------|----------|----------------|---------|-------------|--------|-------------------------|----------|
|                     | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench | Shim                    | Shim Pin |
| PDNN R/L/N 2020 K15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500                | BE05401  |
| PDNN R/L/N 2525 M15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500                | BE05401  |
| PDNN R/L/N 3225 P15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500                | BE05401  |
| PDNN R/L/N 3232 P15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500                | BE05401  |
| PDNN R/L/N 4025 S15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500                | BE05401  |
| PDNN R/L/N 5032 S15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500                | BE05401  |



## (P) LEVER LOCK TOOLHOLDERS



Axial: 0°  
Radial: 0°

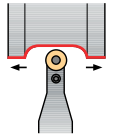


| Order Code | Reference       | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|------|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF   |             |       |       |
| 212051100  | PRDC N 2020 K10 | 20              | 20 | 125 | 22 | 15,0 | RC.. 1003M0 | 0,400 | ⊗     |
| 212169000  | PRDC N 2525 M10 | 25              | 25 | 150 | 22 | 18,5 | RC.. 1003M0 | 0,750 | ⊗     |
| 212301200  | PRDC N 3225 P10 | 32              | 25 | 170 | 22 | 18,5 | RC.. 1003M0 | 1,050 | ⊗     |
| 212301300  | PRDC N 2020 K12 | 20              | 20 | 125 | 28 | 16,0 | RC.. 1204M0 | 0,400 | ⊗     |
| 212042800  | PRDC N 2525 M12 | 25              | 25 | 150 | 28 | 18,5 | RC.. 1204M0 | 0,750 | ⊗     |
| 212301400  | PRDC N 3225 P12 | 32              | 25 | 170 | 28 | 18,5 | RC.. 1204M0 | 1,050 | ⊗     |
| 212422400  | PRDC N 3232 P12 | 32              | 32 | 170 | 28 | 22,0 | RC.. 1204M0 | 1,300 | ○     |
| 212301500  | PRDC N 4025 S12 | 40              | 25 | 250 | 28 | 18,5 | RC.. 1204M0 | 1,850 | ⊗     |
| 212020600  | PRDC N 3225 P16 | 32              | 25 | 170 | 34 | 20,5 | RC.. 1606M0 | 1,050 | ⊗     |
| 212301600  | PRDC N 3232 P16 | 32              | 32 | 170 | 34 | 24,0 | RC.. 1606M0 | 1,300 | ⊗     |
| 212301700  | PRDC N 3232 P20 | 32              | 32 | 170 | 42 | 26,0 | RC.. 2006M0 | 1,300 | ⊗     |
| 212301800  | PRDC N 4040 S20 | 40              | 40 | 250 | 42 | 30,0 | RC.. 2006M0 | 3,050 | ⊗     |
| 212301900  | PRDC N 4040 S25 | 40              | 40 | 250 | 45 | 32,5 | RC.. 2507M0 | 3,050 | ⊗     |
| 212293700  | PRDC N 4040 U25 | 40              | 40 | 350 | 45 | 32,5 | RC.. 2507M0 | 3,050 | ○     |
| 212302000  | PRDC N 5050 U25 | 50              | 50 | 350 | 45 | 37,5 | RC.. 2507M0 | 5,850 | ○     |
| 212302100  | PRDC N 5050 V32 | 50              | 50 | 400 | 52 | 41,0 | RC.. 3209M0 | 5,850 | ○     |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

(P) LEVER LOCK TOOLHOLDERS

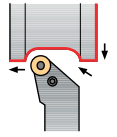
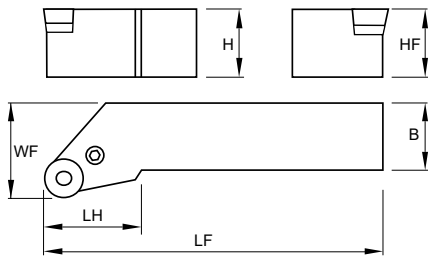


Axial: 0°  
Radial: 0°

SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PRDC N 2020 K10  | CR100300         | BE03800  | BF40009        | AC11700 | PA0501400   | SS20   |
| PRDC N 2525 M10  | CR100300         | BE03800  | BF40009        | AC11700 | PA0501400   | SS20   |
| PRDC N 3225 P10  | CR100300         | BE03800  | BF40009        | AC11700 | PA0501400   | SS20   |
| PRDC N 2020 K12  | CR120300         | BE03800  | BF40009        | AC13300 | PA0601700   | SS25   |
| PRDC N 2525 M12  | CR120300         | BE03800  | BF40009        | AC13300 | PA0601700   | SS25   |
| PRDC N 3225 P12  | CR120300         | BE03800  | BF40009        | AC13300 | PA0601700   | SS25   |
| PRDC N 3232 P12  | CR120300         | BE03800  | BF40009        | AC13300 | PA0601700   | SS25   |
| PRDC N 4025 S12  | CR120300         | BE03800  | BF40009        | AC13300 | PA0601700   | SS25   |
| PRDC N 3225 P16  | CR160500         | BE05400  | BF47509        | AC18000 | PA0602100   | SS25   |
| PRDC N 3232 P16  | CR160500         | BE05400  | BF47509        | AC18000 | PA0602100   | SS25   |
| PRDC N 3232 P20  | CR200500         | BE07000  | BF65012        | AC18700 | PA0802400   | SS30   |
| PRDC N 4040 S20  | CR200500         | BE07000  | BF65012        | AC18700 | PA0802400   | SS30   |
| PRDC N 4040 S25  | CR250600         | BE08500  | BF80012        | AC23000 | PA1003000   | SS40   |
| PRDC N 4040 U25  | CR250600         | BE08500  | BF80012        | AC23000 | PA1003000   | SS40   |
| PRDC N 5050 U25  | CR250600         | BE08500  | BF80012        | AC23000 | PA1003000   | SS40   |
| PRDC N 5050 V32  | CR320600         | BE10500  | BF12520        | AC26700 | PA1203600   | SS50   |

## (P) LEVER LOCK TOOLHOLDERS



Axial: 0°  
Radial: 0°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212302200  | 212302300 | PRSC R/L 2020 K10 | 20              | 20 | 125 | 28 | 25 | RC.. 1003M0 | 0,400 |       |   |
| 212302400  | 212302500 | PRSC R/L 2525 M10 | 25              | 25 | 150 | 28 | 32 | RC.. 1003M0 | 0,750 |       |   |
| 212302600  | 212302700 | PRSC R/L 3225 P10 | 32              | 25 | 170 | 28 | 32 | RC.. 1003M0 | 1,050 |       |   |
| 212302800  | 212302900 | PRSC R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | RC.. 1204M0 | 0,400 |       |   |
| 212303000  | 212303100 | PRSC R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | RC.. 1204M0 | 0,750 |       |   |
| 212303200  | 212303300 | PRSC R/L 3225 P12 | 32              | 25 | 170 | 28 | 32 | RC.. 1204M0 | 1,050 |       |   |
| 212303500  | 212303400 | PRSC R/L 2525 M16 | 25              | 25 | 150 | 34 | 32 | RC.. 1606M0 | 0,750 |       |   |
| 212020800  | 212020700 | PRSC R/L 3225 P16 | 32              | 25 | 170 | 34 | 32 | RC.. 1606M0 | 1,050 |       |   |
| 212303700  | 212303600 | PRSC R/L 3232 P20 | 32              | 32 | 170 | 42 | 40 | RC.. 2006M0 | 1,300 |       |   |
| 212303900  | 212303800 | PRSC R/L 4040 S20 | 40              | 40 | 250 | 42 | 50 | RC.. 2006M0 | 3,050 |       |   |
| 212304100  | 212304000 | PRSC R/L 4040 S25 | 40              | 40 | 250 | 45 | 50 | RC.. 2507M0 | 3,050 |       |   |
| 212020900  | 212304200 | PRSC R/L 5050 T32 | 50              | 50 | 300 | 45 | 63 | RC.. 3209M0 | 5,850 |       |   |

Stock item | Produto de stock | Itens de stock

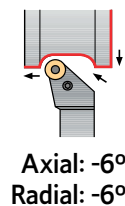
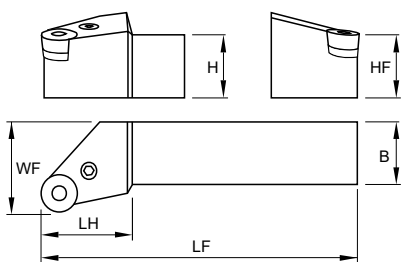
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

Order separately

| Cutter Reference  | Shim     | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
|-------------------|----------|----------|----------------|---------|-------------|--------|
| PRSC R/L 2020 K10 | CR100300 | BE03800  | BF40009        | AC11700 | PA0501400   | SS20   |
| PRSC R/L 2525 M10 | CR100300 | BE03800  | BF40009        | AC11700 | PA0501400   | SS20   |
| PRSC R/L 3225 P10 | CR100300 | BE03800  | BF40009        | AC11700 | PA0501400   | SS20   |
| PRSC R/L 2020 K12 | CR120300 | BE03800  | BF40009        | AC13300 | PA0601700   | SS25   |
| PRSC R/L 2525 M12 | CR120300 | BE03800  | BF40009        | AC13300 | PA0601700   | SS25   |
| PRSC R/L 3225 P12 | CR120300 | BE03800  | BF40009        | AC13300 | PA0601700   | SS25   |
| PRSC R/L 2525 M16 | CR160500 | BE05400  | BF47509        | AC18000 | PA0602100   | SS25   |
| PRSC R/L 3225 P16 | CR160500 | BE05400  | BF47509        | AC18000 | PA0602100   | SS25   |
| PRSC R/L 3232 P20 | CR200500 | BE07000  | BF65012        | AC18700 | PA0802400   | SS30   |
| PRSC R/L 4040 S20 | CR200500 | BE07000  | BF65012        | AC18700 | PA0802400   | SS30   |
| PRSC R/L 4040 S25 | CR250600 | BE08500  | BF80012        | AC23000 | PA0802400   | SS40   |
| PRSC R/L 5050 T32 | CR320600 | BE10500  | BF12520        | AC26700 | PA1203600   | SS50   |

## (P) LEVER LOCK TOOLHOLDERS



Axial: -6°  
Radial: -6°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212046800  | 212304300 | PRSN R/L 2020 K09 | 20              | 20 | 125 | 22 | 25 | RNMG 090300 | 0,400 |       |   |
| 212046900  | 212304400 | PRSN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | RNMG 120400 | 0,750 |       |   |
| 212047000  | 212304500 | PRSN R/L 3225 P15 | 32              | 25 | 170 | 34 | 32 | RNMG 150600 | 1,050 |       |   |
| 212304600  | 212304700 | PRSN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | RNMG 190600 | 1,300 |       |   |
| 212304800  | 212304900 | PRSN R/L 4040 S25 | 40              | 40 | 250 | 45 | 50 | RNMG 250900 | 3,050 |       |   |

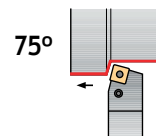
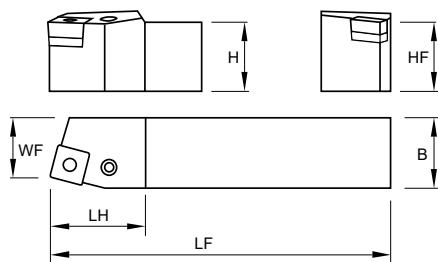
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PRSN R/L 2020 K09 | CR090300         | BE03800  | BF40009        | AN01200 | PA0601700   | SS25   |
| PRSN R/L 2525 M12 | CR120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PRSN R/L 3225 P15 | CR150500         | BE07000  | BF65012        | AN17200 | PA0802400   | SS30   |
| PRSN R/L 3232 P19 | CR190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PRSN R/L 4040 S25 | CR250601         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |

## (P) LEVER LOCK TOOLHOLDERS



Axial: -7,25°  
Radial: -4,25°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212305000  | 212305100 | PSBN R/L 1212 F09 | 12              | 12 | 80  | 18 | 11 | SN.. 0903.. | 0,100 | ⊗     | ⊗ |
| 212305200  | 212305300 | PSBN R/L 1616 H09 | 16              | 16 | 100 | 22 | 13 | SN.. 0903.. | 0,250 | ⊗     | ⊗ |
| 212305400  | 212305500 | PSBN R/L 2020 K09 | 20              | 20 | 125 | 22 | 17 | SN.. 0903.. | 0,400 | ⊗     | ⊗ |
| 212032200  | 212032300 | PSBN R/L 2020 K12 | 20              | 20 | 125 | 28 | 17 | SN.. 1204.. | 0,400 | ⊗     | ⊗ |
| 212014300  | 212032400 | PSBN R/L 2525 M12 | 25              | 25 | 150 | 28 | 22 | SN.. 1204.. | 0,750 | ⊗     | ⊗ |
| 212305600  | 212305700 | PSBN R/L 3225 P12 | 32              | 25 | 170 | 28 | 22 | SN.. 1204.. | 1,050 | ⊗     | ⊗ |
| 212014400  | 212305800 | PSBN R/L 2525 M15 | 25              | 25 | 150 | 34 | 22 | SN.. 1506.. | 0,750 | ⊗     | ⊗ |
| 212305900  | 212306000 | PSBN R/L 3232 P15 | 32              | 32 | 170 | 34 | 27 | SN.. 1506.. | 1,300 | ⊗     | ⊗ |
| 212306100  | 212306200 | PSBN R/L 3232 P19 | 32              | 32 | 170 | 42 | 27 | SN.. 1906.. | 1,300 | ⊗     | ⊗ |
| 212306300  | 212306400 | PSBN R/L 4040 S19 | 40              | 40 | 250 | 45 | 35 | SN.. 1906.. | 3,050 | ⊗     | ⊗ |
| 212422500  | 212422600 | PSBN R/L 5050 T19 | 50              | 50 | 300 | 50 | 43 | SN.. 1906.. | 3,050 | ⊗     | ⊗ |
| 212306500  | 212014100 | PSBN R/L 4040 S25 | 40              | 40 | 250 | 45 | 35 | SN.. 2507.. | 3,050 | ⊗     | ⊗ |
| 212306600  | 212306700 | PSBN R/L 5050 T25 | 50              | 50 | 300 | 45 | 43 | SN.. 2507.. | 5,850 | ⊗     | ⊗ |

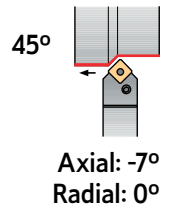
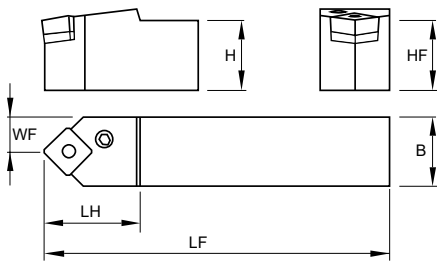
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PSBN R/L 1212 F09 | -                | -        | -              | AN07800 | PA0501000   | SS20   |
| PSBN R/L 1616 H09 | CS090301         | BE03800  | -              | AN01200 | PA0601700   | SS25   |
| PSBN R/L 2020 K09 | CS090301         | BE03800  | -              | AN01200 | PA0601700   | SS25   |
| PSBN R/L 2020 K12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSBN R/L 2525 M12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSBN R/L 3225 P12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSBN R/L 2525 M15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PSBN R/L 3232 P15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PSBN R/L 3232 P19 | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSBN R/L 4040 S19 | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSBN R/L 5050 T19 | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSBN R/L 4040 S25 | CS250600         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |
| PSBN R/L 5050 T25 | CS250600         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code | Reference       | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|------|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF   |             |       |       |
| 212306800  | PSDN N 1010 E09 | 10              | 10 | 70  | 16 | 5,0  | SN.. 0903.. | 0,070 | ☉     |
| 212306900  | PSDN N 1212 F09 | 12              | 12 | 80  | 18 | 6,0  | SN.. 0903.. | 0,100 | ☉     |
| 212307000  | PSDN N 1616 H09 | 16              | 16 | 100 | 22 | 8,0  | SN.. 0903.. | 0,250 | ☉     |
| 212056700  | PSDN N 2020 K12 | 20              | 20 | 125 | 28 | 10,0 | SN.. 1204.. | 0,400 | ☉     |
| 212307100  | PSDN N 2525 M12 | 25              | 25 | 150 | 28 | 12,5 | SN.. 1204.. | 0,750 | ☉     |
| 212307200  | PSDN N 3225 P12 | 32              | 25 | 170 | 28 | 12,5 | SN.. 1204.. | 1,050 | ☉     |
| 212307300  | PSDN N 3232 P12 | 32              | 32 | 170 | 28 | 16,0 | SN.. 1204.. | 1,300 | ☉     |
| 212307400  | PSDN N 3225 P19 | 32              | 25 | 170 | 42 | 12,5 | SN.. 1906.. | 1,050 | ☉     |
| 212249100  | PSDN N 3232 P19 | 32              | 32 | 170 | 42 | 16,0 | SN.. 1906.. | 1,300 | ☉     |
| 212307500  | PSDN N 4040 S25 | 40              | 40 | 250 | 45 | 20,0 | SN.. 2507.. | 3,050 | ☉     |
| 212307600  | PSDN N 5050 T25 | 50              | 50 | 300 | 45 | 25,0 | SN.. 2507.. | 5,850 | ☉     |

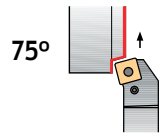
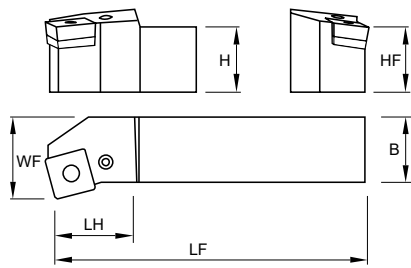
☉ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PSDN N 1010 E09  | -                | -        | -              | AN07800 | PA0501000   | SS20   |
| PSDN N 1212 F09  | -                | -        | -              | AN07800 | PA0501000   | SS20   |
| PSDN N 1616 H09  | CS090301         | BE03800  | BF40009        | AN01200 | PA0601700   | SS25   |
| PSDN N 2020 K12  | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSDN N 2525 M12  | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSDN N 3225 P12  | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSDN N 3232 P12  | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSDN N 3225 P19  | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSDN N 3232 P19  | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSDN N 4040 S25  | CS250600         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |
| PSDN N 5050 T25  | CS250600         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |

## (P) LEVER LOCK TOOLHOLDERS



Axial: -4,25°  
Radial: -7,25°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212307700  | 212307800 | PSKN R/L 1616 H09 | 16              | 16 | 100 | 22 | 20 | SN.. 0903.. | 0,250 |       |   |
| 212307900  | 212308000 | PSKN R/L 2020 K09 | 20              | 20 | 125 | 22 | 25 | SN.. 0903.. | 0,400 |       |   |
| 212032500  | 212032600 | PSKN R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | SN.. 1204.. | 0,400 |       |   |
| 212032700  | 212032800 | PSKN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | SN.. 1204.. | 0,750 |       |   |
| 212308100  | 212308200 | PSKN R/L 3225 P12 | 32              | 25 | 170 | 28 | 32 | SN.. 1204.. | 1,050 |       |   |
| 212308300  | 212308400 | PSKN R/L 2525 M15 | 25              | 25 | 150 | 34 | 32 | SN.. 1506.. | 0,750 |       |   |
| 212308500  | 212308600 | PSKN R/L 3232 P15 | 32              | 32 | 170 | 34 | 40 | SN.. 1506.. | 1,300 |       |   |
| 212308700  | 212308800 | PSKN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | SN.. 1906.. | 1,300 |       |   |
| 212308900  | 212309000 | PSKN R/L 4040 S19 | 40              | 40 | 250 | 45 | 50 | SN.. 1906.. | 3,050 |       |   |
| 212309100  | 212309200 | PSKN R/L 4040 S25 | 40              | 40 | 250 | 45 | 50 | SN.. 2507.. | 3,050 |       |   |
| 212309300  | 212309400 | PSKN R/L 5050 T25 | 50              | 50 | 300 | 45 | 60 | SN.. 2507.. | 5,850 |       |   |

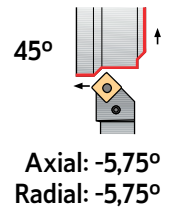
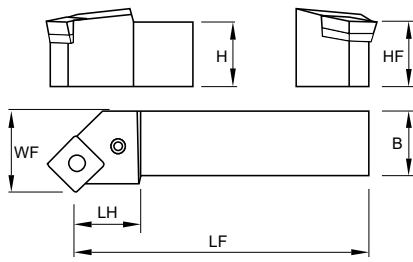
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PSKN R/L 1616 H09 | CS090301         | BE03800  | BF40009        | AN01200 | PA0601700   | SS25   |
| PSKN R/L 2020 K09 | CS090301         | BE03800  | BF40009        | AN01200 | PA0601700   | SS25   |
| PSKN R/L 2020 K12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSKN R/L 2525 M12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSKN R/L 3225 P12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSKN R/L 2525 M15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PSKN R/L 3232 P15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PSKN R/L 3232 P19 | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSKN R/L 4040 S19 | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSKN R/L 4040 S25 | CS250600         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |
| PSKN R/L 5050 T25 | CS250600         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212066500  | 212309500 | PSSN R/L 1616 H09 | 16              | 16 | 100 | 22 | 20 | SN.. 0903.. | 0,250 | ⊗     | ⊗ |
| 212066600  | 212309600 | PSSN R/L 2020 K09 | 20              | 20 | 125 | 22 | 25 | SN.. 0903.. | 0,400 | ⊗     | ⊗ |
| 212032900  | 212033000 | PSSN R/L 2020 K12 | 20              | 20 | 125 | 28 | 25 | SN.. 1204.. | 0,400 | ⊗     | ⊗ |
| 212026600  | 212026700 | PSSN R/L 2525 M12 | 25              | 25 | 150 | 28 | 32 | SN.. 1204.. | 0,750 | ⊗     | ⊗ |
| 212309700  | 212309800 | PSSN R/L 3225 P12 | 32              | 25 | 170 | 28 | 32 | SN.. 1204.. | 1,050 | ⊗     | ⊗ |
| 212066700  | 212309900 | PSSN R/L 2525 M15 | 25              | 25 | 150 | 34 | 32 | SN.. 1506.. | 0,750 | ⊗     | ⊗ |
| 212420500  | 212420600 | PSSN R/L 3225 P15 | 32              | 25 | 170 | 42 | 32 | SN.. 1506.. | 1,050 | ○     | ○ |
| 212066800  | 212015400 | PSSN R/L 3232 P15 | 32              | 32 | 170 | 34 | 40 | SN.. 1506.. | 1,300 | ⊗     | ⊗ |
| 212066900  | 212310000 | PSSN R/L 3232 P19 | 32              | 32 | 170 | 42 | 40 | SN.. 1906.. | 1,300 | ⊗     | ⊗ |
| 212067000  | 212310100 | PSSN R/L 4040 S19 | 40              | 40 | 250 | 45 | 50 | SN.. 1906.. | 3,050 | ⊗     | ⊗ |
| 212310200  | 212310300 | PSSN R/L 5050 T19 | 50              | 50 | 300 | 45 | 60 | SN.. 1906.. | 5,850 | ⊗     | ⊗ |
| 212310400  | 212310500 | PSSN R/L 4040 S25 | 40              | 40 | 250 | 45 | 50 | SN.. 2507.. | 3,050 | ⊗     | ⊗ |
| 212310600  | 212310700 | PSSN R/L 5050 T25 | 50              | 50 | 300 | 45 | 60 | SN.. 2507.. | 5,850 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

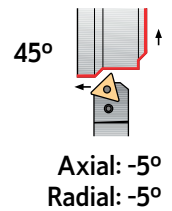
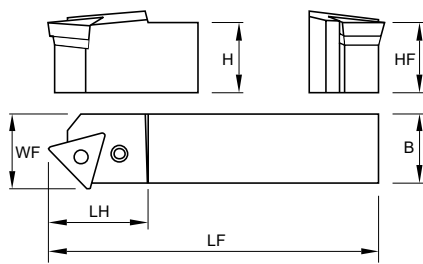
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PSSN R/L 1616 H09 | CS090301         | BE03800  | BF40009        | AN01200 | PA0601700   | SS25   |
| PSSN R/L 2020 K09 | CS090301         | BE03800  | BF40009        | AN01200 | PA0601700   | SS25   |
| PSSN R/L 2020 K12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSSN R/L 2525 M12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSSN R/L 3225 P12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PSSN R/L 2525 M15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PSSN R/L 3225 P15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PSSN R/L 3232 P15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| PSSN R/L 3232 P19 | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSSN R/L 4040 S19 | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSSN R/L 5050 T19 | CS190400         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| PSSN R/L 4040 S25 | CS250600         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |
| PSSN R/L 5050 T25 | CS250600         | BE10500  | BF12520        | AN25200 | PA1203600   | SS50   |



## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212310800  | 212310900 | PTDN R/L 2525 M22 | 25              | 25 | 150 | 34 | 27 | TN., 2204.. | 0,750 |       |   |
| 212311000  | 212311100 | PTDN R/L 3225 P22 | 32              | 25 | 170 | 34 | 27 | TN., 2204.. | 1,050 |       |   |

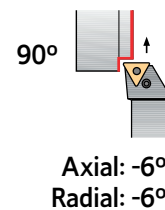
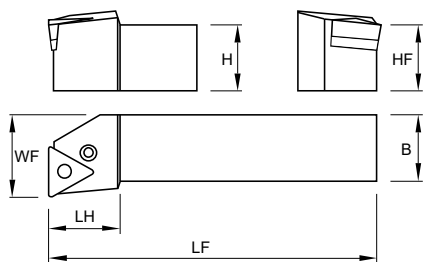
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PTDN R/L 2525 M22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTDN R/L 3225 P22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212056500  | 212311200 | PTFN R/L 1616 H16 | 16              | 16 | 100 | 22 | 20 | TN.. 1604.. | 0,250 |       |   |
| 212031700  | 212015800 | PTFN R/L 2020 K16 | 20              | 20 | 125 | 22 | 25 | TN.. 1604.. | 0,400 |       |   |
| 212036500  | 212015900 | PTFN R/L 2525 M16 | 25              | 25 | 150 | 22 | 32 | TN.. 1604.. | 0,750 |       |   |
| 212311300  | 212311400 | PTFN R/L 3225 P16 | 32              | 25 | 170 | 22 | 32 | TN.. 1604.. | 1,050 |       |   |
| 212031800  | 212311500 | PTFN R/L 2525 M22 | 25              | 25 | 150 | 28 | 32 | TN.. 2204.. | 0,750 |       |   |
| 212016300  | 212311600 | PTFN R/L 3225 P22 | 32              | 25 | 170 | 28 | 32 | TN.. 2204.. | 1,050 |       |   |
| 212311700  | 212311800 | PTFN R/L 3232 P22 | 32              | 32 | 170 | 28 | 40 | TN.. 2204.. | 1,300 |       |   |
| 212311900  | 212312000 | PTFN R/L 3232 P27 | 32              | 32 | 170 | 42 | 40 | TN.. 2706.. | 1,300 |       |   |
| 212312100  | 212312200 | PTFN R/L 4040 S27 | 40              | 40 | 250 | 45 | 50 | TN.. 2706.. | 3,050 |       |   |

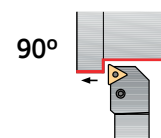
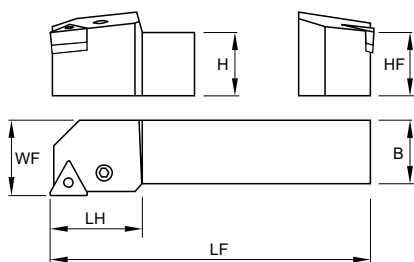
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PTFN R/L 1616 H16 |                  |          |                |         |             |        |
| PTFN R/L 2020 K16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTFN R/L 2525 M16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTFN R/L 3225 P16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTFN R/L 2525 M22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTFN R/L 3225 P22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTFN R/L 3232 P22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTFN R/L 3232 P27 | CT270500         | BE05500  | BF65012        | AN17200 | PA0802400   | SS30   |
| PTFN R/L 4040 S27 | CT270500         | BE05500  | BF65012        | AN17200 | PA0802400   | SS30   |

## (P) LEVER LOCK TOOLHOLDERS



Axial: -6°  
Radial: -6°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212052700  | 212312300 | PTGN R/L 1616 H16 | 16              | 16 | 100 | 22 | 20 | TN.. 1604.. | 0,250 |       |   |
| 212031900  | 212016500 | PTGN R/L 2020 K16 | 20              | 20 | 125 | 22 | 25 | TN.. 1604.. | 0,400 |       |   |
| 212026500  | 212037400 | PTGN R/L 2525 M16 | 25              | 25 | 150 | 22 | 32 | TN.. 1604.. | 0,750 |       |   |
| 212312400  | 212312500 | PTGN R/L 3225 P16 | 32              | 25 | 170 | 22 | 32 | TN.. 1604.. | 1,050 |       |   |
| 212032000  | 212032100 | PTGN R/L 2525 M22 | 25              | 25 | 150 | 28 | 32 | TN.. 2204.. | 0,750 |       |   |
| 212312600  | 212312700 | PTGN R/L 3225 P22 | 32              | 25 | 170 | 28 | 32 | TN.. 2204.. | 1,050 |       |   |
| 212058500  | 212312800 | PTGN R/L 3232 P22 | 32              | 32 | 170 | 28 | 40 | TN.. 2204.. | 1,300 |       |   |
| 212058600  | 212312900 | PTGN R/L 4040 S22 | 40              | 40 | 250 | 34 | 50 | TN.. 2204.. | 3,050 |       |   |
| 212066100  | 212313000 | PTGN R/L 3232 P27 | 32              | 32 | 170 | 42 | 40 | TN.. 2706.. | 1,300 |       |   |
| 212313100  | 212313200 | PTGN R/L 4040 S27 | 40              | 40 | 250 | 45 | 50 | TN.. 2706.. | 3,050 |       |   |
| 212250300  | 212313300 | PTGN R/L 5050 T33 | 50              | 50 | 300 | 45 | 60 | TN.. 3307.. | 5,850 |       |   |

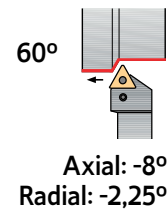
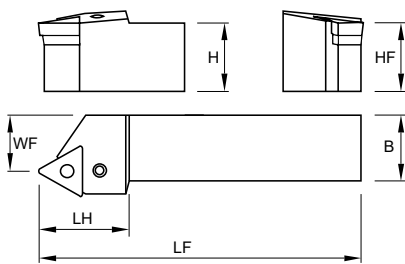
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PTGN R/L 1616 H16 |                  |          |                |         |             |        |
| PTGN R/L 1616 H16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTGN R/L 2020 K16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTGN R/L 2525 M16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTGN R/L 3225 P16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTGN R/L 2525 M22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTGN R/L 3225 P22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTGN R/L 3232 P22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTGN R/L 4040 S22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTGN R/L 3232 P27 | CT270500         | BE07000  | BF65012        | AN17200 | PA0802400   | SS30   |
| PTGN R/L 4040 S27 | CT270500         | BE07000  | BF65012        | AN17200 | PA0802400   | SS30   |
| PTGN R/L 5050 T33 | CT330500         | BE08301  | BF80012        | AN20800 | PA1002700   | SS40   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212313400  | 212313500 | PTTN R/L 1616 H16 | 16              | 16 | 100 | 25 | 13 | TN.. 1604.. | 0,250 | ⊗     | ⊗ |
| 212313600  | 212313700 | PTTN R/L 2020 K16 | 20              | 20 | 125 | 28 | 17 | TN.. 1604.. | 0,400 | ⊗     | ⊗ |
| 212313800  | 212313900 | PTTN R/L 2525 M16 | 25              | 25 | 150 | 28 | 22 | TN.. 1604.. | 0,750 | ⊗     | ⊗ |
| 212314000  | 212314100 | PTTN R/L 2525 M22 | 25              | 25 | 150 | 34 | 22 | TN.. 2204.. | 0,750 | ⊗     | ⊗ |
| 212314200  | 212314300 | PTTN R/L 3225 P22 | 32              | 25 | 170 | 34 | 22 | TN.. 2204.. | 1,050 | ⊗     | ⊗ |

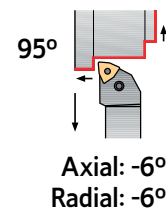
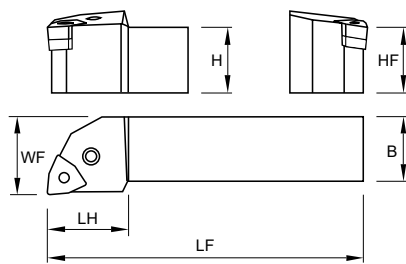
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PTTN R/L 1616 H16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTTN R/L 2020 K16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTTN R/L 2525 M16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PTTN R/L 2525 M22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PTTN R/L 3225 P22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |

## (P) LEVER LOCK TOOLHOLDERS

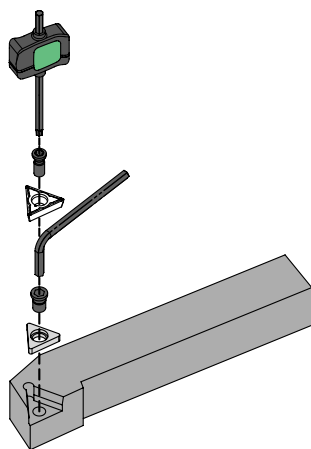


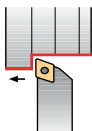
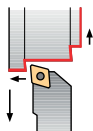
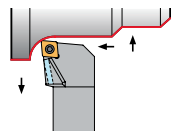
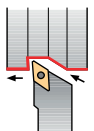
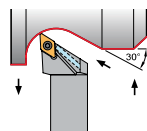
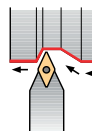
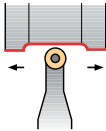
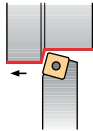
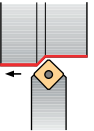
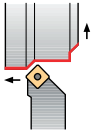
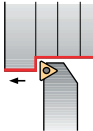
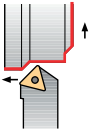
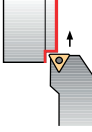
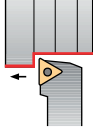
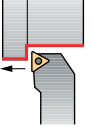
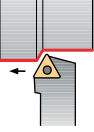
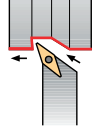
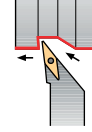
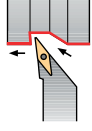
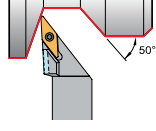
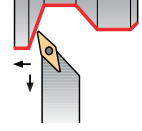
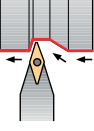
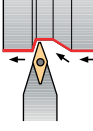
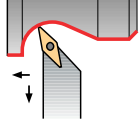
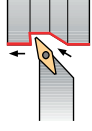
| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212314400  | 212314500 | PWLN R/L 1616 H06 | 16              | 16 | 100 | 15 | 20 | WN.. 0604.. | 0,250 | ⊗     | ⊗ |
| 212314600  | 212046500 | PWLN R/L 2020 K06 | 20              | 20 | 125 | 25 | 25 | WN.. 0604.. | 0,400 | ⊗     | ⊗ |
| 212314700  | 212314800 | PWLN R/L 2525 M06 | 25              | 25 | 150 | 25 | 32 | WN.. 0604.. | 0,750 | ⊗     | ⊗ |
| 212049300  | 212314900 | PWLN R/L 2020 K08 | 20              | 20 | 125 | 34 | 25 | WN.. 0804.. | 0,400 | ⊗     | ⊗ |
| 212052800  | 212079100 | PWLN R/L 2525 M08 | 25              | 25 | 150 | 34 | 32 | WN.. 0804.. | 0,750 | ⊗     | ⊗ |
| 212046600  | 212315000 | PWLN R/L 3225 P08 | 32              | 25 | 170 | 34 | 32 | WN.. 0804.. | 1,050 | ⊗     | ⊗ |
| 212058000  | 212315100 | PWLN R/L 3232 P08 | 32              | 32 | 170 | 34 | 40 | WN.. 0804.. | 1,300 | ⊗     | ⊗ |

## SPARE PARTS Acessórios | Repuestos

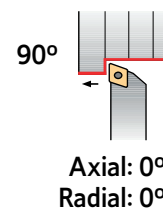
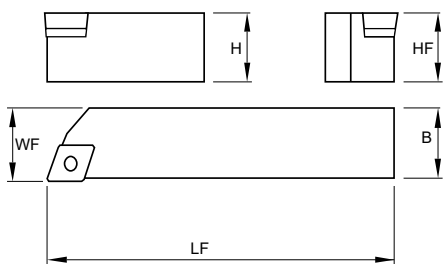
| Cutter Reference  | Order separately |          |                |         |             |        |
|-------------------|------------------|----------|----------------|---------|-------------|--------|
|                   | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| PWLN R/L 1616 H06 | CW060301         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PWLN R/L 2020 K06 | CW060301         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PWLN R/L 2525 M06 | CW060301         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| PWLN R/L 2020 K08 | CW080300         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PWLN R/L 2525 M08 | CW080300         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PWLN R/L 3225 P08 | CW080300         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| PWLN R/L 3232 P08 | CW080300         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |

# (S) CENTER SCREW SYSTEM



|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <p><b>SCAC 90°</b></p>  <p>PAGE C - 718 CC.. 0602..<br/>CC.. 09T3..<br/>CC.. 1204..</p>  | <p><b>SCLC 95°</b></p>  <p>PAGE C - 719 CC.. 0602..<br/>CC.. 09T3..<br/>CC.. 1204..</p>  | <p><b>NEW SCLC 95°-A</b></p>  <p>PAGE C - 720 CC.. 09T3..</p>                            | <p><b>SDJC 93°</b></p>  <p>PAGE C - 721 DC.. 0702..<br/>DC.. 11T3..</p>                  | <p><b>NEW SDJC 93°-A</b></p>  <p>PAGE C - 722 DC.. 11T3..</p>                            | <p><b>SDNC 62°30'</b></p>  <p>PAGE C - 723 DC.. 0702..<br/>DC.. 11T3..</p>               |
| <p><b>SRDC</b></p>  <p>PAGE C - 724 RC.. 0602M0..<br/>...<br/>RC.. 1204M0..</p>         | <p><b>SSBC 75°</b></p>  <p>PAGE C - 725 SC.. 09T3..<br/>SC.. 1204..</p>                 | <p><b>SSDC 45°</b></p>  <p>PAGE C - 726 SC.. 09T3..<br/>SC.. 1204..</p>                 | <p><b>SSSC 45°</b></p>  <p>PAGE C - 727 SC.. 09T3..<br/>SC.. 1204..</p>                 | <p><b>STAC 90°</b></p>  <p>PAGE C - 728 TC.. 0902..<br/>TC.. 1102..<br/>TC.. 16T3..</p> | <p><b>STDC 45°</b></p>  <p>PAGE C - 729 TC.. 0902..<br/>TC.. 1102..<br/>TC.. 16T3..</p> |
| <p><b>STFC 90°</b></p>  <p>PAGE C - 730 TC.. 0902..<br/>TC.. 1102..<br/>TC.. 16T3..</p> | <p><b>STGC 90°</b></p>  <p>PAGE C - 731 TC.. 0902..<br/>TC.. 1102..<br/>TC.. 16T3..</p> | <p><b>STJC 93°</b></p>  <p>PAGE C - 732 TC.. 0902..<br/>TC.. 1102..<br/>TC.. 16T3..</p> | <p><b>STTC 60°</b></p>  <p>PAGE C - 733 TC.. 0902..<br/>TC.. 1102..<br/>TC.. 16T3..</p> | <p><b>SVHC 107°30'</b></p>  <p>PAGE C - 734 VC.. 1604..</p>                             | <p><b>SVJB 93°</b></p>  <p>PAGE C - 734 VB.. 1604..</p>                                 |
| <p><b>SVJC 93°</b></p>  <p>PAGE C - 736 VC.. 1103..<br/>VC.. 1604..</p>                 | <p><b>NEW SVJC 93°-A</b></p>  <p>PAGE C - 737 VC.. 1604..</p>                           | <p><b>SVLC 95°</b></p>  <p>PAGE C - 738 VC.. 1303..</p>                                 | <p><b>SVVB 72°30'</b></p>  <p>PAGE C - 739 VB.. 1604..</p>                              | <p><b>SVVC 72°30'</b></p>  <p>PAGE C - 740 VC.. 1103..<br/>VC.. 1604..</p>              | <p><b>SVXC 113°</b></p>  <p>PAGE C - 741 VC.. 1803..</p>                                |
| <p><b>SVZC 100°</b></p>  <p>PAGE C - 742 VC.. 1604..</p>                                |  |  |  |  |  |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | WF   |             |       | R     | L |
| 212139500  | 212139400 | SCAC R/L 0808 D06 | 8               | 8  | 60  | 8,5  | CC.. 0602.. | 0,050 |       |   |
| 212139700  | 212139600 | SCAC R/L 1010 E06 | 10              | 10 | 70  | 10,5 | CC.. 0602.. | 0,070 |       |   |
| 212139900  | 212139800 | SCAC R/L 1212 F09 | 12              | 12 | 80  | 12,5 | CC.. 09T3.. | 0,100 |       |   |
| 212140100  | 212140000 | SCAC R/L 1616 H09 | 16              | 16 | 100 | 16,5 | CC.. 09T3.. | 0,200 |       |   |
| 212140300  | 212140200 | SCAC R/L 2020 K12 | 20              | 20 | 125 | 20,5 | CC.. 1204.. | 0,400 |       |   |
| 212140500  | 212140400 | SCAC R/L 2525 M12 | 25              | 25 | 150 | 25,5 | CC.. 1204.. | 0,700 |       |   |

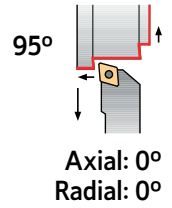
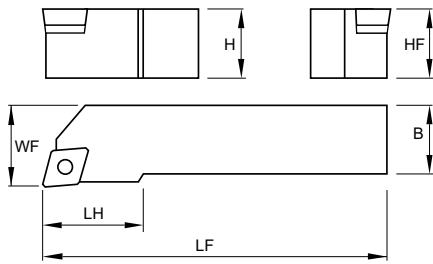
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SCAC R/L 0808 D06 | -        | -          | P0250700 | XT07     |
| SCAC R/L 1010 E06 | -        | -          | P0250700 | XT07     |
| SCAC R/L 1212 F09 | -        | -          | P0401100 | XT15-S35 |
| SCAC R/L 1616 H09 | -        | -          | P0401100 | XT15-S35 |
| SCAC R/L 2020 K12 | CC120401 | T06004000  | P0401400 | XT15-S40 |
| SCAC R/L 2525 M12 | CC120401 | T06004000  | P0401400 | XT15-S40 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212140700  | 212140600 | SCLC R/L 0808 D06 | 8               | 8  | 60  | 10 | 10 | CC.. 0602.. | 0,050 |       |   |
| 212045400  | 212140800 | SCLC R/L 1010 E06 | 10              | 10 | 70  | 10 | 12 | CC.. 0602.. | 0,070 |       |   |
| 212037100  | 212140900 | SCLC R/L 1212 F09 | 12              | 12 | 80  | 16 | 16 | CC.. 09T3.. | 0,100 |       |   |
| 212047600  | 212141000 | SCLC R/L 1616 H09 | 16              | 16 | 100 | 16 | 20 | CC.. 09T3.. | 0,200 |       |   |
| 212037500  | 212141100 | SCLC R/L 2020 K09 | 20              | 20 | 125 | 16 | 25 | CC.. 09T3.. | 0,400 |       |   |
| 212037700  | 212141200 | SCLC R/L 2020 K12 | 20              | 20 | 125 | 25 | 25 | CC.. 1204.. | 0,400 |       |   |
| 212037900  | 212141300 | SCLC R/L 2525 M12 | 25              | 25 | 150 | 25 | 32 | CC.. 1204.. | 0,700 |       |   |

Stock item | Produto de stock | Itens de stock

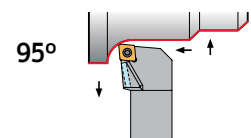
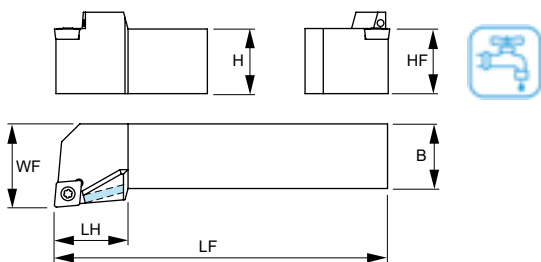
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SCLC R/L 0808 D06 | -        | -          | P0250700 | XT07     |
| SCLC R/L 1010 E06 | -        | -          | P025070  | XT07     |
| SCLC R/L 1212 F09 | -        | -          | P0401100 | XT15-S35 |
| SCLC R/L 1616 H09 | -        | -          | P0401100 | XT15-S35 |
| SCLC R/L 2020 K09 | -        | -          | P0401100 | XT15-S35 |
| SCLC R/L 2020 K12 | CC120401 | T06004000  | P0401400 | XT15-S40 |
| SCLC R/L 2525 M12 | CC120401 | T06004000  | P0401400 | XT15-S40 |



## (S) CENTER SCREW TOOLHOLDERS



Axial: 0°  
Radial: 0°

| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212471300  | 212471200 | SCLC R/L 2020 K09-A | 20              | 20 | 125 | 22 | 25 | CC.. 09T3.. | 0,400 | ○     | ○ |
| 212471400  | 212471100 | SCLC R/L 2525 M09-A | 25              | 25 | 125 | 28 | 32 | CC.. 09T3.. | 0,750 | ○     | ○ |

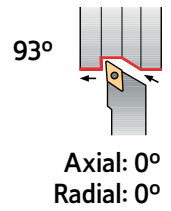
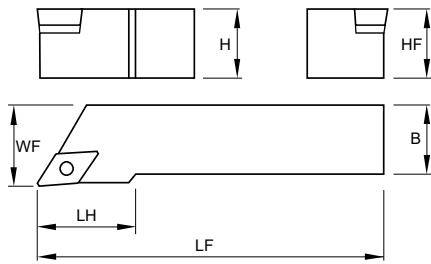
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Screw    | Wrench   | Cooling Screw 1 | Cooling Screw 2 | Cooling Screw 3 |
|---------------------|----------|----------|-----------------|-----------------|-----------------|
| SCLC R/L 2020 K09-A | P0401100 | XT15-S35 | H0600475        | H1000875        | T1000875        |
| SCLC R/L 2525 M09-A | P0401100 | XT15-S35 | H0600475        | H1000875        | T1000875        |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212143800  | 212143700 | SDJC R/L 1010 E07 | 10              | 10 | 70  | 16 | 12 | DC.. 0702.. | 0,070 | ⊗     | ⊗ |
| 212021500  | 212143900 | SDJC R/L 1212 F07 | 12              | 12 | 80  | 18 | 16 | DC.. 0702.. | 0,100 | ⊗     | ⊗ |
| 212420700  | 212420800 | SDJC R/L 1616 H07 | 16              | 16 | 100 | 16 | 20 | DC.. 0702.. | 0,150 | ⊗     | ○ |
| 212021600  | 212144000 | SDJC R/L 1212 F11 | 12              | 12 | 80  | 18 | 16 | DC.. 11T3.. | 0,100 | ⊗     | ⊗ |
| 212035100  | 212035200 | SDJC R/L 1616 H11 | 16              | 16 | 100 | 22 | 20 | DC.. 11T3.. | 0,200 | ⊗     | ⊗ |
| 212036200  | 212035300 | SDJC R/L 2020 K11 | 20              | 20 | 125 | 22 | 25 | DC.. 11T3.. | 0,400 | ⊗     | ⊗ |
| 212042600  | 212144100 | SDJC R/L 2525 M11 | 25              | 25 | 150 | 22 | 32 | DC.. 11T3.. | 0,700 | ⊗     | ⊗ |

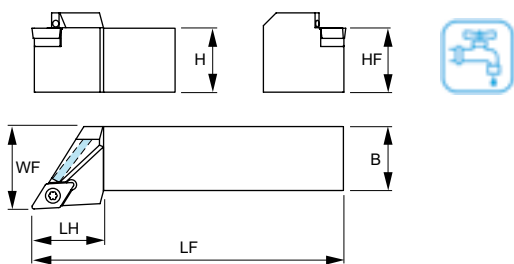
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

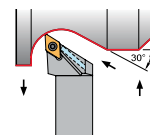
## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SDJC R/L 1010 E07 | -        | -          | P0250700 | XT07     |
| SDJC R/L 1212 F07 | -        | -          | P0250700 | XT07     |
| SDJC R/L 1616 H07 | -        | -          | P0250700 | XT07     |
| SDJC R/L 1212 F11 | -        | -          | P0401100 | XT15-S35 |
| SDJC R/L 1616 H11 | CD110301 | T05003500  | P0351500 | XT15-S35 |
| SDJC R/L 2020 K11 | CD110301 | T05003500  | P0351500 | XT15-S35 |
| SDJC R/L 2525 M11 | CD110301 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



93°










Axial: 0°  
Radial: 0°

| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212471700  | 212471500 | SDJC R/L 2020 K11-A | 20              | 20 | 125 | 22 | 25 | DC.. 11T3.. | 0,400 | ○     | ○ |
| 212471800  | 212471600 | SDJC R/L 2525 M11-A | 25              | 25 | 150 | 28 | 32 | DC.. 11T3.. | 0,750 | ○     | ○ |

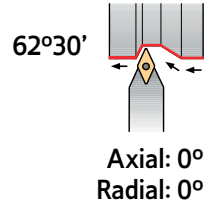
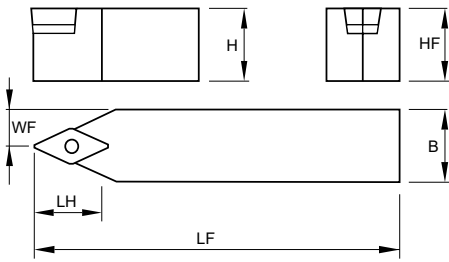
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim   | Shim Screw  | Screw  | Wrench   | Cooling Screw 1  | Cooling Screw 2  | Cooling Screw 3  |
|---------------------|--|---|--|--|--|--|--|
| SDJC R/L 2020 K11-A |  CD110301 |  T05003500 |  P0351500 |  XT15-S35 |  H0600475 |  H1000875 |  T1000875 |
| SDJC R/L 2525 M11-A | CD110301   | T05003500   | P0351500   | XT15-S35   | H0600475   | H1000875   | T1000875   |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code | Reference       | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|------|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF   |             |       |       |
| 212144200  | SDNC N 0808 D07 | 8               | 8  | 60  | 16 | 4,0  | DC.. 0702.. | 0,050 |       |
| 212144300  | SDNC N 1010 E07 | 10              | 10 | 70  | 16 | 5,0  | DC.. 0702.. | 0,070 |       |
| 212144400  | SDNC N 1212 F07 | 12              | 12 | 80  | 18 | 6,0  | DC.. 0702.. | 0,100 |       |
| 212259700  | SDNC N 1616 H11 | 16              | 16 | 100 | 22 | 8,0  | DC.. 11T3.. | 0,200 |       |
| 212144500  | SDNC N 2020 K11 | 20              | 20 | 125 | 22 | 10,0 | DC.. 11T3.. | 0,400 |       |
| 212259800  | SDNC N 2525 M11 | 25              | 25 | 150 | 22 | 12,5 | DC.. 11T3.. | 0,700 |       |

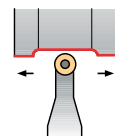
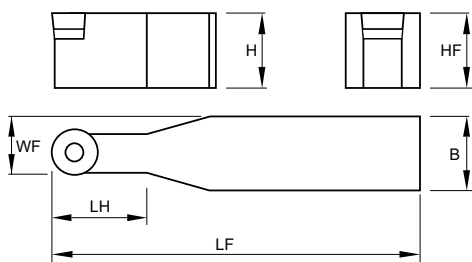
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| SDNC N 0808 D07  | -        | -          | P0250700 | XT07     |
| SDNC N 1010 E07  | -        | -          | P0250700 | XT07     |
| SDNC N 1212 F07  | -        | -          | P0250700 | XT07     |
| SDNC N 1616 H11  | CD110301 | T05003500  | P0351500 | XT15-S35 |
| SDNC N 2020 K11  | CD110301 | T05003500  | P0351500 | XT15-S35 |
| SDNC N 2525 M11  | CD110301 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



Axial: 0°  
Radial: 0°

| Order Code | Reference       | Dimensions (mm) |    |     |    |      | Insert      | Kg    | Stock |
|------------|-----------------|-----------------|----|-----|----|------|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF   |             |       |       |
| 212148500  | SRDC N 1010 E06 | 10              | 10 | 70  | 10 | 8,0  | RC.. 0602M0 | 0,070 | ☉     |
| 212148600  | SRDC N 1212 F06 | 12              | 12 | 80  | 12 | 11,0 | RC.. 0602M0 | 0,100 | ☉     |
| 212058700  | SRDC N 1616 H06 | 16              | 16 | 100 | 16 | 13,0 | RC.. 0602M0 | 0,200 | ☉     |
| 212053400  | SRDC N 2020 K06 | 20              | 20 | 125 | 20 | 15,0 | RC.. 0602M0 | 0,400 | ☉     |
| 212040000  | SRDC N 2525 M06 | 25              | 25 | 150 | 25 | 17,5 | RC.. 0602M0 | 0,700 | ☉     |
| 212148700  | SRDC N 1616 H08 | 16              | 16 | 100 | 16 | 13,0 | RC.. 0803M0 | 0,200 | ☉     |
| 212024400  | SRDC N 2020 K08 | 20              | 20 | 125 | 20 | 15,0 | RC.. 0803M0 | 0,400 | ☉     |
| 212148800  | SRDC N 2525 M08 | 25              | 25 | 150 | 25 | 17,5 | RC.. 0803M0 | 0,700 | ☉     |
| 212049500  | SRDC N 2020 K10 | 20              | 20 | 125 | 22 | 15,0 | RC.. 10T3M0 | 0,400 | ☉     |
| 212040100  | SRDC N 2525 M10 | 25              | 25 | 150 | 22 | 17,5 | RC.. 10T3M0 | 0,700 | ☉     |
| 212259900  | SRDC N 2020 K12 | 20              | 20 | 125 | 28 | 16,0 | RC.. 1204M0 | 0,400 | ☉     |
| 212050800  | SRDC N 2525 M12 | 25              | 25 | 150 | 28 | 18,5 | RC.. 1204M0 | 0,700 | ☉     |
| 212058800  | SRDC N 3225 P12 | 32              | 25 | 170 | 28 | 18,5 | RC.. 1204M0 | 0,900 | ☉     |
| 212148900  | SRDC N 3232 P12 | 32              | 32 | 170 | 28 | 22,0 | RC.. 1204M0 | 1,200 | ☉     |

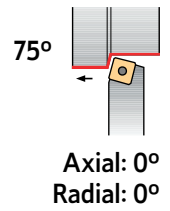
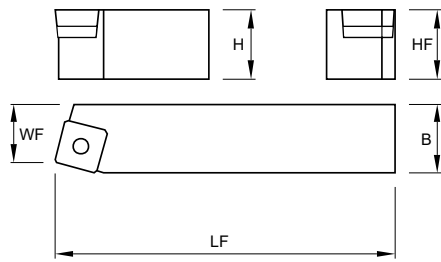
☉ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| SRDC N 1010 E06  | -        | -          | P0250700 | XT07     |
| SRDC N 1212 F06  | -        | -          | P0250700 | XT07     |
| SRDC N 1616 H06  | -        | -          | P0250700 | XT07     |
| SRDC N 2020 K06  | -        | -          | P0250700 | XT07     |
| SRDC N 2525 M06  | -        | -          | P0250700 | XT07     |
| SRDC N 1616 H08  | -        | -          | P0300900 | XT08     |
| SRDC N 2020 K08  | -        | -          | P0300900 | XT08     |
| SRDC N 2525 M08  | -        | -          | P0300900 | XT08     |
| SRDC N 2020 K10  | CR100301 | T05003500  | P0351500 | XT15-S35 |
| SRDC N 2525 M10  | CR100301 | T05003500  | P0351500 | XT15-S35 |
| SRDC N 2020 K12  | CR120301 | T05003500  | P0351500 | XT15-S35 |
| SRDC N 2525 M12  | CR120301 | T05003500  | P0351500 | XT15-S35 |
| SRDC N 3225 P12  | CR120301 | T05003500  | P0351500 | XT15-S35 |
| SRDC N 3232 P12  | CR120301 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | WF |             |       | R     | L |
| 212149100  | 212149000 | SSBC R/L 1212 F09 | 12              | 12 | 80  | 11 | SC.. 09T3.. | 0,100 |       |   |
| 212045700  | 212149200 | SSBC R/L 1616 H09 | 16              | 16 | 100 | 13 | SC.. 09T3.. | 0,200 |       |   |
| 212149400  | 212149300 | SSBC R/L 2020 K12 | 20              | 20 | 125 | 17 | SC.. 1204.. | 0,400 |       |   |
| 212149600  | 212149500 | SSBC R/L 2525 M12 | 25              | 25 | 150 | 22 | SC.. 1204.. | 0,700 |       |   |

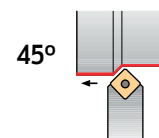
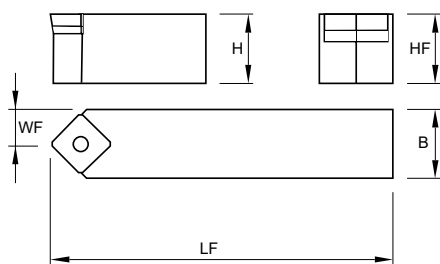
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SSBC R/L 1212 F09 | -        | -          | P0401100 | XT15-S35 |
| SSBC R/L 1616 H09 | -        | -          | P0401100 | XT15-S35 |
| SSBC R/L 2020 K12 | CS120400 | T06004000  | P0401400 | XT15-S40 |
| SSBC R/L 2525 M12 | CS120400 | T06004000  | P0401400 | XT15-S40 |

## (S) CENTER SCREW TOOLHOLDERS



Axial: 0°  
Radial: 0°

| Order Code | Reference       | Dimensions (mm) |    |     |      | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|------|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | WF   |             |       |       |
| 212149700  | SSDC N 1212 F09 | 12              | 12 | 80  | 6,0  | SC.. 09T3.. | 0,100 | ⊗     |
| 212050900  | SSDC N 1616 H09 | 16              | 16 | 100 | 8,0  | SC.. 09T3.. | 0,200 | ⊗     |
| 212046000  | SSDC N 2020 K12 | 20              | 20 | 125 | 10,0 | SC.. 1204.. | 0,400 | ⊗     |
| 212076800  | SSDC N 2525 M12 | 25              | 25 | 150 | 12,5 | SC.. 1204.. | 0,700 | ⊗     |

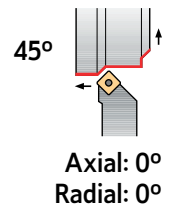
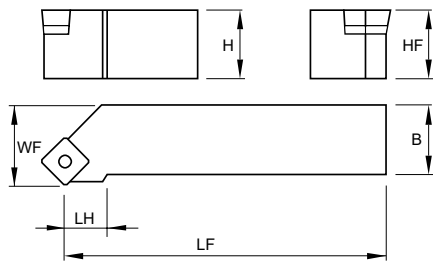
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| SSDC N 1212 F09  | -        | -          | P0401100 | XT15-S35 |
| SSDC N 1616 H09  | -        | -          | P0401100 | XT15-S35 |
| SSDC N 2020 K12  | CS120400 | T06004000  | P0401400 | XT15-S40 |
| SSDC N 2525 M12  | CS120400 | T06004000  | P0401400 | XT15-S40 |

## (S) CENTER SCREW TOOLHOLDERS



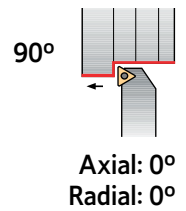
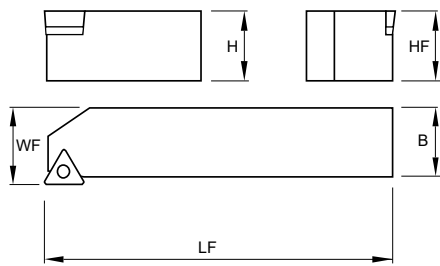
| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212149900  | 212149800 | SSSC R/L 1212 F09 | 12              | 12 | 80  | 11 | 16 | SC.. 09T3.. | 0,100 |       |   |
| 212150100  | 212150000 | SSSC R/L 1616 H09 | 16              | 16 | 100 | 22 | 20 | SC.. 09T3.. | 0,200 |       |   |
| 212021900  | 212150200 | SSSC R/L 2020 K12 | 20              | 20 | 125 | 22 | 25 | SC.. 1204.. | 0,400 |       |   |
| 212042700  | 212021800 | SSSC R/L 2525 M12 | 25              | 25 | 150 | 22 | 32 | SC.. 1204.. | 0,700 |       |   |

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SSSC R/L 1212 F09 | -        | -          | P0401100 | XT15-S35 |
| SSSC R/L 1616 H09 | -        | -          | P0401100 | XT15-S35 |
| SSSC R/L 2020 K12 | CS120400 | T06004000  | P0401400 | XT15-S40 |
| SSSC R/L 2525 M12 | CS120400 | T06004000  | P0401400 | XT15-S40 |



## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |      | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|------|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | WF   |             |       | R     | L |
| 212151400  | 212151300 | STAC R/L 0808 D09 | 8               | 8  | 60  | 8,5  | TC.. 0902.. | 0,050 |       |   |
| 212151600  | 212151500 | STAC R/L 1010 E09 | 10              | 10 | 70  | 10,5 | TC.. 0902.. | 0,070 |       |   |
| 212151800  | 212151700 | STAC R/L 1212 F11 | 12              | 12 | 80  | 12,5 | TC.. 1102.. | 0,100 |       |   |
| 212152000  | 212151900 | STAC R/L 1616 H11 | 16              | 16 | 100 | 16,5 | TC.. 1102.. | 0,200 |       |   |
| 212152200  | 212152100 | STAC R/L 1616 H16 | 16              | 16 | 100 | 16,5 | TC.. 16T3.. | 0,200 |       |   |
| 212260000  | 212260100 | STAC R/L 2020 K16 | 20              | 20 | 125 | 20,5 | TC.. 16T3.. | 0,400 |       |   |
| 212152600  | 212152400 | STAC R/L 2525 M16 | 25              | 25 | 150 | 25,5 | TC.. 16T3.. | 0,700 |       |   |

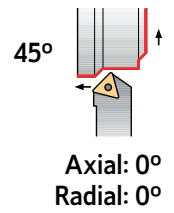
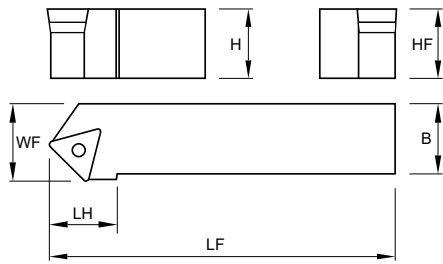
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| STAC R/L 0808 D09 | -        | -          | P0220600 | XT06     |
| STAC R/L 1010 E09 | -        | -          | P0220600 | XT06     |
| STAC R/L 1212 F11 | -        | -          | P0250700 | XT07     |
| STAC R/L 1616 H11 | -        | -          | P0250700 | XT07     |
| STAC R/L 1616 H16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STAC R/L 2020 K16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STAC R/L 2525 M16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212152800  | 212152700 | STDC R/L 0808 D09 | 8               | 8  | 60  | 11 | 10 | TC.. 0902.. | 0,050 |       |   |
| 212153000  | 212152900 | STDC R/L 1010 E09 | 10              | 10 | 70  | 11 | 11 | TC.. 0902.. | 0,070 |       |   |
| 212153200  | 212153100 | STDC R/L 1212 F11 | 12              | 12 | 80  | 16 | 13 | TC.. 1102.. | 0,100 |       |   |
| 212153400  | 212153300 | STDC R/L 1616 H11 | 16              | 16 | 100 | 16 | 17 | TC.. 1102.. | 0,200 |       |   |
| 212153600  | 212153500 | STDC R/L 1212 F16 | 12              | 12 | 80  | 21 | 17 | TC.. 16T3.. | 0,100 |       |   |
| 212153800  | 212153700 | STDC R/L 1616 H16 | 16              | 16 | 100 | 21 | 17 | TC.. 16T3.. | 0,200 |       |   |
| 212154000  | 212153900 | STDC R/L 2020 K16 | 20              | 20 | 125 | 21 | 22 | TC.. 16T3.. | 0,400 |       |   |
| 212154200  | 212154100 | STDC R/L 2525 M16 | 25              | 25 | 150 | 21 | 27 | TC.. 16T3.. | 0,700 |       |   |

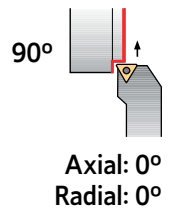
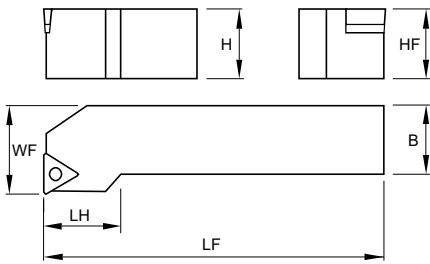
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| STDC R/L 0808 D09 | -        | -          | P0220600 | XT06     |
| STDC R/L 1010 E09 | -        | -          | P0220600 | XT06     |
| STDC R/L 1212 F11 | -        | -          | P0250700 | XT07     |
| STDC R/L 1616 H11 | -        | -          | P0250700 | XT07     |
| STDC R/L 1212 F16 | -        | -          | P0401100 | XT15-S35 |
| STDC R/L 1616 H16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STDC R/L 2020 K16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STDC R/L 2525 M16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212154400  | 212154300 | STFC R/L 0808 D09 | 8               | 8  | 60  | 16 | 10 | TC.. 0902.. | 0,050 |       |   |
| 212154600  | 212154500 | STFC R/L 1010 E09 | 10              | 10 | 70  | 16 | 12 | TC.. 0902.. | 0,070 |       |   |
| 212154800  | 212154700 | STFC R/L 1212 F11 | 12              | 12 | 80  | 18 | 16 | TC.. 1102.. | 0,100 |       |   |
| 212065800  | 212154900 | STFC R/L 1616 H11 | 16              | 16 | 100 | 22 | 20 | TC.. 1102.. | 0,200 |       |   |
| 212155100  | 212155000 | STFC R/L 1212 F16 | 12              | 12 | 80  | 18 | 16 | TC.. 16T3.. | 0,100 |       |   |
| 212056800  | 212155200 | STFC R/L 1616 H16 | 16              | 16 | 100 | 22 | 20 | TC.. 16T3.. | 0,200 |       |   |
| 212056600  | 212155300 | STFC R/L 2020 K16 | 20              | 20 | 125 | 22 | 25 | TC.. 16T3.. | 0,400 |       |   |
| 212155500  | 212155400 | STFC R/L 2525 M16 | 25              | 25 | 150 | 22 | 32 | TC.. 16T3.. | 0,700 |       |   |

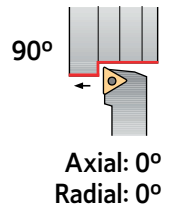
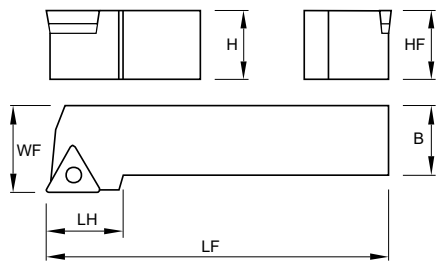
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| STFC R/L 0808 D09 | -        | -          | P0220600 | XT06     |
| STFC R/L 1010 E09 | -        | -          | P0220600 | XT06     |
| STFC R/L 1212 F11 | -        | -          | P0250700 | XT07     |
| STFC R/L 1616 H11 | -        | -          | P0250700 | XT07     |
| STFC R/L 1212 F16 | -        | -          | P0401100 | XT15-S35 |
| STFC R/L 1616 H16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STFC R/L 2020 K16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STFC R/L 2525 M16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212155700  | 212155600 | STGC R/L 0808 D09 | 8               | 8  | 60  | 16 | 10 | TC.. 0902.. | 0,050 |       |   |
| 212155900  | 212155800 | STGC R/L 1010 E09 | 10              | 10 | 70  | 16 | 12 | TC.. 0902.. | 0,070 |       |   |
| 212156100  | 212156000 | STGC R/L 1212 F11 | 12              | 12 | 80  | 18 | 16 | TC.. 1102.. | 0,100 |       |   |
| 212046100  | 212156200 | STGC R/L 1616 H11 | 16              | 16 | 100 | 22 | 20 | TC.. 1102.. | 0,200 |       |   |
| 212156400  | 212156300 | STGC R/L 1212 F16 | 12              | 12 | 80  | 18 | 16 | TC.. 16T3.. | 0,100 |       |   |
| 212156600  | 212156500 | STGC R/L 1616 H16 | 16              | 16 | 100 | 22 | 20 | TC.. 16T3.. | 0,200 |       |   |
| 212156800  | 212156700 | STGC R/L 2020 K16 | 20              | 20 | 125 | 22 | 25 | TC.. 16T3.. | 0,400 |       |   |
| 212157000  | 212156900 | STGC R/L 2525 M16 | 25              | 25 | 150 | 22 | 32 | TC.. 16T3.. | 0,700 |       |   |

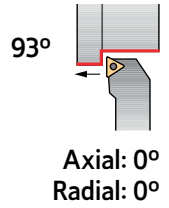
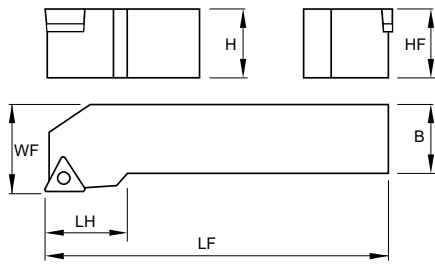
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| STGC R/L 0808 D09 | -        | -          | P0220600 | XT06     |
| STGC R/L 1010 E09 | -        | -          | P0220600 | XT06     |
| STGC R/L 1212 F11 | -        | -          | P0250700 | XT07     |
| STGC R/L 1616 H11 | -        | -          | P0250700 | XT07     |
| STGC R/L 1212 F16 | -        | -          | P0401100 | XT15-S35 |
| STGC R/L 1616 H16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STGC R/L 2020 K16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STGC R/L 2525 M16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212157200  | 212157100 | STJC R/L 0808 D09 | 8               | 8  | 60  | 16 | 10 | TC.. 0902.. | 0,050 |       |   |
| 212157400  | 212157300 | STJC R/L 1010 E09 | 10              | 10 | 70  | 16 | 12 | TC.. 0902.. | 0,070 |       |   |
| 212157600  | 212157500 | STJC R/L 1212 F11 | 12              | 12 | 80  | 18 | 16 | TC.. 1102.. | 0,100 |       |   |
| 212035400  | 212035500 | STJC R/L 1616 H11 | 16              | 16 | 100 | 22 | 20 | TC.. 1102.. | 0,200 |       |   |
| 212157800  | 212157700 | STJC R/L 1212 F16 | 12              | 12 | 80  | 18 | 16 | TC.. 16T3.. | 0,100 |       |   |
| 212035600  | 212035700 | STJC R/L 1616 H16 | 16              | 16 | 100 | 22 | 20 | TC.. 16T3.. | 0,200 |       |   |
| 212036300  | 212031000 | STJC R/L 2020 K16 | 20              | 20 | 125 | 22 | 25 | TC.. 16T3.. | 0,400 |       |   |
| 212038600  | 212038700 | STJC R/L 2525 M16 | 25              | 25 | 150 | 22 | 32 | TC.. 16T3.. | 0,700 |       |   |

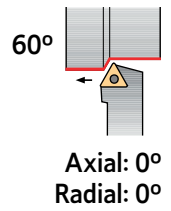
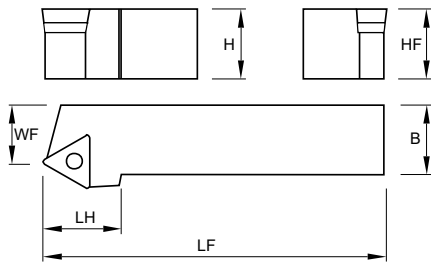
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| STJC R/L 0808 D09 | -        | -          | P0220600 | XT06     |
| STJC R/L 1010 E09 | -        | -          | P0220600 | XT06     |
| STJC R/L 1212 F11 | -        | -          | P0250700 | XT07     |
| STJC R/L 1616 H11 | -        | -          | P0250700 | XT07     |
| STJC R/L 1212 F16 | -        | -          | P0401100 | XT15-S35 |
| STJC R/L 1616 H16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STJC R/L 2020 K16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STJC R/L 2525 M16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212158000  | 212157900 | STTC R/L 0808 D09 | 8               | 8  | 60  | 16 | 7  | TC.. 0902.. | 0,050 |       |   |
| 212158200  | 212158100 | STTC R/L 1010 E09 | 10              | 10 | 70  | 16 | 9  | TC.. 0902.. | 0,070 |       |   |
| 212158400  | 212158300 | STTC R/L 1212 F11 | 12              | 12 | 80  | 18 | 11 | TC.. 1102.. | 0,100 |       |   |
| 212047500  | 212158500 | STTC R/L 1616 H11 | 16              | 16 | 100 | 18 | 13 | TC.. 1102.. | 0,200 |       |   |
| 212158700  | 212158600 | STTC R/L 1212 F16 | 12              | 12 | 80  | 22 | 11 | TC.. 16T3.. | 0,100 |       |   |
| 212158900  | 212158800 | STTC R/L 1616 H16 | 16              | 16 | 100 | 22 | 13 | TC.. 16T3.. | 0,200 |       |   |
| 212159100  | 212159000 | STTC R/L 2020 K16 | 20              | 20 | 125 | 22 | 17 | TC.. 16T3.. | 0,400 |       |   |
| 212159300  | 212159200 | STTC R/L 2525 M16 | 25              | 25 | 150 | 22 | 22 | TC.. 16T3.. | 0,700 |       |   |

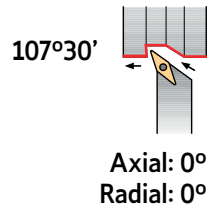
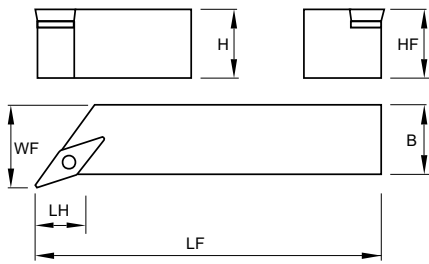
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| STTC R/L 0808 D09 | -        | -          | P0220600 | XT06     |
| STTC R/L 1010 E09 | -        | -          | P0220600 | XT06     |
| STTC R/L 1212 F11 | -        | -          | P0250700 | XT07     |
| STTC R/L 1616 H11 | -        | -          | P0250700 | XT07     |
| STTC R/L 1212 F16 | -        | -          | P0401100 | XT15-S35 |
| STTC R/L 1616 H16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STTC R/L 2020 K16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| STTC R/L 2525 M16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |      |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|------|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH   | WF |             |       | R     | L |
| 212161000  | 212160900 | SVHC R/L 2020 K16 | 20              | 20 | 125 | 15,4 | 25 | VC.. 1604.. | 0,400 |       |   |
| 212161200  | 212161100 | SVHC R/L 2525 M16 | 25              | 25 | 150 | 21,0 | 32 | VC.. 1604.. | 0,700 |       |   |
| 212161400  | 212161300 | SVHC R/L 3225 P16 | 32              | 25 | 170 | 21,0 | 32 | VC.. 1604.. | 0,900 |       |   |
| 212161500  | 212161600 | SVHC R/L 2525 M22 | 25              | 25 | 150 | 19,6 | 32 | VC.. 2205.. | 0,700 |       |   |
| 212161700  | 212161800 | SVHC R/L 3225 P22 | 32              | 25 | 170 | 19,6 | 32 | VC.. 2205.. | 0,900 |       |   |

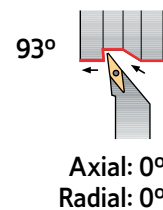
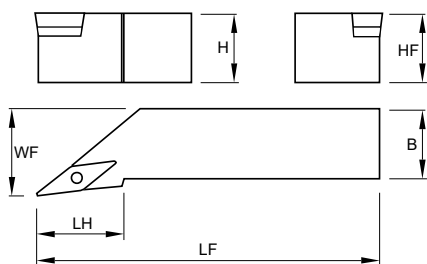
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SVHC R/L 2020 K16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVHC R/L 2525 M16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVHC R/L 3225 P16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVHC R/L 2525 M22 | CV220400 | T06004000  | P0401400 | XT20-S40 |
| SVHC R/L 3225 P22 | CV220400 | T06004000  | P0401400 | XT20-S40 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212055300  | 212363000 | SVJB R/L 2020 K16 | 20              | 20 | 125 | 37 | 25 | VB.. 1604.. | 0,400 | ⊗     | ⊗ |
| 212022200  | 212022000 | SVJB R/L 2525 M16 | 25              | 25 | 150 | 37 | 32 | VB.. 1604.. | 0,700 | ⊗     | ⊗ |
| 212022300  | 212022100 | SVJB R/L 3225 P16 | 32              | 25 | 170 | 37 | 32 | VB.. 1604.. | 0,900 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

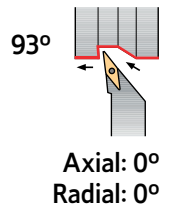
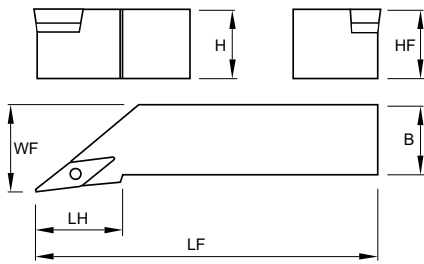
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SVJB R/L 2020 K16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVJB R/L 2525 M16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVJB R/L 3225 P16 | CV160300 | T05003500  | P0351500 | XT15-S35 |



## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212161900  | 212162000 | SVJC R/L 1212 F11 | 12              | 12 | 80  | 25 | 16 | VC.. 1103.. | 0,100 |       |   |
| 212056400  | 212162100 | SVJC R/L 1616 H11 | 16              | 16 | 100 | 25 | 20 | VC.. 1103.. | 0,200 |       |   |
| 212162200  | 212162300 | SVJC R/L 2020 K11 | 20              | 20 | 125 | 25 | 25 | VC.. 1103.. | 0,400 |       |   |
| 212392400  | 212420900 | SVJC R/L 2525 M11 | 25              | 25 | 150 | 28 | 32 | VC.. 1103.. | 0,700 |       |   |
| 212031100  | 212031200 | SVJC R/L 2020 K16 | 20              | 20 | 125 | 37 | 25 | VC.. 1604.. | 0,400 |       |   |
| 212031300  | 212031400 | SVJC R/L 2525 M16 | 25              | 25 | 150 | 37 | 32 | VC.. 1604.. | 0,700 |       |   |
| 212162500  | 212162400 | SVJC R/L 3225 P16 | 32              | 25 | 170 | 37 | 32 | VC.. 1604.. | 0,900 |       |   |

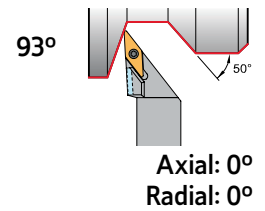
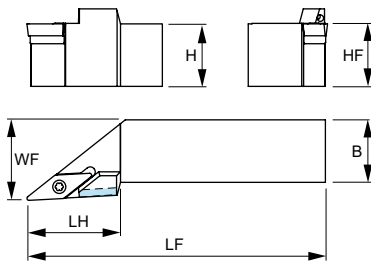
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SVJC R/L 1212 F11 | -        | -          | P0250700 | XT07     |
| SVJC R/L 1616 H11 | -        | -          | P0250700 | XT07     |
| SVJC R/L 2020 K11 | -        | -          | P0250700 | XT07     |
| SVJC R/L 2525 M11 | -        | -          | P0250700 | XT07     |
| SVJC R/L 2020 K16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVJC R/L 2525 M16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVJC R/L 3225 P16 | CV160300 | T05003500  | P0351500 | XT15-S35 |

(S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference           | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                     | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212472100  | 212471900 | SVJC R/L 2020 K11-A | 20              | 20 | 125 | 34 | 25 | VC.. 1103.. | 0,400 | ○     | ○ |
| 212472200  | 212472000 | SVJC R/L 2525 M16-A | 25              | 25 | 150 | 34 | 32 | VC.. 1604.. | 0,700 | ○     | ○ |

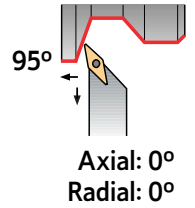
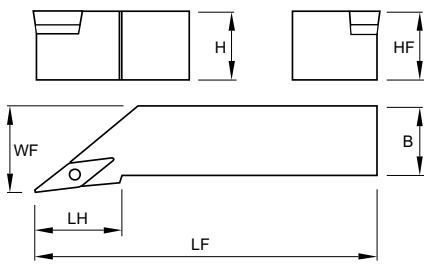
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

**SPARE PARTS** Acessórios | Repuestos

| Cutter Reference    | Shim     | Shim Screw | Screw    | Wrench  | Cooling Screw 1 | Cooling Screw 2 | Cooling Screw 3 |
|---------------------|----------|------------|----------|---------|-----------------|-----------------|-----------------|
| SVJC R/L 2020 K11-A | -        | -          | P0250700 | XT07    | H0600475        | H1000875        | T1000875        |
| SVJC R/L 2525 M16-A | CV160300 | T05003500  | P0351500 | XT15-35 | H0600475        | H1000875        | T1000875        |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212041900  | 212162600 | SVLC R/L 1212 G13 | 12              | 12 | 90  | 25 | 16 | VCGT 1303.. | 0,100 |       |   |
| 212162800  | 212162700 | SVLC R/L 1616 H13 | 16              | 16 | 100 | 25 | 20 | VCGT 1303.. | 0,200 |       |   |
| 212163000  | 212162900 | SVLC R/L 2020 K13 | 20              | 20 | 125 | 28 | 25 | VCGT 1303.. | 0,400 |       |   |
| 212163200  | 212163100 | SVLC R/L 2525 M13 | 25              | 25 | 150 | 30 | 32 | VCGT 1303.. | 0,700 |       |   |

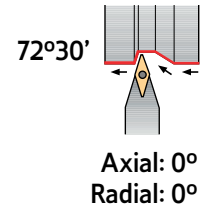
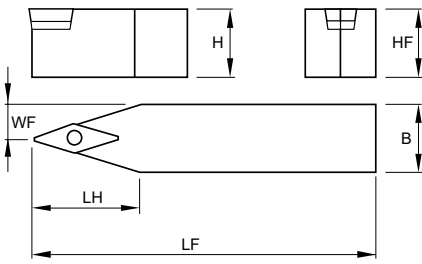
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw    | Wrench |
|-------------------|----------|--------|
|                   |          |        |
| SVLC R/L 1212 G13 | P0300900 | XT08   |
| SVLC R/L 1616 H13 | P0300900 | XT08   |
| SVLC R/L 2020 K13 | P0300900 | XT08   |
| SVLC R/L 2525 M13 | P0300900 | XT08   |

## (S) CENTER SCREW TOOLHOLDERS







| Order Code | Reference       | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|------|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF   |             |       |       |
| 212260200  | SVVB N 2020 K16 | 20              | 20 | 125 | 37 | 10,6 | VB.. 1604.. | 0,400 | ⊗     |
| 212169500  | SVVB N 2525 M16 | 25              | 25 | 150 | 37 | 13,1 | VB.. 1604.. | 0,700 | ⊗     |
| 212260300  | SVVB N 3225 P16 | 32              | 25 | 170 | 37 | 13,1 | VB.. 1604.. | 0,900 | ⊗     |

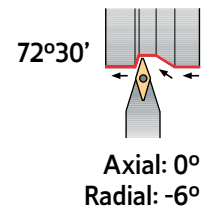
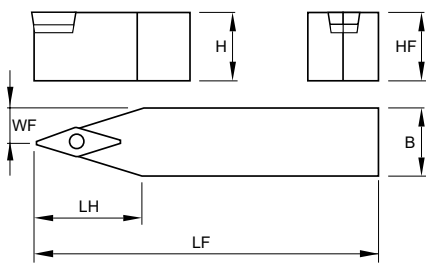
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim   | Shim Screw  | Screw  | Wrench   |
|------------------|--|---|--|--|
| SVVB N 2020 K16  |  CV160300 |  T05003500 |  P0351500 |  XT15-S35 |
| SVVB N 2525 M16  | CV160300   | T05003500   | P0351500   | XT15-S35   |
| SVVB N 3225 P16  | CV160300   | T05003500   | P0351500   | XT15-S35   |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code | Reference       | Dimensions (mm) |    |     |    |      | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|------|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF   |             |       |       |
| 212163300  | SVVC N 1212 F11 | 12              | 12 | 80  | 25 | 6,6  | VC.. 1103.. | 0,100 | ☉     |
| 212163400  | SVVC N 1616 H11 | 16              | 16 | 100 | 25 | 8,6  | VC.. 1103.. | 0,200 | ☉     |
| 212163500  | SVVC N 2020 K11 | 20              | 20 | 125 | 25 | 10,6 | VC.. 1103.. | 0,400 | ☉     |
| 212042500  | SVVC N 2020 K16 | 20              | 20 | 125 | 37 | 10,6 | VC.. 1604.. | 0,400 | ☉     |
| 212163600  | SVVC N 2525 M16 | 25              | 25 | 150 | 37 | 13,1 | VC.. 1604.. | 0,700 | ☉     |
| 212022400  | SVVC N 3225 P16 | 32              | 25 | 170 | 37 | 13,1 | VC.. 1604.. | 0,900 | ☉     |

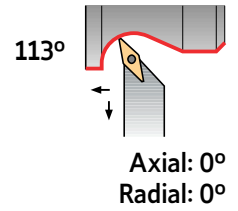
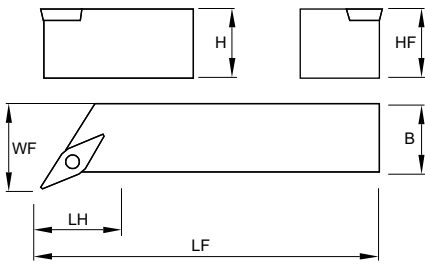
☉ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| SVVC N 1212 F11  | -        | -          | P0250700 | XT07     |
| SVVC N 1616 H11  | -        | -          | P0250700 | XT07     |
| SVVC N 2020 K11  | -        | -          | P0250700 | XT07     |
| SVVC N 2020 K16  | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVVC N 2525 M16  | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVVC N 3225 P16  | CV160300 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |      |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|------|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH   | WF |             |       | R     | L |
| 212163800  | 212163700 | SVXC R/L 1212 G13 | 12              | 12 | 90  | 11,5 | 16 | VCGT 1303.. | 0,100 |       |   |
| 212164000  | 212163900 | SVXC R/L 1616 H13 | 16              | 16 | 100 | 13,8 | 20 | VCGT 1303.. | 0,200 |       |   |
| 212164200  | 212164100 | SVXC R/L 2020 K13 | 20              | 20 | 125 | 10,4 | 25 | VCGT 1303.. | 0,400 |       |   |
| 212164400  | 212164300 | SVXC R/L 2525 M13 | 25              | 25 | 150 | 20,2 | 32 | VCGT 1303.. | 0,700 |       |   |

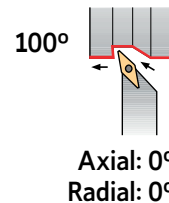
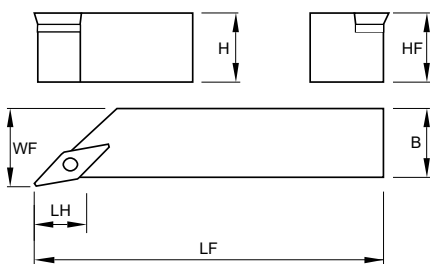
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw    | Wrench |
|-------------------|----------|--------|
|                   |          |        |
| SVXC R/L 1212 G13 | P0300900 | XT08   |
| SVXC R/L 1616 H13 | P0300900 | XT08   |
| SVXC R/L 2020 K13 | P0300900 | XT08   |
| SVXC R/L 2525 M13 | P0300900 | XT08   |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |      |    | Insert     | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|------|----|------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH   | WF |            |       | R     | L |
| 212164600  | 212164500 | SVZC R/L 2020 K16 | 20              | 20 | 125 | 25,7 | 25 | VC..1604.. | 0,400 |       |   |
| 212164700  | 212044500 | SVZC R/L 2525 M16 | 25              | 25 | 150 | 28,5 | 32 | VC..1604.. | 0,700 |       |   |
| 212164900  | 212164800 | SVZC R/L 3225 P16 | 32              | 25 | 170 | 28,5 | 32 | VC..1604.. | 0,900 |       |   |

Stock item | Produto de stock | Itens de stock

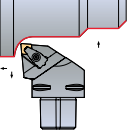
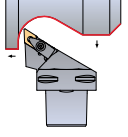
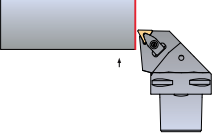
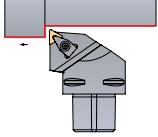
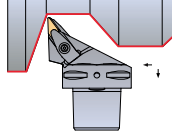
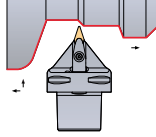
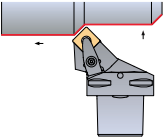
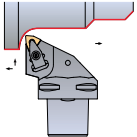
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| SVZC R/L 2020 K16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVZC R/L 2525 M16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| SVZC R/L 3225 P16 | CV160300 | T05003500  | P0351500 | XT15-S35 |

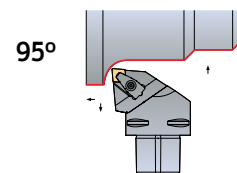
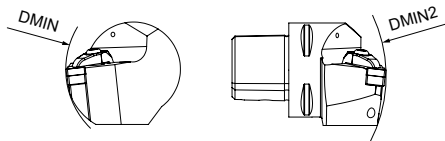
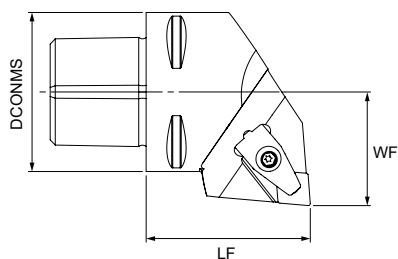
# NEW PSC SYSTEM - (D) DIMPLE LOCK SYSTEM



|  |   |  |  |   |   |
|--|---|--|--|---|---|
| <p><b>NEW DCLN 95°</b></p>  <p>CN.. 0903..<br/>CN.. 1204..<br/>CN.. 1606..<br/>CN.. 1906..</p> <p>PAGE C - 744</p> | <p><b>NEW DDJN 93°</b></p>  <p>DN.. 1104..<br/>DN.. 1506..</p> <p>PAGE C - 745</p>      | <p><b>NEW DTFN 90°</b></p>  <p>TN.. 1604..<br/>TN.. 2204..</p> <p>PAGE C - 746</p> | <p><b>NEW DTGN 90°</b></p>  <p>TNM.. 1604..<br/>TNM.. 2204..</p> <p>PAGE C - 747</p> | <p><b>NEW DVJN93°</b></p>  <p>VN.. 1604..</p> <p>PAGE C - 748</p> | <p><b>NEW DVVN 72°30'</b></p>  <p>VN.. 1604..</p> <p>PAGE C - 749</p> |
| <p><b>NEW DSSN 45°</b></p>  <p>SNM.. 1204..<br/>SNM.. 1506..<br/>SNM.. 1906..</p> <p>PAGE C - 750</p>             | <p><b>NEW DWLN 95°</b></p>  <p>WNMG.. 0604..<br/>WNMG.. 0806..</p> <p>PAGE C - 751</p> |  |  |   |   |



## (D) DIMPLE LOCK TOOLHOLDERS



Axial: -6°  
Radial: -6°

| Order Code |           | Reference               | Dimensions (mm) |      |       |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------------|-----------------|------|-------|----|----|-------------|-------|-------|---|
| R          | L         |                         | DCONMS          | DMIN | DMIN2 | WF | LF |             |       | R     | L |
| 212432600  | 212432700 | PSC32-DCLN R/L 22040-09 | 32              | 60   | 116   | 22 | 40 | CN.. 0903.. | 0,210 | ○     | ○ |
| 212432800  | 212432900 | PSC40-DCLN R/L 27050-09 | 40              | 60   | 140   | 27 | 50 | CN.. 0903.. | 0,420 | ○     | ○ |
| 212433000  | 212433100 | PSC32-DCLN R/L 22045-12 | 32              | 60   | 121   | 22 | 45 | CN.. 1204.. | 0,240 | ○     | ○ |
| 212433200  | 212433300 | PSC40-DCLN R/L 27050-12 | 40              | 110  | 140   | 27 | 50 | CN.. 1204.. | 0,420 | ○     | ○ |
| 212433400  | 212433500 | PSC50-DCLN R/L3 5060-12 | 50              | 110  | 165   | 35 | 60 | CN.. 1204.. | 0,800 | ○     | ○ |
| 212433600  | 212433700 | PSC63-DCLN R/L 45065-12 | 63              | 110  | 190   | 45 | 65 | CN.. 1204.. | 1,100 | ○     | ○ |
| 212433800  | 212433900 | PSC80-DCLN R/L 55080-12 | 80              | 110  | 250   | 55 | 80 | CN.. 1204.. | 2,740 | ○     | ○ |
| 212434000  | 212434100 | PSC40-DCLN R/L 27055-16 | 40              | 125  | 145   | 27 | 55 | CN.. 1606.. | 0,430 | ○     | ○ |
| 212434200  | 212434300 | PSC50-DCLN R/L 35060-16 | 50              | 125  | 165   | 35 | 60 | CN.. 1606.. | 0,800 | ○     | ○ |
| 212434400  | 212434500 | PSC63-DCLN R/L 45065-16 | 63              | 125  | 190   | 45 | 65 | CN.. 1606.. | 1,100 | ○     | ○ |
| 212434600  | 212434700 | PSC80-DCLN R/L 55080-16 | 80              | 125  | 250   | 55 | 80 | CN.. 1606.. | 2,740 | ○     | ○ |
| 212434800  | 212434900 | PSC50-DCLN R/L 35060-19 | 50              | 125  | 165   | 35 | 60 | CN.. 1906.. | 0,800 | ○     | ○ |
| 212435000  | 212435100 | PSC63-DCLN R/L 45065-19 | 63              | 125  | 190   | 45 | 65 | CN.. 1906.. | 1,100 | ○     | ○ |
| 212435000  | 212435300 | PSC80-DCLNR/L 55080-19  | 80              | 125  | 250   | 55 | 80 | CN.. 1906.. | 2,740 | ○     | ○ |

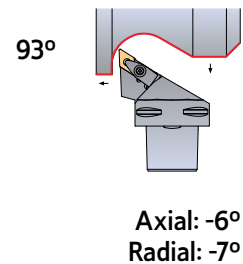
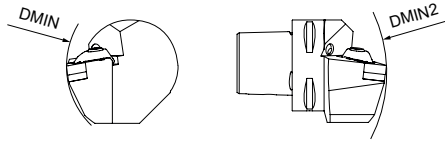
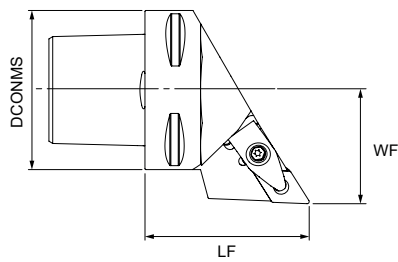
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference        | Shim Screw | Shim     | Clamp Screw | Clamp   | Wrench | Spring | Torque Value |
|-------------------------|------------|----------|-------------|---------|--------|--------|--------------|
| PSC32-DCLN R/L 22040-09 | T05008000  | CC090500 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC40-DCLN R/L 27050-09 | T05008000  | CC090500 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC32-DCLN R/L 22045-12 | T06010000  | CC120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC40-DCLN R/L 27050-12 | T06010000  | CC120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC50-DCLN R/L 35060-12 | T06010000  | CC120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC63-DCLN R/L 45065-12 | T06010000  | CC120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC80-DCLN R/L 55080-12 | T06010000  | CC120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC40-DCLN R/L 27055-16 | T0601575   | CC160501 | D0602900    | GA07004 | SS40   | M09513 | 3,5          |
| PSC50-DCLN R/L 35060-16 | T0601575   | CC160501 | D0602900    | GA07004 | SS40   | M09513 | 3,5          |
| PSC63-DCLN R/L 45065-16 | T0601575   | CC160501 | D0602900    | GA07004 | SS40   | M09513 | 3,5          |
| PSC80-DCLN R/L 55080-16 | T0601575   | CC160501 | D0602900    | GA07004 | SS40   | M09513 | 3,5          |
| PSC50-DCLN R/L 35060-19 | T06015000  | CC190502 | D0602900    | GA07003 | SS40   | M09513 | 3,5          |
| PSC63-DCLN R/L 45065-19 | T06015000  | CC190502 | D0602900    | GA07003 | SS40   | M09513 | 3,5          |
| PSC80-DCLN R/L 55080-19 | T06015000  | CC190502 | D0602900    | GA07003 | SS40   | M09513 | 3,5          |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference               | Dimensions (mm) |      |       |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------------|-----------------|------|-------|----|----|-------------|-------|-------|---|
| R          | L         |                         | DCONMS          | DMIN | DMIN2 | WF | LF |             |       | R     | L |
| 212435400  | 212435500 | PSC32-DDJN R/L 22045-11 | 32              | 60   | 121   | 22 | 45 | DN.. 1104.. | 0,240 | ○     | ○ |
| 212435600  | 212435700 | PSC40-DDJN R/L 27050-11 | 40              | 60   | 140   | 27 | 50 | DN.. 1104.. | 0,420 | ○     | ○ |
| 212435800  | 212435900 | PSC50-DDJN R/L 35060-11 | 50              | 65   | 165   | 35 | 60 | DN.. 1104.. | 0,800 | ○     | ○ |
| 212436000  | 212436100 | PSC63-DDJN R/L 45065-11 | 63              | 81   | 190   | 45 | 65 | DN.. 1104.. | 1,100 | ○     | ○ |
| 212436200  | 212436300 | PSC40-DDJN R/L 27055-15 | 40              | 110  | 145   | 27 | 55 | DN.. 1506.. | 0,420 | ⊗     | ⊗ |
| 212436400  | 212436500 | PSC50-DDJN R/L 35060-15 | 50              | 110  | 165   | 35 | 60 | DN.. 1506.. | 0,800 | ⊗     | ⊗ |
| 212436600  | 212436700 | PSC63-DDJN R/L 45065-15 | 63              | 110  | 190   | 45 | 65 | DN.. 1506.. | 1,100 | ⊗     | ⊗ |
| 212436800  | 212436900 | PSC80-DDJN R/L 55080-15 | 80              | 110  | 250   | 55 | 80 | DN.. 1506.. | 2,740 | ⊗     | ⊗ |

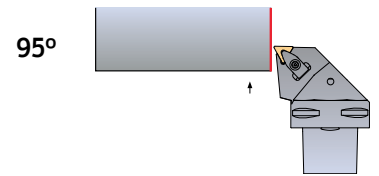
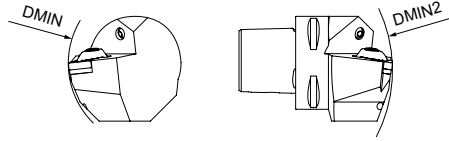
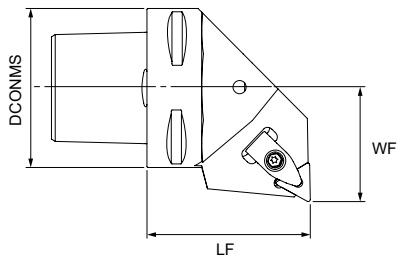
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference        | Shim Screw | Shim     | Clamp Screw | Clamp   | Wrench | Spring | Torque Value |
|-------------------------|------------|----------|-------------|---------|--------|--------|--------------|
| PSC32-DDJN R/L 22045-11 | T05008000  | CD110302 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC40-DDJN R/L 27050-11 | T05008000  | CD110302 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC50-DDJN R/L 35060-11 | T05008000  | CD110302 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC63-DDJN R/L 45065-11 | T05008000  | CD110302 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC40-DDJN R/L 27055-15 | T06010000  | CD150501 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC50-DDJN R/L 35060-15 | T06010000  | CD150501 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC63-DDJN R/L 45065-15 | T06010000  | CD150501 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC80-DDJN R/L 55080-15 | T06010000  | CD150501 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |

## (D) DIMPLE LOCK TOOLHOLDERS



Axial: -6°  
Radial: -6°

| Order Code |           | Reference               | Dimensions (mm) |      |       |    |    | Insert       | WT    | Stock |   |
|------------|-----------|-------------------------|-----------------|------|-------|----|----|--------------|-------|-------|---|
| R          | L         |                         | DCONMS          | DMIN | DMIN2 | WF | LF |              |       | R     | L |
| 212439000  | 212439100 | PSC40-DTFN R/L 27050-16 | 40              | 110  | 140   | 27 | 50 | TNM.. 1604.. | 0,420 | ○     | ○ |
| 212439200  | 212439300 | PSC50-DTFN R/L 35060-16 | 50              | 110  | 165   | 35 | 60 | TNM.. 1604.. | 0,800 | ○     | ○ |
| 212439400  | 212439500 | PSC63-DTFN R/L 45065-16 | 63              | 110  | 190   | 45 | 65 | TNM.. 1604.. | 1,100 | ○     | ○ |
| 212439600  | 212439700 | PSC40-DTFN R/L 27050-22 | 40              | 110  | 140   | 27 | 50 | TNM.. 2204.. | 0,420 | ○     | ○ |
| 212439800  | 212439900 | PSC50-DTFN R/L 35060-22 | 50              | 110  | 165   | 35 | 60 | TNM.. 2204.. | 0,800 | ○     | ○ |
| 212440000  | 212440100 | PSC63-DTFN R/L 45065-22 | 63              | 110  | 190   | 45 | 65 | TNM.. 2204.. | 1,100 | ○     | ○ |

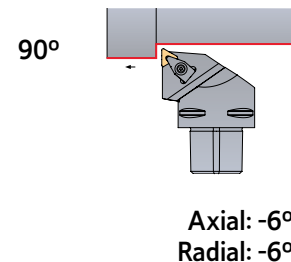
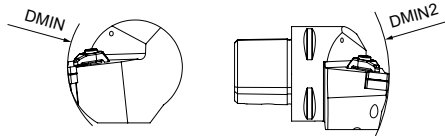
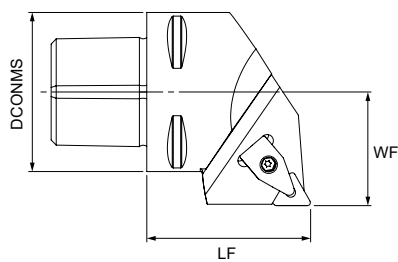
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference        | Shim Screw | Shim     | Clamp Screw | Clamp   | Wrench | Spring | Torque Value |
|-------------------------|------------|----------|-------------|---------|--------|--------|--------------|
| PSC40-DTFN R/L 27050-16 | T05008000  | CT160600 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC50-DTFN R/L 35060-16 | T05008000  | CT160600 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC63-DTFN R/L 45065-16 | T05008000  | CT160600 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC40-DTFN R/L 27050-22 | T06010000  | CT220500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC50-DTFN R/L 35060-22 | T06010000  | CT220500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC63-DTFN R/L 45065-22 | T06010000  | CT220500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference               | Dimensions (mm) |      |       |    |    | Insert       | WT    | Stock |   |
|------------|-----------|-------------------------|-----------------|------|-------|----|----|--------------|-------|-------|---|
| R          | L         |                         | DCONMS          | DMIN | DMIN2 | WF | LF |              |       | R     | L |
| 212440200  | 212440300 | PSC40-DTGN R/L 27050-16 | 40              | 110  | 140   | 27 | 50 | TNM.. 1604.. | 0,420 | ○     | ○ |
| 212440400  | 212440500 | PSC50-DTGN R/L 35060-16 | 50              | 110  | 165   | 35 | 60 | TNM.. 1604.. | 0,800 | ○     | ○ |
| 212440600  | 212440700 | PSC63-DTGN R/L 45065-16 | 63              | 110  | 190   | 45 | 65 | TNM.. 1604.. | 1,100 | ○     | ○ |
| 212440800  | 212440900 | PSC40-DTGN R/L 27050-22 | 40              | 110  | 140   | 27 | 50 | TNM.. 2204.. | 0,420 | ○     | ○ |
| 212441000  | 212441100 | PSC50-DTGN R/L 35060-22 | 50              | 110  | 165   | 35 | 60 | TNM.. 2204.. | 0,800 | ○     | ○ |
| 212441200  | 212441300 | PSC63-DTGN R/L 45065-22 | 63              | 110  | 190   | 45 | 65 | TNM.. 2204.. | 1,100 | ○     | ○ |

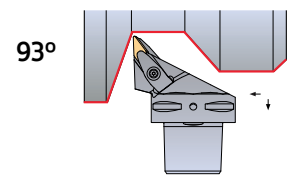
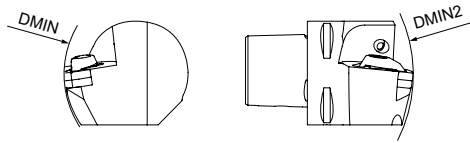
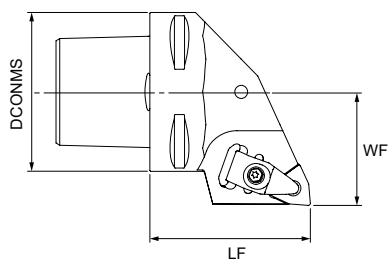
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference        | Shim Screw | Shim     | Clamp Screw | Clamp   | Wrench | Spring | Torque Value |
|-------------------------|------------|----------|-------------|---------|--------|--------|--------------|
| PSC40-DTGN R/L 27050-16 | T05008000  | CT160600 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC50-DTGN R/L 35060-16 | T05008000  | CT160600 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC63-DTGN R/L 45065-16 | T05008000  | CT160600 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC40-DTGN R/L 27050-22 | T06010000  | CT220500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC50-DTGN R/L 35060-22 | T06010000  | CT220500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC63-DTGN R/L 45065-22 | T06010000  | CT220500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |

## (D) DIMPLE LOCK TOOLHOLDERS



Axial: -4°  
Radial: -13°

| Order Code |           | Reference               | Dimensions (mm) |      |       |    |    | Insert     | WT    | Stock                 |                       |
|------------|-----------|-------------------------|-----------------|------|-------|----|----|------------|-------|-----------------------|-----------------------|
| R          | L         |                         | DCONMS          | DMIN | DMIN2 | WF | LF |            |       | R                     | L                     |
| 212441400  | 212441500 | PSC40-DVJN R/L 27062-16 | 40              | 60   | 152   | 27 | 62 | VN..1604.. | 0,450 | <input type="radio"/> | <input type="radio"/> |
| 212441600  | 212441700 | PSC50-DVJN R/L 35065-16 | 50              | 65   | 170   | 35 | 65 | VN..1604.. | 0,790 | <input type="radio"/> | <input type="radio"/> |
| 212441800  | 212441900 | PSC63-DVJN R/L 45065-16 | 63              | 81   | 190   | 45 | 65 | VN..1604.. | 1,100 | <input type="radio"/> | <input type="radio"/> |
| 212442000  | 212442100 | PSC80-DVJN R/L 55080-16 | 80              | 100  | 250   | 55 | 80 | VN..1604.. | 2,740 | <input type="radio"/> | <input type="radio"/> |

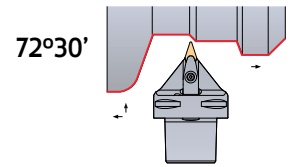
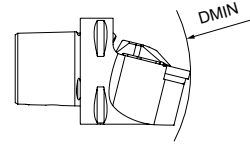
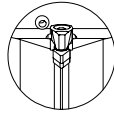
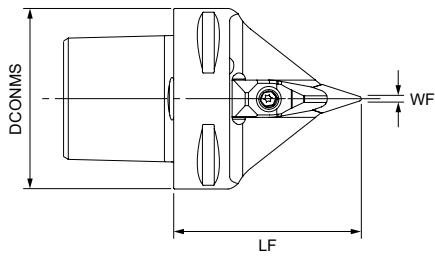
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference        | Shim Screw | Shim     | Clamp Screw | Clamp   | Wrench | Spring | Torque Value |
|-------------------------|------------|----------|-------------|---------|--------|--------|--------------|
| PSC40-DVJN R/L 27062-16 | T05008000  | CV160301 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC50-DVJN R/L 35065-16 | T05008000  | CV160301 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC63-DVJN R/L 45065-16 | T05008000  | CV160301 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC80-DVJN R/L 55080-16 | T05008000  | CV160301 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |

(D) DIMPLE LOCK TOOLHOLDERS



Axial: -6°  
Radial: -6°

| Order Code | Reference             | Dimensions (mm) |      |     |    | Insert      | WT    | Stock |
|------------|-----------------------|-----------------|------|-----|----|-------------|-------|-------|
|            |                       | DCONMS          | DMIN | WF  | LF |             |       |       |
| 212442200  | PSC40-DVVN N 00062-16 | 40              | 152  | 0,6 | 62 | VN.. 1604.. | 0,430 | ○     |
| 212442300  | PSC50-DVVN N 00065-16 | 50              | 170  | 0,6 | 65 | VN.. 1604.. | 0,800 | ○     |
| 212442400  | PSC63-DVVN N 00065-16 | 63              | 190  | 0,6 | 65 | VN.. 1604.. | 1,070 | ○     |
| 212442500  | PSC80-DVVN N 00080-16 | 80              | 250  | 0,6 | 80 | VN.. 1604.. | 2,320 | ○     |

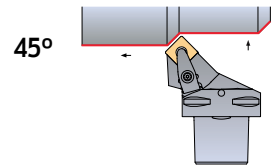
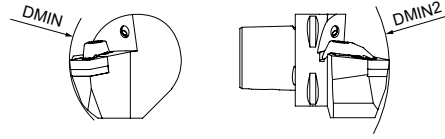
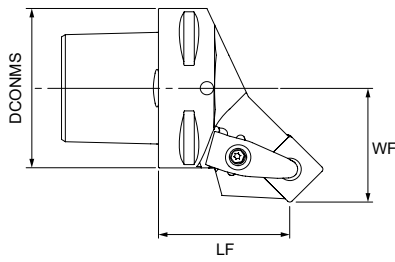
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

**SPARE PARTS** Acessórios | Repuestos

| Cutter Reference      | Shim Screw | Shim     | Clamp Screw | Clamp   | Wrench | Spring | Torque Value |
|-----------------------|------------|----------|-------------|---------|--------|--------|--------------|
| PSC40-DVVN N 00062-16 | T05008000  | CV160301 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC50-DVVN N 00065-16 | T05008000  | CV160301 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC63-DVVN N 00065-16 | T05008000  | CV160301 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC80-DVVN N 00080-16 | T05008000  | CV160301 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |

(D) DIMPLE LOCK TOOLHOLDERS



Axial: -8°  
Radial: 0°

| Order Code |           | Reference               | Dimensions (mm) |      |       |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------------|-----------------|------|-------|----|----|-------------|-------|-------|---|
| R          | L         |                         | DCONMS          | DMIN | DMIN2 | WF | LF |             |       | R     | L |
| 212437000  | 212437100 | PSC32-DSSN R/L 22040-12 | 32              | 60   | 124   | 22 | 40 | SNM..1204.. | 0,210 | ○     | ○ |
| 212437200  | 212437300 | PSC40-DSSN R/L 27042-12 | 40              | 110  | 140   | 27 | 42 | SNM..1204.. | 0,350 | ○     | ○ |
| 212437400  | 212437500 | PSC50-DSSN R/L 35052-12 | 50              | 110  | 165   | 35 | 52 | SNM..1204.. | 0,700 | ○     | ○ |
| 212437600  | 212437700 | PSC63-DSSN R/L 45056-12 | 63              | 110  | 190   | 45 | 56 | SNM..1204.. | 1,120 | ○     | ○ |
| 212437800  | 212437900 | PSC40-DSSN R/L 27045-15 | 40              | 125  | 145   | 27 | 45 | SNM..1506.. | 0,400 | ○     | ○ |
| 212438000  | 212438100 | PSC50-DSSN R/L 35050-15 | 50              | 125  | 165   | 35 | 50 | SNM..1506.. | 0,680 | ○     | ○ |
| 212438200  | 212438300 | PSC63-DSSN R/L 45054-15 | 63              | 125  | 190   | 45 | 54 | SNM..1506.. | 1,140 | ○     | ○ |
| 212438400  | 212438500 | PSC50-DSSN R/L 35048-19 | 50              | 125  | 165   | 35 | 48 | SNM..1906.. | 0,700 | ○     | ○ |
| 212438600  | 212438700 | PSC63-DSSN R/L 45052-19 | 63              | 125  | 190   | 45 | 52 | SNM..1906.. | 1,130 | ○     | ○ |

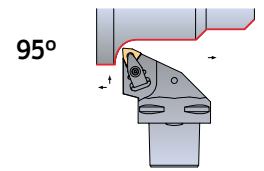
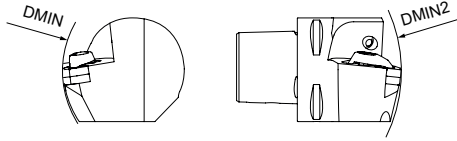
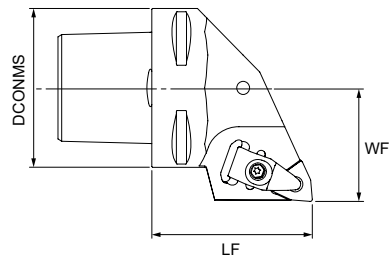
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

**SPARE PARTS** Acessórios | Repuestos

| Cutter Reference        | Shim Screw | Shim     | Clamp Screw | Clamp   | Wrench | Spring | Torque Value |
|-------------------------|------------|----------|-------------|---------|--------|--------|--------------|
| PSC32-DSSN R/L 22040-12 | T06010000  | CS120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC40-DSSN R/L 27042-12 | T06010000  | CS120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC50-DSSN R/L 35052-12 | T06010000  | CS120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC63-DSSN R/L 45056-12 | T06010000  | CS120600 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC40-DSSN R/L 27045-15 | T0601575   | CS150500 | D0602900    | GA07004 | SS40   | M09513 | 3,5          |
| PSC50-DSSN R/L 35050-15 | T0601575   | CS150500 | D0602900    | GA07004 | SS40   | M09513 | 3,5          |
| PSC63-DSSN R/L 45054-15 | T0601575   | CS150500 | D0602900    | GA07004 | SS40   | M09513 | 3,5          |
| PSC50-DSSN R/L 35048-19 | T06015000  | CS190501 | D0602900    | GA07003 | SS40   | M09513 | 3,5          |
| PSC63-DSSN R/L 45052-19 | T06015000  | CS190501 | D0602900    | GA07003 | SS40   | M09513 | 3,5          |

(D) DIMPLE LOCK TOOLHOLDERS



Axial: -6°  
Radial: -6°

| Order Code |           | Reference               | Dimensions (mm) |      |       |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------------|-----------------|------|-------|----|----|-------------|-------|-------|---|
| R          | L         |                         | DCONMS          | DMIN | DMIN2 | WF | LF |             |       | R     | L |
| 212442600  | 212442700 | PSC32-DWLN R/L 22040-06 | 32              | 60   | 116   | 22 | 40 | WNMG 0604.. | 0,210 | ○     | ○ |
| 212442800  | 212442900 | PSC40-DWLN R/L 27050-06 | 40              | 60   | 140   | 27 | 50 | WNMG 0604.. | 0,420 | ○     | ○ |
| 212443000  | 212443100 | PSC50-DWLN R/L 35060-06 | 50              | 65   | 165   | 35 | 60 | WNMG 0604.. | 0,800 | ○     | ○ |
| 212443200  | 212443300 | PSC63-DWLN R/L 45065-06 | 63              | 81   | 190   | 45 | 65 | WNMG 0604.. | 1,100 | ○     | ○ |
| 212443400  | 212443500 | PSC40-DWLN R/L 27050-08 | 40              | 110  | 140   | 27 | 50 | WNMG 0804.. | 0,420 | ○     | ○ |
| 212443600  | 212443700 | PSC50-DWLN R/L 35060-08 | 50              | 110  | 165   | 35 | 60 | WNMG 0804.. | 0,800 | ○     | ○ |
| 212443800  | 212443900 | PSC63-DWLN R/L 45065-08 | 63              | 110  | 190   | 45 | 65 | WNMG 0804.. | 1,100 | ○     | ○ |
| 212444000  | 212444100 | PSC80-DWLN R/L 55080-08 | 80              | 110  | 250   | 55 | 80 | WNMG 0804.. | 2,740 | ○     | ○ |

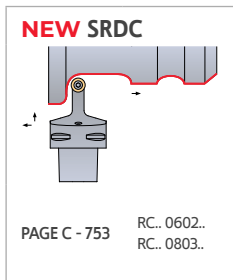
Ⓢ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

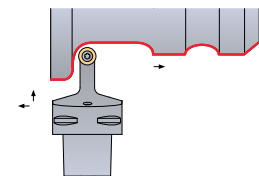
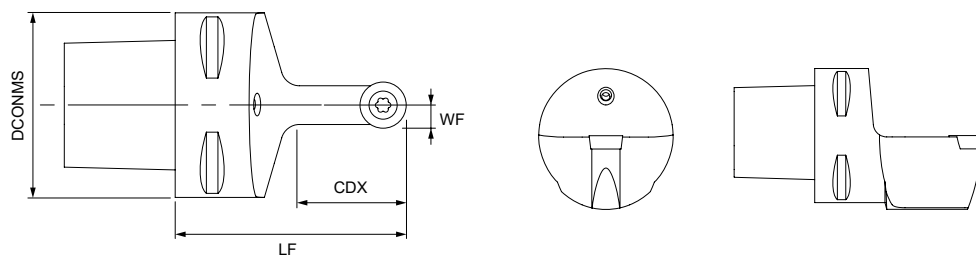
**SPARE PARTS** Acessórios | Repuestos

| Cutter Reference        | Shim Screw | Shim     | Clamp Screw | Clamp   | Wrench | Spring | Torque Value |
|-------------------------|------------|----------|-------------|---------|--------|--------|--------------|
| PSC32-DWLN R/L 22040-06 | T05008000  | CW060302 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC40-DWLN R/L 27050-06 | T05008000  | CW060302 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC50-DWLN R/L 35060-06 | T05008000  | CW060302 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC63-DWLN R/L 45065-06 | T05008000  | CW060302 | D0500801    | GA05001 | SS40   | M06511 | 3,5          |
| PSC40-DWLN R/L 27050-08 | T06010000  | CW080500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC50-DWLN R/L 35060-08 | T06010000  | CW080500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC63-DWLN R/L 45065-08 | T06010000  | CW080500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |
| PSC80-DWLN R/L 55080-08 | T06010000  | CW080500 | D0602900    | GA07002 | SS40   | M09513 | 3,5          |





(S) CENTER SCREW TOOLHOLDERS



Axial: 0°  
Radial: 0°

| Order Code | Reference             | Dimensions (mm) |    |    |     | Insert      | Kg    | Stock |
|------------|-----------------------|-----------------|----|----|-----|-------------|-------|-------|
|            |                       | DCONMS          | WF | LF | CDX |             |       |       |
| 212444300  | PSC32-SRDC N 00040-06 | 32              | 3  | 40 | 12  | RC.. 0602.. | 0,160 | ○     |
| 212462200  | PSC40-SRDC N 00050-06 | 40              | 3  | 50 | 12  | RC.. 0602.. | 0,350 | ○     |
| 212462300  | PSC50-SRDC N 00060-06 | 50              | 3  | 60 | 12  | RC.. 0602.. | 0,750 | ○     |
| 212462400  | PSC32-SRDC N 00040-08 | 32              | 4  | 40 | 16  | RC.. 0803.. | 0,160 | ○     |
| 212470900  | PSC40-SRDC N00050-08  | 40              | 4  | 50 | 16  | RC.. 0803.. | 0,35  | ○     |
| 212471000  | PSC50-SRDC N00060-08  | 50              | 4  | 60 | 16  | RC.. 0803.. | 0,35  | ○     |

⊗ Stock item | Produto de stock | Itens de stock

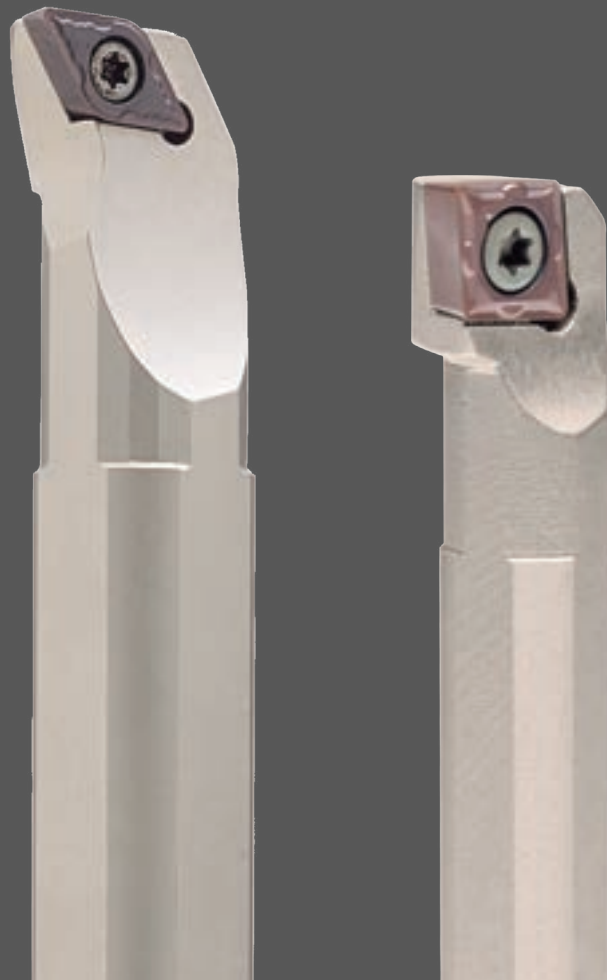
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

**SPARE PARTS** Acessórios | Repuestos

| Cutter Reference      | Shim Screw | Wrench | Torque Value |
|-----------------------|------------|--------|--------------|
| PSC32-SRDC N 00040-06 | P0250700   | XT07   | 0,9          |
| PSC40-SRDC N 00050-06 | P0250700   | XT07   | 0,9          |
| PSC50-SRDC N 00060-06 | P0250700   | XT07   | 0,9          |
| PSC32-SRDC N 00040-08 | P0300900   | XT08   | 1,2          |
| PSC40-SRDC N 00050-08 | P0300900   | XT08   | 1,2          |
| PSC50-SRDC N 00060-08 | P0300900   | XT08   | 1,2          |

TOOLHOLDERS

# INTERNAL



Internal turning places high demands on tools due to limited space. Efficient chipbreaking and evacuation are crucial for preventing tool damage and surface finish. Specialized tooling, optimized parameters, and effective coolant usage are vital for successful machining.

O torneamento interno exige muito das ferramentas devido ao espaço limitado. A quebra eficiente de aparas e a evacuação são cruciais para evitar danos à ferramenta e garantir o acabamento da superfície. Ferramentas especializadas, parâmetros otimizados e uso eficaz de refrigerante são vitais para a maquiagem bem-sucedida.

El torneado interno pone altas demandas en las herramientas debido al espacio limitado. La rotura eficiente de virutas y la evacuación son cruciales para prevenir daños en la herramienta y garantizar el acabado superficial. Herramientas especializadas, parámetros optimizados y uso efectivo de refrigerante son vitales para el mecanizado exitoso.

## Top Clamp Toolholders (C) > page 760

- > Highly rigid top clamp with shim

Grampo altamente rígido com calço | Brida altamente rígida con calzo



## Dimple Lock Toolholders (D) > page 765

- > Stable and rigid top clamp for negative inserts with a through hole

Grampo estável e rígido para pastilhas negativas com furo passante | Brida estable y rígida para plaquitas negativos con agujero pasante



## Wedge Clamp (M) &

## Double Lock (M-K) Toolholders > page 768

- > Double security clamping with eccentric pin, common for negative inserts

Dupla fixação de segurança com pino excêntrico, comum para pastilhas negativas | Doble sujeción de seguridad con pasador excéntrico, común para plaquitas negativas



## Lever Lock Toolholders (P) > page 778

- > Locking design for negative inserts, avoiding chip interference

Design de bloqueio para pastilhas negativas, evitando interferência de aparas | Diseño de bloqueo para plaquitas negativas, evitando interferencia de virutas

- > With or without directional coolant

Com ou sem refrigeração direcional | Con o sin refrigeración direccional



## Center Screw Toolholders (S) > page 792

- > Solution for ensuring easy insert exchange without interference

Solução ideal para garantir a troca fácil da pastilha sem interferência | Solución para garantizar un intercambio fácil de la plaquita sin interferencias

- > With or without directional coolant

Com ou sem refrigeração direcional | Con o sin refrigeración direccional

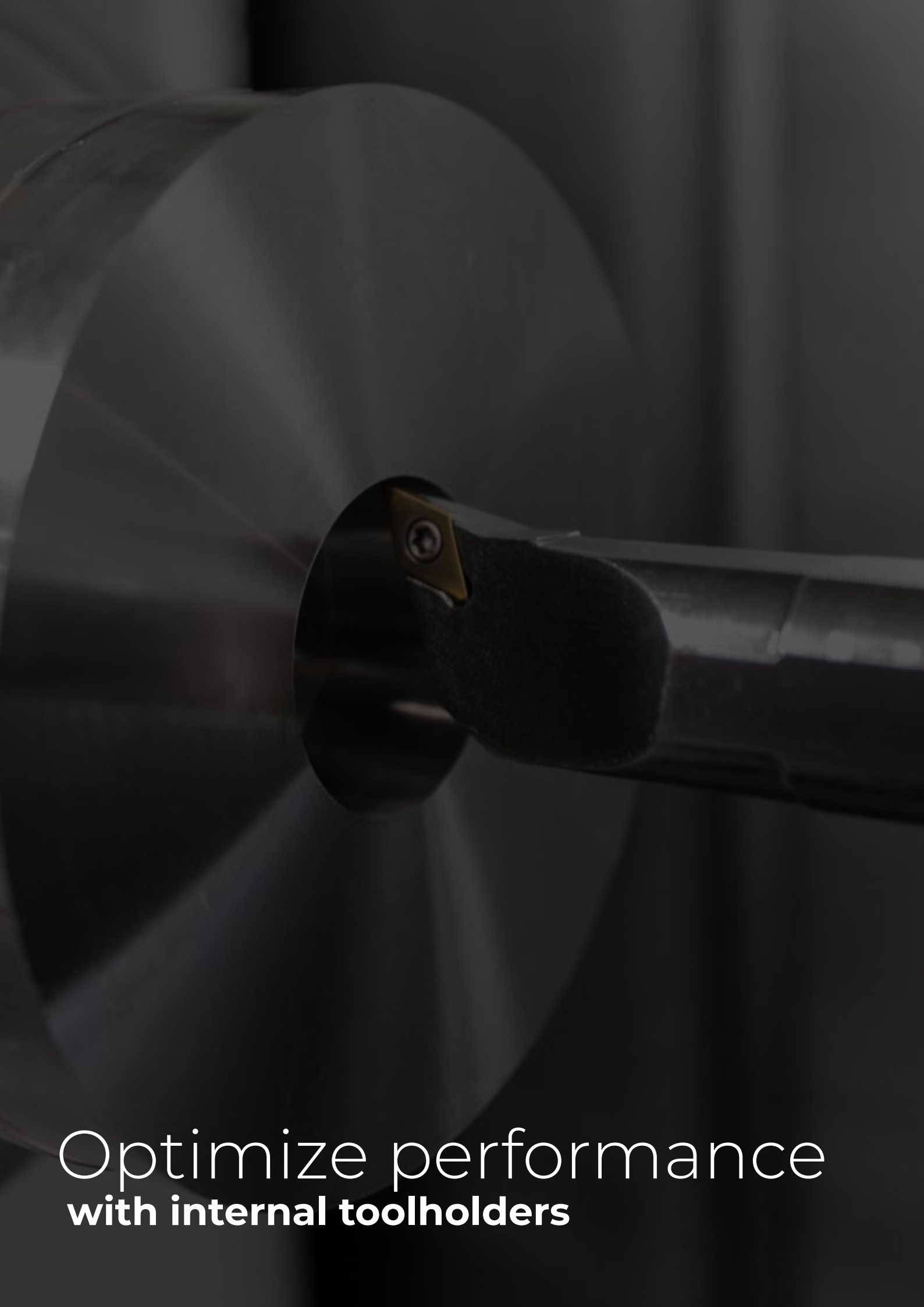


## Anti-vibration Bars (AVB) > page 821

- > Long overhangs with excellent finished surfaces

Torneamentos longos com excelente acabamento de superfície | Torneados largos con excelente acabado superficial





Optimize performance  
**with internal toolholders**

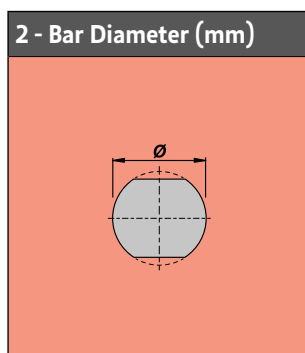
# CODE KEY FOR INTERNAL TURNING TOOLHOLDERS

Sistema de codificação para suportes de torneamento interno (ISO) | Codificación de herramientas de torneado interior (ISO)

|          |           |          |          |          |          |          |          |           |          |           |
|----------|-----------|----------|----------|----------|----------|----------|----------|-----------|----------|-----------|
| <b>S</b> | <b>25</b> | <b>T</b> | <b>S</b> | <b>D</b> | <b>U</b> | <b>C</b> | <b>R</b> | <b>11</b> | <b>-</b> | <b>BT</b> |
| <b>1</b> | <b>2</b>  | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b>  |          | <b>10</b> |

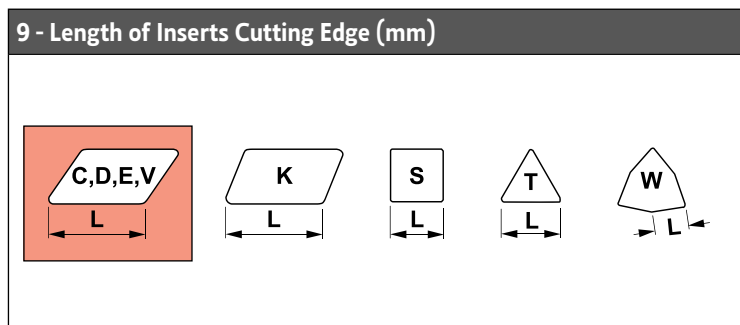
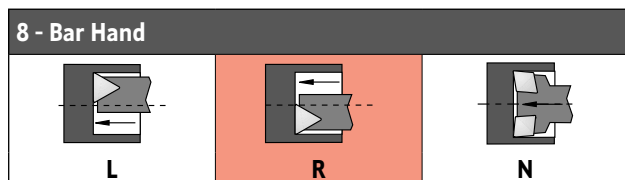
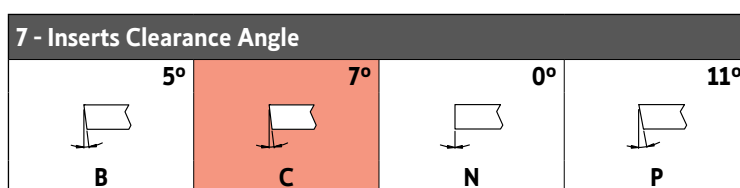
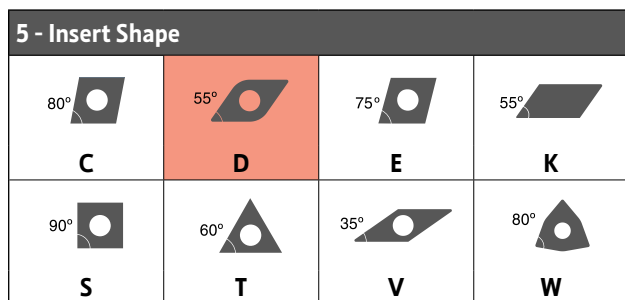
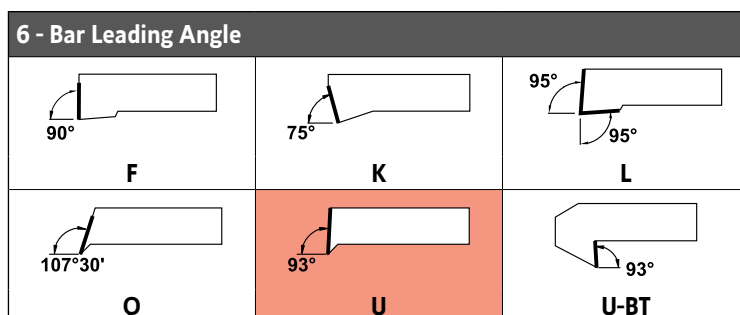
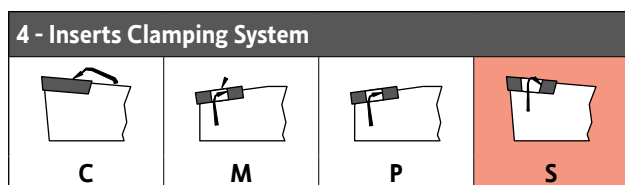
### 1 - Bar Type

|          |  |  |  |
|----------|--|--|--|
| <b>A</b> | Steel shank with internal coolant                        |  |  |
| <b>E</b> | Anti-vibration shank (heavy metal) with internal coolant |  |  |
| <b>S</b> | Steel shank  |  |  |



### 3 - Bar Length (mm)

|          |     |          |         |
|----------|-----|----------|---------|
| <b>H</b> | 100 | <b>T</b> | 300     |
| <b>J</b> | 110 | <b>U</b> | 350     |
| <b>K</b> | 125 | <b>V</b> | 400     |
| <b>L</b> | 140 | <b>W</b> | 450     |
| <b>M</b> | 150 | <b>Y</b> | 500     |
| <b>Q</b> | 180 | <b>X</b> | Special |
| <b>R</b> | 200 |          |         |
| <b>S</b> | 250 |          |         |



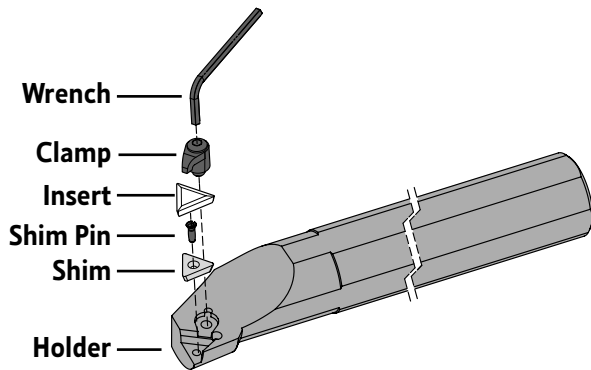
### 10 - Special Toolholder (Suppressed when standard)

**BT** - Back Turning

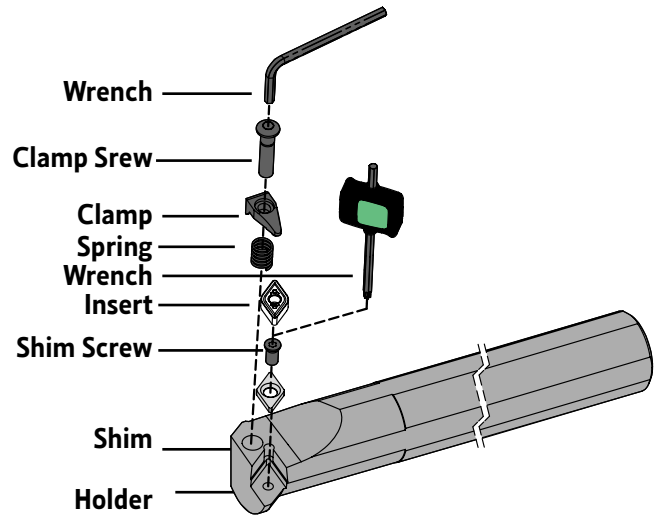
# CLAMPING SYSTEMS FOR INTERNAL TOOLHOLDERS

Sistemas de fixação para ferramentas de torneamento interno | Sistemas de fijación para herramientas de torneado interior

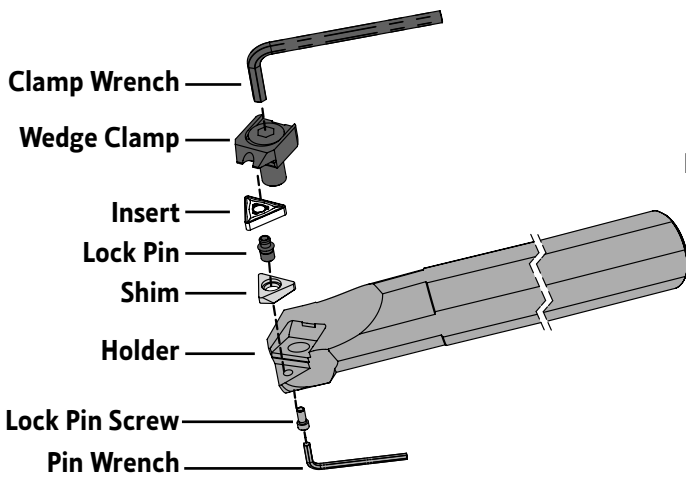
(C) TOP CLAMP SYSTEM



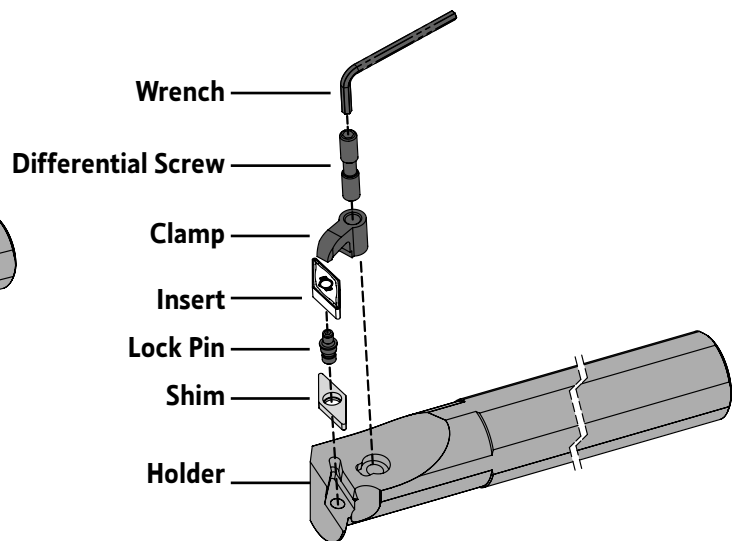
(D) DIMPLE LOCK SYSTEM



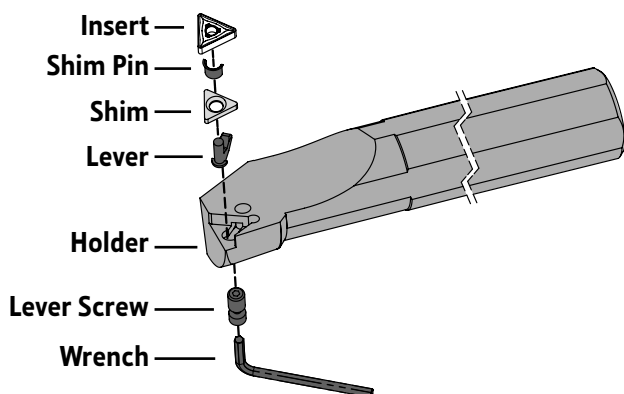
(M) WEDGE CLAMP SYSTEM



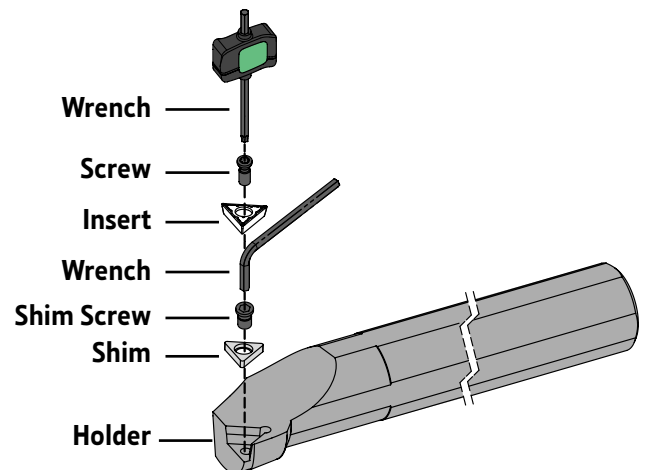
(M-K) DOUBLE LOCK SYSTEM



(P) LEVER LOCK SYSTEM

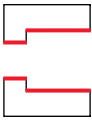
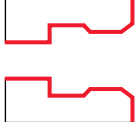
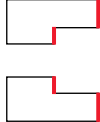


(S) CENTER SCREW SYSTEM

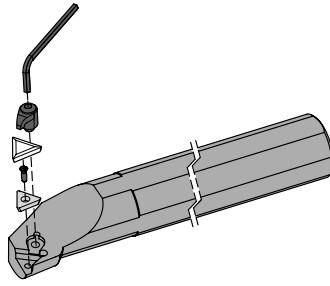


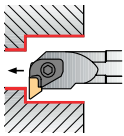
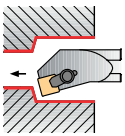
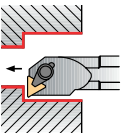
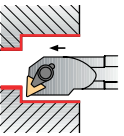
# SUITABLE CLAMPING SYSTEM DEFINITION

Definição do sistema de fixação | Definición del sistema de Fijación

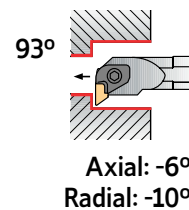
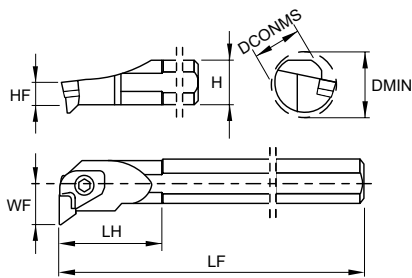
| Operation          |   | Longitudinal turning  | Profiling  | Facing  |
|--------------------|---|---|--|---|
|                    |   |  |  |  |
| Internal machining |   |   |  |   |
| Negative inserts   | (C)<br>TOP CLAMP SYSTEM                                       | ●   | ●  |   |
|                    | (D)<br>DIMPLE LOCK SYSTEM                                     | ● ●   | ●  |   |
|                    | (M)<br>WEDGE CLAMP SYSTEM<br>-<br>(M-K)<br>DOUBLE LOCK SYSTEM | ●   | ●  | ●   |
|                    | (P)<br>LEVER LOCK SYSTEM                                      | ● ●   | ●  | ●   |
| Positive inserts   | (C)<br>TOP CLAMP SYSTEM                                       | ●   |  |   |
|                    | (S)<br>CENTER SCREW SYSTEM                                    | ● ●   | ● ●  | ● ●   |
|                    |   | ● ● Recommended Insert Shape  | ● Alternative Insert Shape   |   |





|   |  |   |   |
|---|--|---|---|
| <p><b>CKUN 93°</b></p>  <p>PAGE C - 761    KNUX 1604..</p> | <p><b>CSKP 75°</b></p>  <p>PAGE C - 762    SP. 0903..<br/>SP. 1203..<br/>SP. 1904..</p> | <p><b>CTFP 90°</b></p>  <p>PAGE C - 763    TP. 0903..<br/>...<br/>TP. 2204..</p> | <p><b>CTUP 93°</b></p>  <p>PAGE C - 764    TP. 0903..<br/>...<br/>TP. 2204..</p> |
|---|--|---|---|

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |      |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|------|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF   | DMIN |             |       | R     | L |
| 212038300  | 212028200 | S25T CKUN R/L 16 | 25              | 23 | 11,5 | 300 | 50 | 20,5 | 37   | KNUX 1604.. | 0,700 | ⊗     | ⊗ |
| 212028300  | 212028400 | S32U CKUN R/L 16 | 32              | 30 | 15,0 | 350 | 54 | 22,0 | 39   | KNUX 1604.. | 2,050 | ○     | ○ |
| 212329300  | 212329400 | S40V CKUN R/L 16 | 40              | 37 | 18,5 | 400 | 60 | 27,0 | 48   | KNUX 1604.. | 3,750 | ○     | ○ |
| 212329500  | 212329600 | S50W CKUN R/L 16 | 50              | 47 | 23,5 | 450 | 65 | 35,0 | 61   | KNUX 1604.. | 6,500 | ○     | ○ |

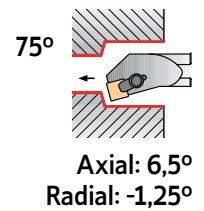
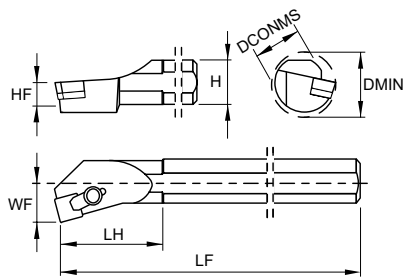
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |        |         |          |        |
|------------------|------------------|----------|----------------|--------|---------|----------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Spring | Clamp   | Screw    | Wrench |
| S25T CKUN R 16   | -                | -        | BF04806        | M09513 | GAW1401 | DW142600 | SS40   |
| S32U CKUN R 16   | CK160501         | BE03000  | BF04808        | M09513 | GAW1401 | DW142600 | SS40   |
| S40V CKUN R 16   | CK160501         | BE03000  | BF04815        | M09513 | GAW1401 | DW142600 | SS40   |
| S50W CKUN R 16   | CK160501         | BE03000  | BF04815        | M09513 | GAW1401 | DW142600 | SS40   |
| S25T CKUN L 16   | -                | -        | BF04806        | M09513 | GAW1400 | DW142600 | SS40   |
| S32U CKUN L 16   | CK160500         | BE03000  | BF04808        | M09513 | GAW1400 | DW142600 | SS40   |
| S40V CKUN L 16   | CK160500         | BE03000  | BF04815        | M09513 | GAW1400 | DW142600 | SS40   |
| S50W CKUN L 16   | CK160500         | BE03000  | BF04815        | M09513 | GAW1400 | DW142600 | SS40   |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212027500  | 212027600 | S16R CSKP R/L 09 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | SP.. 0903.. | 0,300 | ⊗     | ⊗ |
| 212027700  | 212027800 | S20S CSKP R/L 09 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | SP.. 0903.. | 0,550 | ⊗     | ⊗ |
| 212329700  | 212027900 | S25T CSKP R/L 12 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | SP.. 1203.. | 1,050 | ⊗     | ⊗ |
| 212028000  | 212028100 | S32U CSKP R/L 12 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | SP.. 1203.. | 2,050 | ○     | ○ |
| 212329800  | 212329900 | S40V CSKP R/L 12 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | SP.. 1203.. | 3,650 | ○     | ○ |
| 212330000  | 212330100 | S50W CSKP R/L 12 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | SP.. 1203.. | 6,450 | ○     | ○ |
| 212330200  | 212330300 | S50W CSKP R/L 19 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | SP.. 1904.. | 6,400 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

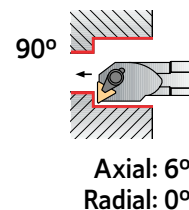
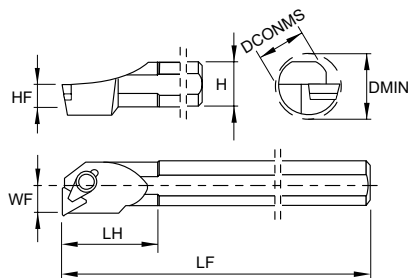
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

Complementary Accessories - Flat Inserts

| Cutter Reference | Shim     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
|------------------|----------|----------|---------|--------|---------|----------------|----------------|
|                  |          |          |         |        |         |                |                |
| S16R CSKP R/L 09 | -        | -        | GS05000 | SS25   | -       | QCS0900        | -              |
| S20S CSKP R/L 09 | -        | -        | GS05000 | SS25   | -       | QCS1200        | QCS1201        |
| S25T CSKP R/L 12 | -        | -        | GS06001 | SS30   | GS06003 | QCS1200        | QCS1201        |
| S32U CSKP R/L 12 | CS120300 | BE02100  | GS06001 | SS30   | GS06003 | QCS1200        | QCS1201        |
| S40V CSKP R/L 12 | CS120300 | BE02100  | GS06001 | SS30   | GS06003 | QCS1200        | QCS1201        |
| S50W CSKP R/L 12 | CS120300 | BE02100  | GS06001 | SS30   | GS06003 | QCS1200        | QCS1201        |
| S50W CSKP R/L 19 | CS190300 | BE03000  | GS08000 | SS40   | GS08001 | QCS1900        | QCS1901        |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212330400  | 212330500 | S10M CTFP R/L 09 | 10              | 9  | 4,5  | 150 | 25 | 7  | 13   | TP.. 0902.. | 0,060 | ⊗     | ⊗ |
| 212330600  | 212330700 | S12M CTFP R/L 09 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | TP.. 0902.. | 0,150 | ⊗     | ⊗ |
| 212170200  | 212330800 | S12M CTFP R/L 11 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | TP.. 1103.. | 0,150 | ⊗     | ⊗ |
| 212026800  | 212026900 | S16R CTFP R/L 11 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | TP.. 1103.. | 0,300 | ⊗     | ⊗ |
| 212027000  | 212027100 | S20S CTFP R/L 11 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | TP.. 1103.. | 0,550 | ⊗     | ⊗ |
| 212330900  | 212331000 | S16R CTFP R/L 16 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | TP.. 1603.. | 0,300 | ⊗     | ⊗ |
| 212331100  | 212331200 | S20S CTFP R/L 16 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | TP.. 1603.. | 0,550 | ⊗     | ⊗ |
| 212036700  | 212027200 | S25T CTFP R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | TP.. 1603.. | 0,700 | ⊗     | ⊗ |
| 212027300  | 212027400 | S32U CTFP R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | TP.. 1603.. | 2,050 | ○     | ○ |
| 212331300  | 212331700 | S40V CTFP R/L 16 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TP.. 1603.. | 3,750 | ○     | ○ |
| 212331800  | 212331900 | S50W CTFP R/L 16 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TP.. 1603.. | 6,500 | ○     | ○ |
| 212021300  | 212332000 | S40V CTFP R/L 22 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TP.. 2204.. | 3,750 | ○     | ○ |
| 212332100  | 212332200 | S50W CTFP R/L 22 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TP.. 2204.. | 6,500 | ○     | ○ |

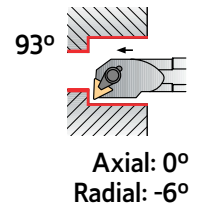
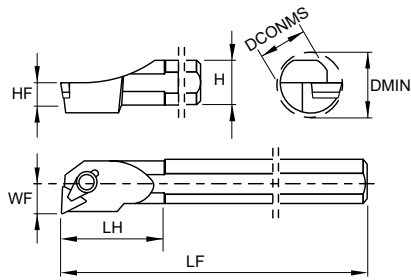
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Complementary Accessories - Flat Inserts |          |         |        |         |                |                |
|------------------|--|----------|---------|--------|---------|----------------|----------------|
|                  | Shim                                     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
| S10M CTFP R/L 09 | -  | -        | GS03000 | SS15   | -       | -              | -              |
| S12M CTFP R/L 09 | -  | -        | GS03000 | SS15   | -       | -              | -              |
| S12M CTFP R/L 11 | -  | -        | GS04000 | SS25   | -       | -              | -              |
| S16R CTFP R/L 11 | -  | -        | GS05000 | SS25   | GS05003 | QCT1100        | QCT1101        |
| S20S CTFP R/L 11 | -  | -        | GS05000 | SS25   | GS05003 | QCT1100        | QCT1101        |
| S16R CTFP R/L 16 | -  | -        | GS06002 | SS30   | GS06003 | QCT1600        | QCT1601        |
| S20S CTFP R/L 16 | -  | -        | GS06002 | SS30   | GS06003 | QCT1600        | QCT1601        |
| S25T CTFP R/L 16 | -  | -        | GS06001 | SS30   | GS06003 | QCT1600        | QCT1601        |
| S32U CTFP R/L 16 | CT160301                                 | BE02100  | GS06000 | SS30   | GS06003 | QCT1600        | QCT1601        |
| S40V CTFP R/L 16 | CT160301                                 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| S50W CTFP R/L 16 | CT160301                                 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| S40V CTFP R/L 22 | CT220301                                 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |
| S50W CTFP R/L 22 | CT220301                                 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |

## (C) TOP CLAMP TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212245500  | 212332300 | S10M CTUP R/L 09 | 10              | 9  | 4,5  | 150 | 25 | 7  | 13   | TP.. 0902.. | 0,060 | ⊗     | ⊗ |
| 212332400  | 212332500 | S12M CTUP R/L 09 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | TP.. 0902.. | 0,150 | ⊗     | ⊗ |
| 212332600  | 212332700 | S12M CTUP R/L 11 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | TP.. 1103.. | 0,150 | ⊗     | ⊗ |
| 212332800  | 212332900 | S16R CTUP R/L 11 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | TP.. 1103.. | 0,300 | ⊗     | ⊗ |
| 212333000  | 212333100 | S20S CTUP R/L 11 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | TP.. 1103.. | 0,550 | ⊗     | ⊗ |
| 212333200  | 212333300 | S16R CTUP R/L 16 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | TP.. 1603.. | 0,300 | ⊗     | ⊗ |
| 212333400  | 212333500 | S20S CTUP R/L 16 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | TP.. 1603.. | 0,550 | ⊗     | ⊗ |
| 212245600  | 212333600 | S25T CTUP R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | TP.. 1603.. | 0,700 | ⊗     | ⊗ |
| 212333700  | 212333800 | S32U CTUP R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | TP.. 1603.. | 2,050 | ○     | ○ |
| 212245700  | 212333900 | S40V CTUP R/L 16 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TP.. 1603.. | 3,750 | ○     | ○ |
| 212334000  | 212334100 | S50W CTUP R/L 16 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TP.. 1603.. | 6,500 | ○     | ○ |
| 212334200  | 212334300 | S40V CTUP R/L 22 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TP.. 2204.. | 3,750 | ○     | ○ |
| 212334400  | 212334500 | S50W CTUP R/L 22 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TP.. 2204.. | 6,500 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

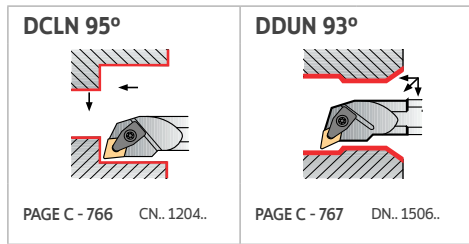
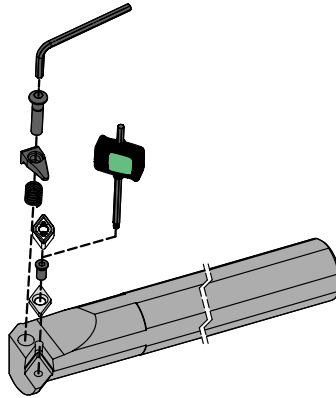
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

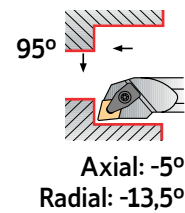
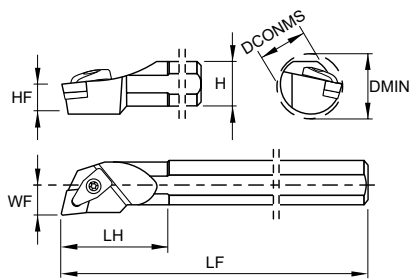
Complementary Accessories - Flat Inserts

| Cutter Reference | Shim     | Shim Pin | Clamp   | Wrench | Clamp   | Chip Breaker 1 | Chip Breaker 2 |
|------------------|----------|----------|---------|--------|---------|----------------|----------------|
|                  |          |          |         |        |         |                |                |
| S10M CTUP R/L 09 | -        | -        | GS03000 | SS15   | -       | -              | -              |
| S12M CTUP R/L 09 | -        | -        | GS03000 | SS15   | -       | -              | -              |
| S12M CTUP R/L 11 | -        | -        | GS04000 | SS25   | -       | -              | -              |
| S16R CTUP R/L 11 | -        | -        | GS05000 | SS25   | GS05003 | QCT1100        | QCT1101        |
| S20S CTUP R/L 11 | -        | -        | GS05000 | SS25   | GS05003 | QCT1100        | QCT1101        |
| S16R CTUP R/L 16 | -        | -        | GS06002 | SS30   | GS06003 | QCT1600        | QCT1601        |
| S20S CTUP R/L 16 | -        | -        | GS06002 | SS30   | GS06003 | QCT1600        | QCT1601        |
| S25T CTUP R/L 16 | -        | -        | GS06001 | SS30   | GS06003 | QCT1600        | QCT1601        |
| S32U CTUP R/L 16 | CT160301 | BE02100  | GS06000 | SS30   | GS06003 | QCT1600        | QCT1601        |
| S40V CTUP R/L 16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| S50W CTUP R/L 16 | CT160301 | BE02100  | GS06000 | SS30   | GS05005 | QCT1600        | QCT1601        |
| S40V CTUP R/L 22 | CT220301 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |
| S50W CTUP R/L 22 | CT220301 | BE03000  | GS08000 | SS40   | GS08001 | QCT2200        | QCT2201        |

# (D) DIMPLE LOCK SYSTEM



## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212334600  | 212334700 | S25T DCLN R/L 12 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | CN..1204.. | 0,700 | ⊗     | ⊗ |
| 212334800  | 212334900 | S32U DCLN R/L 12 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | CN..1204.. | 2,050 | ○     | ○ |
| 212335000  | 212335100 | S40V DCLN R/L 12 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | CN..1204.. | 3,750 | ○     | ○ |

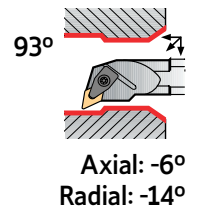
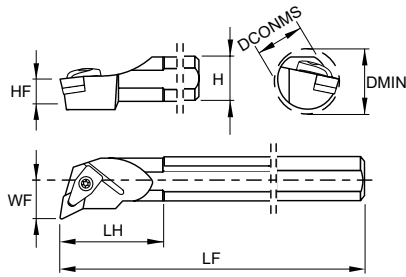
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench |
|------------------|----------|------------|--------|---------|-------------|--------|
| S25T DCLN R/L 12 | CC120300 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| S32U DCLN R/L 12 | CC120300 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| S40V DCLN R/L 12 | CC120300 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |

## (D) DIMPLE LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212335200  | 212335300 | S32U DDUN R/L 15 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | DN..1506.. | 2,050 | ○     | ○ |
| 212335400  | 212335500 | S40V DDUN R/L 15 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | DN..1506.. | 3,750 | ○     | ○ |

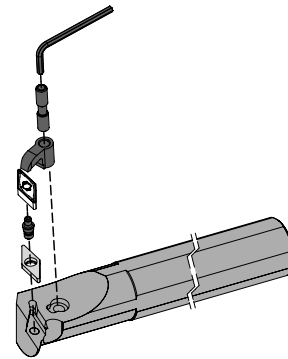
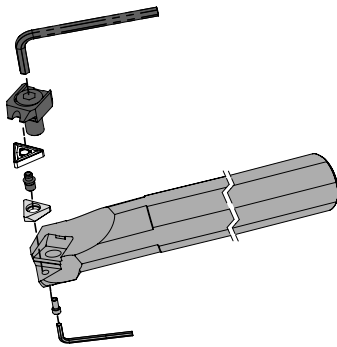
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

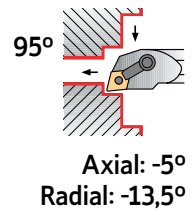
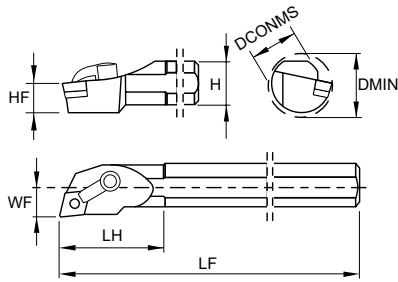
| Cutter Reference | Shim     | Shim Screw | Spring | Clamp   | Clamp Screw | Wrench |
|------------------|----------|------------|--------|---------|-------------|--------|
| S32U DDUN R/L 15 | CD150501 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |
| S40V DDUN R/L 15 | CD150501 | T06010000  | M09513 | GA07002 | D0602900    | SS40   |





|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <p><b>MCLN-K 95°</b></p> <p>PAGE C - 769 CN.. 1204..</p> | <p><b>MDUN-K 93°</b></p> <p>PAGE C - 770 DN.. 1506..</p>               | <p><b>MSKN-K 75°</b></p> <p>PAGE C - 771 SN.. 1204..</p> | <p><b>MTFN 90°</b></p> <p>PAGE C - 772 TN.. 1604..<br/>TN.. 2204..</p> | <p><b>MTFN-K 90°</b></p> <p>PAGE C - 773 TN.. 1604..</p> | <p><b>MTUN 93°</b></p> <p>PAGE C - 774 TN.. 1604..<br/>TN.. 2204..</p> |
| <p><b>MVUN-K 93°</b></p> <p>PAGE C - 775 VN.. 1604..</p> | <p><b>MWLN 95°</b></p> <p>PAGE C - 776 WN.. 0604..<br/>WN.. 0804..</p> | <p><b>MWLN-K 95°</b></p> <p>PAGE C - 777 WN.. 0804..</p> |  |  |  |

## (M-K) DOUBLE LOCK TOOLHOLDERS



| Order Code |           | Reference          | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|--------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                    | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212335600  | 212335700 | S25T MCLN R/L 12-K | 25              | 23 | 11,5 | 300 | 33 | 17 | 31   | CN.. 1204.. | 0,700 | ⊗     | ⊗ |
| 212335800  | 212335900 | S32U MCLN R/L 12-K | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | CN.. 1204.. | 2,050 | ○     | ○ |
| 212336000  | 212336100 | S40V MCLN R/L 12-K | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | CN.. 1204.. | 3,750 | ○     | ○ |

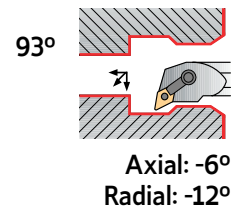
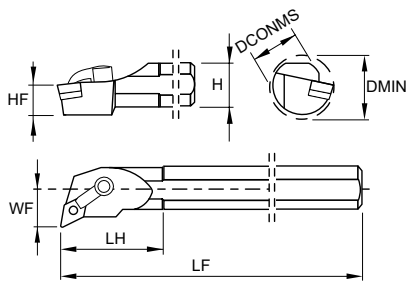
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Shim     | Lock Pin | Lock Pin Punch | Clamp   | Differential Screw | Clamp Wrench |
|--------------------|----------|----------|----------------|---------|--------------------|--------------|
| S25T MCLN R/L 12-K | -        | BS1-402  | SS25           | GA06000 | F0602100           | SS30         |
| S32U MCLN R/L 12-K | CC120500 | BS1-400  | SS25           | GA06000 | F0602900           | SS30         |
| S40V MCLN R/L 12-K | CC120500 | BS1-400  | SS25           | GA06000 | F0602900           | SS30         |

## (M-K) DOUBLE LOCK TOOLHOLDERS



| Order Code |           | Reference          | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|--------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                    | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212245300  | 212336200 | S25T MDUN R/L 15-K | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | DN.. 1506.. | 0,700 | ⊗     | ⊗ |
| 212336300  | 212336400 | S32U MDUN R/L 15-K | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | DN.. 1506.. | 2,050 | ○     | ○ |
| 212245400  | 212336500 | S40V MDUN R/L 15-K | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | DN.. 1506.. | 3,750 | ○     | ○ |

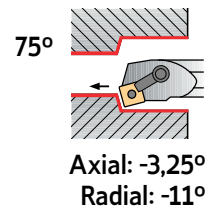
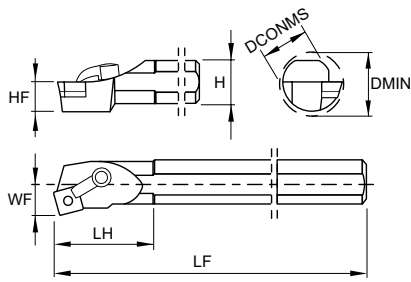
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Shim     | Lock Pin | Lock Pin Punch | Clamp   | Differential Screw | Clamp Wrench |
|--------------------|----------|----------|----------------|---------|--------------------|--------------|
| S25T MDUN R/L 15-K | -        | BS1-402  | SS25           | GA06001 | F0602100           | SS30         |
| S32U MDUN R/L 15-K | CD150501 | BS1-401  | SS25           | GA06001 | F0602900           | SS30         |
| S40V MDUN R/L 15-K | CD150501 | BS1-401  | SS25           | GA06001 | F0602900           | SS30         |

## (M-K) DOUBLE LOCK TOOLHOLDERS



| Order Code |           | Reference          | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|--------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                    | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212336600  | 212336700 | S32U MSKN R/L 12-K | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | SN..1204.. | 2,050 | ○     | ○ |
| 212336800  | 212336900 | S40V MSKN R/L 12-K | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | SN..1204.. | 3,750 | ○     | ○ |

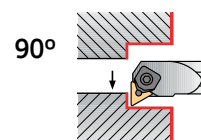
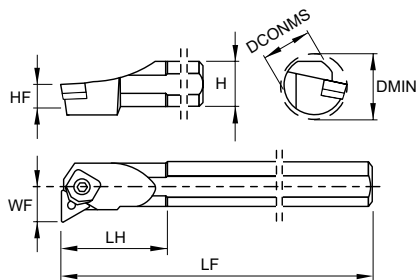
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Shim     | Lock Pin | Lock Pin Punch | Clamp   | Differential Screw | Clamp Wrench |
|--------------------|----------|----------|----------------|---------|--------------------|--------------|
| S32U MSKN R/L 12-K | CS120500 | BS1-400  | SS25           | GA06000 | F0602900           | SS30         |
| S40V MSKN R/L 12-K | CS120500 | BS1-400  | SS25           | GA06000 | F0602900           | SS30         |

## (M) DOUBLE LOCK TOOLHOLDERS



90°  
Axial: -6°  
Radial: -12°

| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT     | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|--------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |        | R     | L |
| 212050300  | 212338100 | S25T MTFN R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 34   | TN.. 1604.. | 0,700  | ⊗     | ⊗ |
| 212168200  | 212338200 | S32U MTFN R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | TN.. 1604.. | 2,050  | ○     | ○ |
| 212338300  | 212338400 | S40V MTFN R/L 16 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TN.. 1604.. | 3,750  | ○     | ○ |
| 212338500  | 212338600 | S50W MTFN R/L 16 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TN.. 1604.. | 6,500  | ○     | ○ |
| 212421000  | 212421100 | S60Y MTFN R/L 16 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | TN.. 1604.. | 12,600 | ○     | ○ |
| 212338700  | 212338800 | S40V MTFN R/L 22 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TN.. 2204.. | 3,750  | ○     | ○ |
| 212017500  | 212338900 | S50W MTFN R/L 22 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TN.. 2204.. | 6,500  | ○     | ○ |
| 212421800  | 212421900 | S60Y MTFN R/L 22 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | TN.. 2204.. | 12,600 | ○     | ○ |

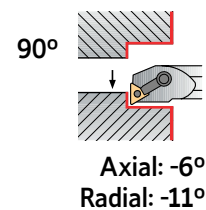
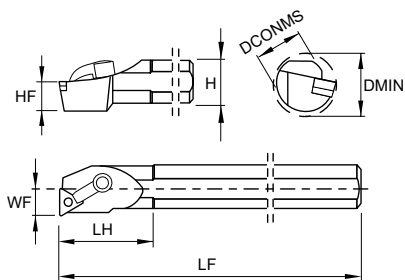
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Lock Pin | Lock Pin Punch | Wedge Clamp | Wrench |
|------------------|----------|----------|----------------|-------------|--------|
| S25T MTFN R/L 16 | CT160302 | BC04501  | D0300691       | GW08001     | SS50   |
| S32U MTFN R/L 16 | CT160302 | BC04501  | D0300700       | GW08001     | SS50   |
| S40V MTFN R/L 16 | CT160302 | BC04501  | D0300700       | GW08001     | SS50   |
| S50W MTFN R/L 16 | CT160302 | BC04501  | D0300700       | GW08001     | SS50   |
| S60Y MTFN R/L 16 | CT160302 | BC04501  | D0300691       | GW08001     | SS50   |
| S40V MTFN R/L 22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| S50W MTFN R/L 22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| S60Y MTFN R/L 22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |

## (M-K) DOUBLE LOCK TOOLHOLDERS



| Order Code |           | Reference          | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|--------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                    | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212337000  | 212337100 | S25T MTFN R/L 16-K | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | TN..1604.. | 0,700 | ⊗     | ⊗ |
| 212337200  | 212337300 | S32U MTFN R/L 16-K | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | TN..1604.. | 2,050 | ○     | ○ |
| 212337400  | 212337500 | S40V MTFN R/L 16-K | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TN..1604.. | 3,750 | ○     | ○ |

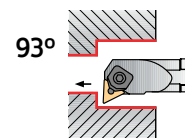
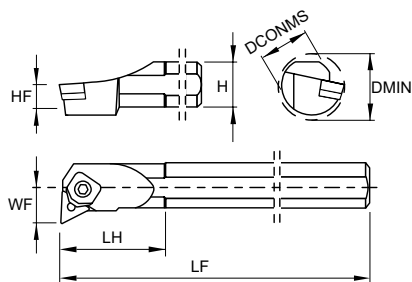
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Shim     | Lock Pin | Lock Pin Wrench | Clamp   | Differential Screw | Clamp Wrench |
|--------------------|----------|----------|-----------------|---------|--------------------|--------------|
| S25T MTFN R/L 16-K | CT160304 | BS05000  | SS20            | GA06000 | F0602900           | SS30         |
| S32U MTFN R/L 16-K | CT160304 | BS05000  | SS20            | GA06000 | F0602900           | SS30         |
| S40V MTFN R/L 16-K | CT160304 | BS05000  | SS20            | GA06000 | F0602900           | SS30         |

## (M) DOUBLE LOCK TOOLHOLDERS



Axial: -6°  
Radial: -11°

| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212339000  | 212339100 | S25T MTUN R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 34   | TN.. 1604.. | 0,700 | ⊗     | ⊗ |
| 212339200  | 212339300 | S32U MTUN R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | TN.. 1604.. | 2,050 | ○     | ○ |
| 212339400  | 212339500 | S40V MTUN R/L 16 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TN.. 1604.. | 3,750 | ○     | ○ |
| 212339600  | 212339700 | S50W MTUN R/L 16 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TN.. 1604.. | 6,500 | ○     | ○ |
| 212339800  | 212339900 | S40V MTUN R/L 22 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TN.. 2204.. | 3,750 | ○     | ○ |
| 212340000  | 212340100 | S50W MTUN R/L 22 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TN.. 2204.. | 6,500 | ○     | ○ |

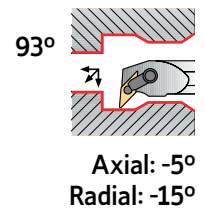
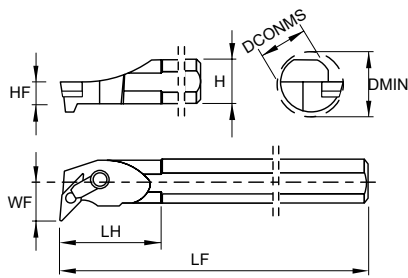
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Lock Pin | Lock Pin Punch | Wedge Clamp | Wrench |
|------------------|----------|----------|----------------|-------------|--------|
| S25T MTUN R/L 16 | CT160302 | BC04501  | D0300691       | GW08001     | SS50   |
| S32U MTUN R/L 16 | CT160302 | BC04501  | D0300700       | GW08001     | SS50   |
| S40V MTUN R/L 16 | CT160302 | BC04501  | D0300700       | GW08001     | SS50   |
| S50W MTUN R/L 16 | CT160302 | BC04501  | D0300700       | GW08001     | SS50   |
| S40V MTUN R/L 22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |
| S50W MTUN R/L 22 | CT220500 | BC06000  | D0400900       | GW08003     | SS50   |

## (M-K) DOUBLE LOCK TOOLHOLDERS



| Order Code |           | Reference          | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|--------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                    | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212050400  | 212337600 | S25T MVUN R/L 16-K | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | VN..1604.. | 0,700 | ⊗     | ⊗ |
| 212337700  | 212337800 | S32U MVUN R/L 16-K | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | VN..1604.. | 2,050 | ○     | ○ |
| 212337900  | 212338000 | S40V MVUN R/L 16-K | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | VN..1604.. | 3,750 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

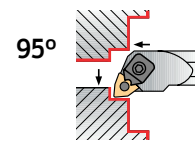
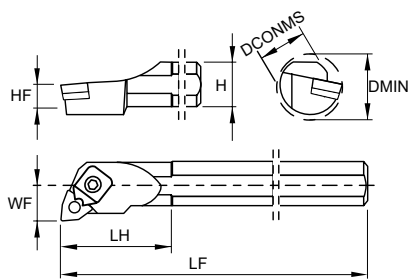
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Shim     | Lock Pin | Lock Pin Wrench | Clamp   | Differential Screw | Clamp Wrench |
|--------------------|----------|----------|-----------------|---------|--------------------|--------------|
| S25T MVUN R/L 16-K | CV160301 | BS05000  | SS20            | GA06001 | F0602100           | SS30         |
| S32U MVUN R/L 16-K | CV160301 | BS05000  | SS20            | GA06001 | F0602900           | SS30         |
| S40V MVUN R/L 16-K | CV160301 | BS05000  | SS20            | GA06001 | F0602900           | SS30         |



## (M) DOUBLE LOCK TOOLHOLDERS



95°  
Axial: -5°  
Radial: -11,5°

| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT     | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|--------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |        | R     | L |
| 212050500  | 212340200 | S20S MWLN R/L 06 | 20              | 18 | 9,0  | 250 | 36 | 13 | 27   | WN.. 0604.. | 0,550  | ⊗     | ⊗ |
| 212340300  | 212340400 | S25T MWLN R/L 06 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | WN.. 0604.. | 0,700  | ⊗     | ⊗ |
| 212340500  | 212340600 | S32U MWLN R/L 06 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | WN.. 0604.. | 2,050  | ○     | ○ |
| 212054400  | 212340700 | S25T MWLN R/L 08 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | WN.. 0804.. | 0,700  | ⊗     | ⊗ |
| 212044100  | 212044000 | S32U MWLN R/L 08 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | WN.. 0804.. | 2,050  | ○     | ○ |
| 212340800  | 212340900 | S40V MWLN R/L 08 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | WN.. 0804.. | 3,750  | ○     | ○ |
| 212341000  | 212341100 | S50W MWLN R/L 08 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | WN.. 0804.. | 6,500  | ○     | ○ |
| 212421200  | 212421300 | S60Y MWLN R/L 08 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | WNM. 0804.. | 12,600 | ○     | ○ |

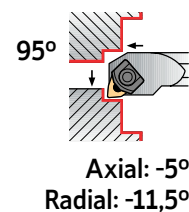
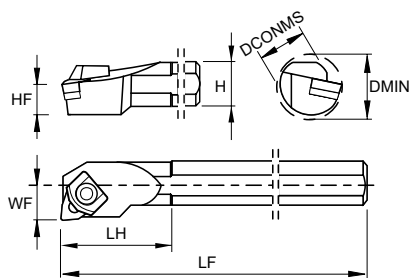
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Lock Pin | Lock Pin Punch | Wedge Clamp | Wrench |
|------------------|----------|----------|----------------|-------------|--------|
| S20S MWLN R/L 06 | -        | BC04502  | D0300691       | GW05000     | SS25   |
| S25T MWLN R/L 06 | CW060300 | BC04501  | D0300691       | GW05000     | SS25   |
| S32U MWLN R/L 06 | CW060300 | BC04501  | D0300691       | GW05000     | SS25   |
| S25T MWLN R/L 08 | -        | BC06001  | D0400691       | GW08000     | SS25   |
| S32U MWLN R/L 08 | CW080500 | BC06000  | D0400691       | GW08000     | SS25   |
| S40V MWLN R/L 08 | CW080500 | BC06000  | D0400691       | GW08000     | SS25   |
| S50W MWLN R/L 08 | CW080500 | BC06000  | D0400691       | GW08000     | SS25   |
| S60Y MWLN R/L 08 | CW080500 | BC06000  | D0400691       | GW08000     | SS25   |

## (M-K) DOUBLE LOCK TOOLHOLDERS



| Order Code |           | Reference          | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|--------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                    | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212341200  | 212341300 | S25T MWLN R/L 08-K | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | WN.. 0804.. | 0,700 | ⊗     | ⊗ |
| 212341400  | 212341500 | S32U MWLN R/L 08-K | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | WN.. 0804.. | 2,050 | ○     | ○ |
| 212341600  | 212341700 | S40V MWLN R/L 08-K | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | WN.. 0804.. | 3,750 | ○     | ○ |
| 212341800  | 212341900 | S50W MWLN R/L 08-K | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | WN.. 0804.. | 6,500 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Shim     | Lock Pin | Lock Pin Screw | Wedge Clamp | Wrench |
|--------------------|----------|----------|----------------|-------------|--------|
| S25T MWLN R/L 08-K | -        | BC06001  | D0400691       | GW06000     | SS25   |
| S32U MWLN R/L 08-K | CW080500 | BC06000  | D0400691       | GW06000     | SS25   |
| S40V MWLN R/L 08-K | CW080500 | BC06000  | D0400691       | GW06000     | SS25   |
| S50W MWLN R/L 08-K | CW080500 | BC06000  | D0400691       | GW06000     | SS25   |

# C (P) LEVER LOCK SYSTEM

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

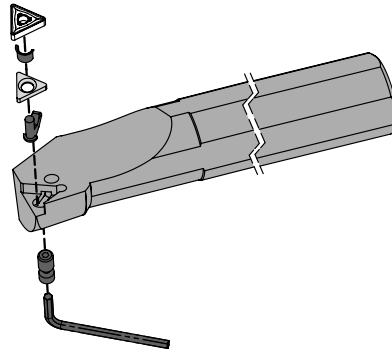
External Toolholders

Internal Toolholders

Automatic Lathes

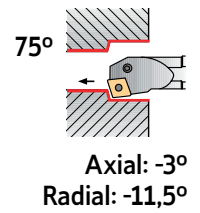
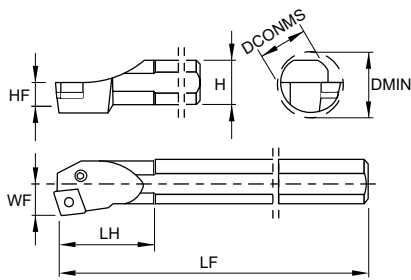
Spare Parts

Technical Data



|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <p><b>PCKN 75°</b></p> <p>PAGE C - 779 CN.. 1204..<br/>CN.. 1606..<br/>CN.. 1906..</p> | <p><b>PCLN 95°</b></p> <p>PAGE C - 780 CN.. 0903..<br/>... CN.. 1906..</p> | <p><b>A-PCLN 95°</b></p> <p>PAGE C - 781 CN.. 0903..<br/>... CN.. 1204..</p> | <p><b>PDUN 93°</b></p> <p>PAGE C - 782 DN.. 1104..<br/>DN.. 1506..</p> | <p><b>A-PDUN 93°</b></p> <p>PAGE C - 783 DN.. 1104..<br/>DN.. 1506..</p> | <p><b>PDUN 93° - BT</b></p> <p>PAGE C - 784 DN.. 1506..</p>            |
| <p><b>PSKN 75°</b></p> <p>PAGE C - 785 SN.. 1204..<br/>SN.. 1906..</p>                 | <p><b>A-PSKN 75°</b></p> <p>PAGE C - 786 SN.. 1204..</p>                   | <p><b>A-PSSN 45°</b></p> <p>PAGE C - 787 SN.. 1204..</p>                     | <p><b>PTFN 90°</b></p> <p>PAGE C - 788 TN.. 1604..<br/>TN.. 2204..</p> | <p><b>A-PTFN 90°</b></p> <p>PAGE C - 789 TN.. 1604..<br/>TN.. 2204..</p> | <p><b>PWLN 95°</b></p> <p>PAGE C - 790 WN.. 0604..<br/>WN.. 0804..</p> |
| <p><b>A-PWLN 95°</b></p> <p>PAGE C - 791 WN.. 0604..<br/>WN.. 0804..</p>               |  |  |  |  |  |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT     | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|--------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |        | R     | L |
| 212342000  | 212342100 | S25T PCKN R/L 12 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | CN.. 1204.. | 0,700  | ⊗     | ⊗ |
| 212342200  | 212342300 | S32U PCKN R/L 12 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | CN.. 1204.. | 2,050  | ○     | ○ |
| 212342400  | 212342500 | S40V PCKN R/L 12 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | CN.. 1204.. | 3,750  | ○     | ○ |
| 212421400  | 212421500 | S50W PCKN R/L 12 | 50              | 47 | 23,5 | 450 | 60 | 35 | 61   | CN.. 1204.. | 6,500  | ○     | ○ |
| 212421600  | 212421700 | S60Y PCKN R/L 12 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | CN.. 1204.. | 12,600 | ○     | ○ |
| 212342600  | 212342700 | S50W PCKN R/L 16 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | CN.. 1606.. | 6,500  | ○     | ○ |
| 212422000  | 212422100 | S60Y PCKN R/L 16 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | CN.. 1606.. | 12,600 | ○     | ○ |
| 212342800  | 212342900 | S50W PCKN R/L 19 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | CN.. 1906.. | 6,500  | ○     | ○ |
| 212422200  | 212422300 | S60Y PCKN R/L 19 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | CN.. 1906.. | 12,600 | ○     | ○ |

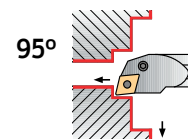
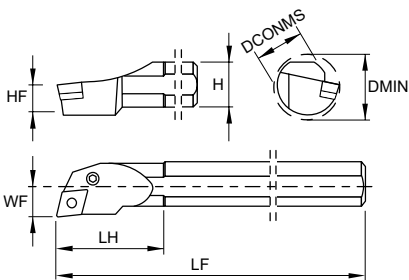
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| S25T PCKN R/L 12 | -                | -        | -              | AN12100 | PA0601300   | SS25   |
| S32U PCKN R/L 12 | CC120301         | BE05500  | BF47509        | AC13200 | PA0801700   | SS30   |
| S40V PCKN R/L 12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S50W PCKN R/L 12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S60Y PCKN R/L 12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S50W PCKN R/L 16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| S60Y PCKN R/L 16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| S50W PCKN R/L 19 | CC190500         | BE08500  | BF80012        | AN20800 | PA1002700   | SS40   |
| S60Y PCKN R/L 19 | CC190500         | BE08500  | BF0012         | AN20800 | PA1002700   | SS40   |

## (P) LEVER LOCK TOOLHOLDERS



95°  
Axial: -5°  
Radial: -13,5°

| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT     | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|--------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |        | R     | L |
| 212247000  | 212343000 | S16R PCLN R/L 09 | 16              | 15 | 7,5  | 200 | 26 | 11 | 20   | CN.. 0903.. | 0,300  | ⊗     | ⊗ |
| 212050600  | 212343100 | S20S PCLN R/L 09 | 20              | 18 | 9,0  | 250 | 29 | 13 | 25   | CN.. 0903.. | 0,550  | ⊗     | ⊗ |
| 212247100  | 212343200 | S25T PCLN R/L 09 | 25              | 23 | 11,5 | 300 | 33 | 17 | 32   | CN.. 0903.. | 0,700  | ⊗     | ⊗ |
| 212048400  | 212343300 | S25T PCLN R/L 12 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | CN.. 1204.. | 0,700  | ⊗     | ⊗ |
| 212169900  | 212343400 | S32U PCLN R/L 12 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | CN.. 1204.. | 2,050  | ○     | ○ |
| 212247200  | 212017300 | S40V PCLN R/L 12 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | CN.. 1204.. | 3,750  | ○     | ○ |
| 212343500  | 212343600 | S50W PCLN R/L 12 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | CN.. 1204.. | 6,500  | ○     | ○ |
| 212423300  | 212423400 | S60Y PCLN R/L 12 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | CN.. 1204.. | 12,600 | ○     | ○ |
| 212423500  | 212423600 | S40V PCLN R/L 16 | 40              | 37 | 18,5 | 400 | 50 | 27 | 48   | CN.. 1606.. | 3,750  | ○     | ○ |
| 212017700  | 212343700 | S50W PCLN R/L 16 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | CN.. 1606.. | 6,500  | ○     | ○ |
| 212423700  | 212423800 | S60Y PCLN R/L 16 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | CN.. 1606.. | 12,600 | ○     | ○ |
| 212017800  | 212017600 | S50W PCLN R/L 19 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | CN.. 1906.. | 6,500  | ○     | ○ |
| 212423900  | 212424000 | S60Y PCLN R/L 19 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | CN.. 1906.. | 12,600 | ○     | ○ |

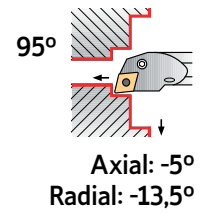
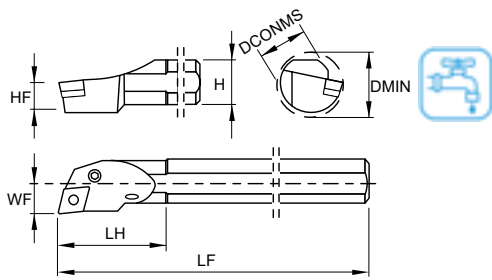
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| S16R PCLN R/L 09 | -                | -        | -              | AN07800 | PA0501200   | SS20   |
| S20S PCLN R/L 09 | -                | -        | -              | AN07800 | PA0501200   | SS20   |
| S25T PCLN R/L 09 | CC090300         | BE04400  | BF40009        | AN01200 | PA0601300   | SS25   |
| S25T PCLN R/L 12 | -                | -        | -              | AN12100 | PA0601300   | SS25   |
| S32U PCLN R/L 12 | CC120301         | BE05500  | BF47509        | AC13200 | PA0801700   | SS30   |
| S40V PCLN R/L 12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S50W PCLN R/L 12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S60Y PCLN R/L 12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S40V PCLN R/L 16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| S50W PCLN R/L 16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| S60Y PCLN R/L 16 | CC160500         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| S50W PCLN R/L 19 | CC190500         | BE08300  | BF80012        | AN20200 | PA1002700   | SS40   |
| S60Y PCLN R/L 19 | CC190500         | BE08300  | BF80012        | AN20200 | PA1002700   | SS40   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212343800  | 212343900 | A16M PCLN R/L 09 | 16              | 15 | 7,5  | 150 | 26 | 11 | 20   | CN.. 0903.. | 0,200 |       |   |
| 212344000  | 212344100 | A20Q PCLN R/L 09 | 20              | 18 | 9,0  | 180 | 29 | 13 | 25   | CN.. 0903.. | 0,400 |       |   |
| 212344200  | 212344300 | A25R PCLN R/L 12 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | CN.. 1204.. | 0,700 |       |   |
| 212344400  | 212344500 | A32S PCLN R/L 12 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | CN.. 1204.. | 1,400 |       |   |
| 212344600  | 212344700 | A40T PCLN R/L 12 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | CN.. 1204.. | 2,650 |       |   |

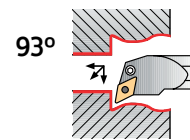
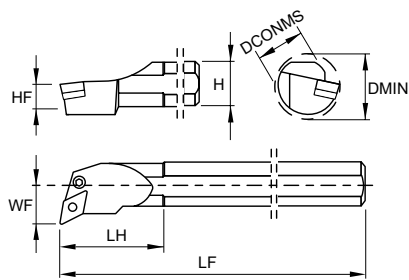
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| A16M PCLN R/L 09 | -                | -        | -              | AN07800 | PA0501200   | SS20   |
| A20Q PCLN R/L 09 | -                | -        | -              | AN07800 | PA0501200   | SS20   |
| A25R PCLN R/L 12 | -                | -        | -              | AN12100 | PA0601300   | SS25   |
| A32S PCLN R/L 12 | CC120301         | BE05500  | BF47509        | AC13200 | PA0801700   | SS30   |
| A40T PCLN R/L 12 | CC120301         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |

## (P) LEVER LOCK TOOLHOLDERS



Axial: -6°  
Radial: -14°

| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212079300  | 212344800 | S25T PDUN R/L 11 | 25              | 23 | 11,5 | 300 | 35 | 17 | 32   | DN.. 1104.. | 0,700 | ⊗     | ⊗ |
| 212247300  | 212344900 | S32U PDUN R/L 11 | 32              | 30 | 15,0 | 350 | 40 | 22 | 40   | DN.. 1104.. | 2,050 | ○     | ○ |
| 212079400  | 212079500 | S32U PDUN R/L 15 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | DN.. 1506.. | 2,050 | ○     | ○ |
| 212345000  | 212345100 | S40V PDUN R/L 15 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | DN.. 1506.. | 3,750 | ○     | ○ |
| 212018000  | 212017900 | S50W PDUN R/L 15 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | DN.. 1506.. | 6,500 | ○     | ○ |

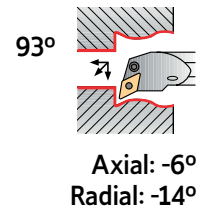
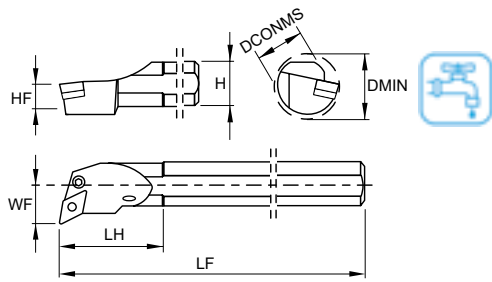
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        | for inserts DN.. 1504.. |          |
|------------------|------------------|----------|----------------|---------|-------------|--------|-------------------------|----------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench | Shim                    | Shim Pin |
| S25T PDUN R/L 11 | CD110300         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   | -                       | -        |
| S32U PDUN R/L 11 | CD110300         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   | -                       | -        |
| S32U PDUN R/L 15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0801700   | SS30   | CD150500                | BE05401  |
| S40V PDUN R/L 15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500                | BE05401  |
| S50W PDUN R/L 15 | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500                | BE05401  |

## (P) LEVER LOCK TOOLHOLDERS



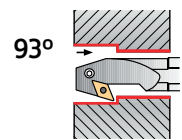
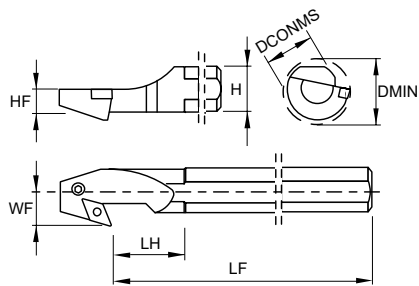
| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212345200  | 212345300 | A25R PDUN R/L 11 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | DN.. 1104.. | 0,700 |       |   |
| 212345400  | 212345500 | A32S PDUN R/L 15 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | DN.. 1506.. | 1,400 |       |   |
| 212345600  | 212345700 | A40T PDUN R/L 15 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | DN.. 1506.. | 2,650 |       |   |

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |       |             |        | for inserts DN.. 1504.. |          |
|------------------|------------------|----------|----------------|-------|-------------|--------|-------------------------|----------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever | Lever Screw | Wrench | Shim\                   | Shim Pin |
| A25R PDUN R/L 11 |                  |          |                |       |             |        | -                       | -        |
| A32S PDUN R/L 15 |                  |          |                |       |             |        | CD150500                | BE05401  |
| A40T PDUN R/L 15 |                  |          |                |       |             |        | CD150500                | BE05401  |



## (P) LEVER LOCK TOOLHOLDERS



Axial:  $-6^\circ$   
Radial:  $-14^\circ$

| Order Code |           | Reference           | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                     | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212345800  | 212345900 | S32U PDUN R/L 15-BT | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | DN..1506.. | 2,050 | ○     | ○ |
| 212346000  | 212346100 | S40V PDUN R/L 15-BT | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | DN..1506.. | 3,750 | ○     | ○ |
| 212346200  | 212346300 | S50W PDUN R/L 15-BT | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | DN..1506.. | 6,500 | ○     | ○ |

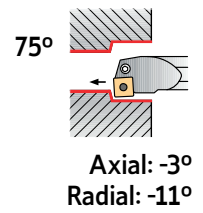
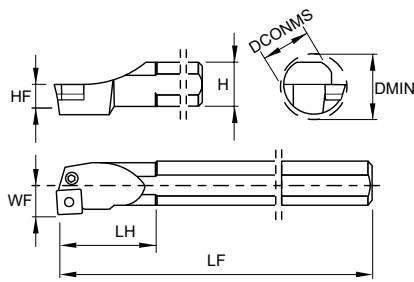
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Order separately |          |                |         |             |        | for inserts DN..1504.. |          |
|---------------------|------------------|----------|----------------|---------|-------------|--------|------------------------|----------|
|                     | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench | Shim                   | Shim Pin |
| S32U PDUN R/L 15-BT | -                | -        | -              | AN14700 | PA0801700   | SS30   | -                      | -        |
| S40V PDUN R/L 15-BT | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500               | BE05401  |
| S50W PDUN R/L 15-BT | CD150300         | BE05500  | BF47509        | AN14700 | PA0802101   | SS30   | CD150500               | BE05401  |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT     | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|------------|--------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |        | R     | L |
| 212050700  | 212346400 | S25T PSKN R/L 12 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | SN..1204.. | 0,700  | ⊗     | ⊗ |
| 212346500  | 212346600 | S32U PSKN R/L 12 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | SN..1204.. | 2,050  | ○     | ○ |
| 212346700  | 212346800 | S40V PSKN R/L 12 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | SN..1204.. | 3,750  | ○     | ○ |
| 212424100  | 212424200 | S40V PSKN R/L 15 | 40              | 37 | 18,5 | 400 | 50 | 27 | 48   | SN..1506.. | 3,750  | ○     | ○ |
| 212424300  | 212424400 | S50W PSKN R/L 15 | 50              | 47 | 23,5 | 450 | 60 | 35 | 61   | SN..1506.. | 6,500  | ○     | ○ |
| 212346900  | 212347000 | S50W PSKN R/L 19 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | SN..1906.. | 6,500  | ○     | ○ |
| 212424500  | 212424600 | S60Y PSKN R/L 19 | 60              | 57 | 28,5 | 600 | 75 | 43 | 80   | SN..1906.. | 12,600 | ○     | ○ |

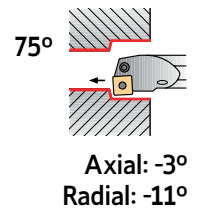
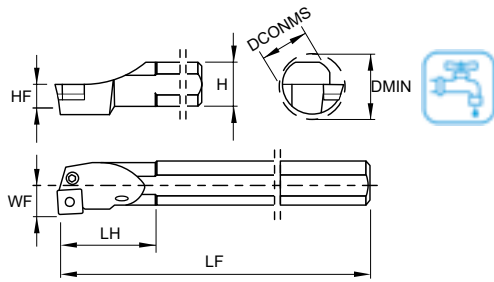
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| S25T PSKN R/L 12 | -                | -        | -              | AN12100 | PA0601300   | SS25   |
| S32U PSKN R/L 12 | CS120302         | BE05500  | BF47509        | AC13200 | PA0801700   | SS30   |
| S40V PSKN R/L 12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S40V PSKN R/L 15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| S50W PSKN R/L 15 | CS150400         | BE07000  | BF65012        | AN17100 | PA0802300   | SS30   |
| S50W PSKN R/L 19 | CS190400         | BE08300  | BF80012        | AN20200 | PA1003000   | SS40   |
| S60Y PSKN R/L 19 | CS150400         | BE08300  | BF80012        | AN20200 | PA1003000   | SS40   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212347100  | 212347200 | A25R PSKN R/L 12 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | SN.. 1204.. | 0,700 |       |   |
| 212347300  | 212347400 | A32S PSKN R/L 12 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | SN.. 1204.. | 1,400 |       |   |
| 212347500  | 212347600 | A40T PSKN R/L 12 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | SN.. 1204.. | 2,650 |       |   |

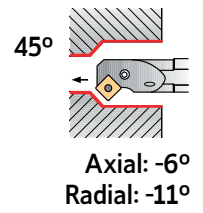
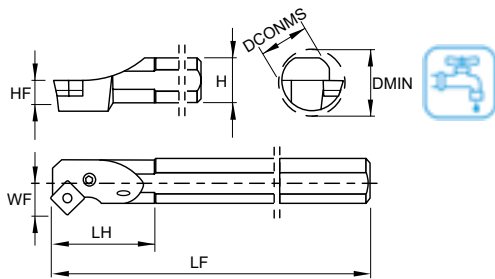
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| A25R PSKN R/L 12 | -                | -        | -              | AN12100 | PA0601300   | SS25   |
| A32S PSKN R/L 12 | CS120302         | BE05500  | BF47509        | AC13200 | PA0801700   | SS30   |
| A40T PSKN R/L 12 | CS120302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212347700  | 212347800 | A25R PSSN R/L 12 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | SN..1204.. | 0,700 |       |   |
| 212347900  | 212348000 | A32S PSSN R/L 12 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | SN..1204.. | 2,050 |       |   |

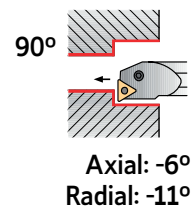
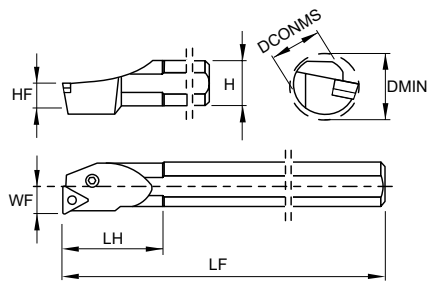
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| A25R PSKN R/L 12 | -                | -        | -              | AN12100 | PA0601300   | SS25   |
| A32S PSKN R/L 12 | CS120302         | BE05500  | BF47509        | AC13200 | PA0801700   | SS30   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212054300  | 212348100 | S25T PTFN R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | TN.. 1604.. | 0,700 | ⊗     | ⊗ |
| 212045000  | 212348200 | S32U PTFN R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | TN.. 1604.. | 2,050 | ○     | ○ |
| 212424700  | 212424800 | S40V PTFN R/L 16 | 40              | 37 | 18,5 | 400 | 50 | 27 | 48   | TN.. 1604.. | 3,750 | ○     | ○ |
| 212424900  | 212425000 | S50W PTFN R/L 16 | 50              | 47 | 23,5 | 450 | 60 | 35 | 61   | TN.. 1604.. | 6,500 | ○     | ○ |
| 212348300  | 212348400 | S40V PTFN R/L 22 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TN.. 2204.. | 3,750 | ○     | ○ |
| 212348500  | 212348600 | S50W PTFN R/L 22 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | TN.. 2204.. | 6,500 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

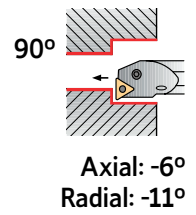
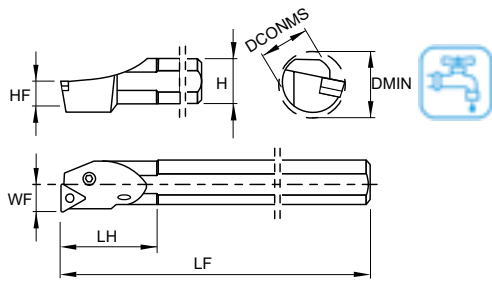
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| S25T PTFN R/L 16 | -                | -        | -              | AN09500 | PA0501200   | SS20   |
| S32U PTFN R/L 16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| S40V PTFN R/L 16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| S50W PTFN R/L 16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| S40V PTFN R/L 22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S50W PTFN R/L 22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |

# A-PTFN 90° Toolholders | Ferros de torno | Herramientas de torneado

(P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212348700  | 212348800 | A25R PTFN R/L 16 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | TN.. 1604.. | 0,700 | ⊗     | ⊗ |
| 212348900  | 212349000 | A32S PTFN R/L 16 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | TN.. 1604.. | 1,400 | ⊗     | ⊗ |
| 212349100  | 212349200 | A40T PTFN R/L 22 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | TN.. 2204.. | 2,650 | ⊗     | ⊗ |

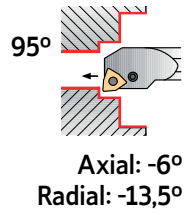
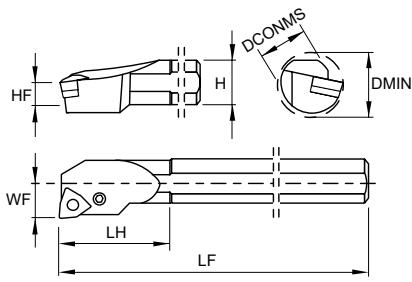
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| A25R PTFN R/L 16 | -                | -        | -              | AN09500 | PA0501200   | SS20   |
| A32S PTFN R/L 16 | CT160303         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| A40T PTFN R/L 22 | CT220302         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212046300  | 212349300 | S16R PWLN R/L 06 | 16              | 15 | 7,5  | 200 | 24 | 11 | 20   | WN..0604.. | 0,300 | ⊗     | ⊗ |
| 212219100  | 212349400 | S20S PWLN R/L 06 | 20              | 18 | 9,0  | 250 | 36 | 13 | 27   | WN..0604.. | 0,550 | ⊗     | ⊗ |
| 212249900  | 212349500 | S25T PWLN R/L 06 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | WN..0604.. | 0,700 | ⊗     | ⊗ |
| 212046400  | 212349600 | S25T PWLN R/L 08 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | WN..0804.. | 0,700 | ⊗     | ⊗ |
| 212349700  | 212349800 | S32U PWLN R/L 08 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | WN..0804.. | 2,050 | ○     | ○ |
| 212349900  | 212350000 | S40V PWLN R/L 08 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | WN..0804.. | 3,750 | ○     | ○ |

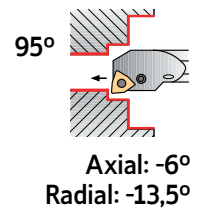
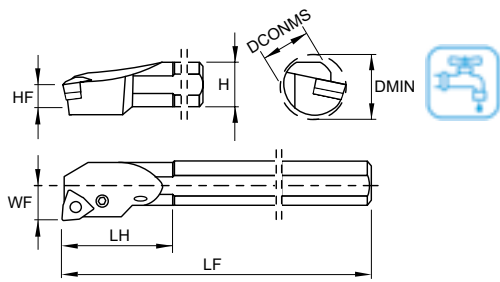
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| S16R PWLN R/L 06 | -                | -        | -              | AN09500 | PA0501200   | SS20   |
| S20S PWLN R/L 06 | -                | -        | -              | AN09500 | PA0501200   | SS20   |
| S25T PWLN R/L 06 | CW060301         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| S25T PWLN R/L 08 | -                | -        | -              | AC13200 | PA0801700   | SS30   |
| S32U PWLN R/L 08 | CW080300         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| S40V PWLN R/L 08 | CW080300         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |

## (P) LEVER LOCK TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212350100  | 212350200 | A16M PWLN R/L 06 | 16              | 15 | 7,5  | 150 | 24 | 11 | 20   | WN..0604.. | 0,200 | ⊗     | ⊗ |
| 212350300  | 212350400 | A20Q PWLN R/L 06 | 20              | 18 | 9,0  | 180 | 36 | 13 | 27   | WN..0604.. | 0,400 | ⊗     | ⊗ |
| 212350500  | 212350600 | A25R PWLN R/L 06 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | WN..0604.. | 0,700 | ⊗     | ⊗ |
| 212350700  | 212350800 | A32S PWLN R/L 06 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | WN..0604.. | 1,400 | ⊗     | ⊗ |
| 212350900  | 212351000 | A25R PWLN R/L 08 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | WN..0804.. | 0,700 | ⊗     | ⊗ |
| 212351300  | 212351400 | A32S PWLN R/L 08 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | WN..0804.. | 1,400 | ⊗     | ⊗ |
| 212351100  | 212351200 | A40T PWLN R/L 08 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | WN..0804.. | 2,650 | ⊗     | ⊗ |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Order separately |          |                |         |             |        |
|------------------|------------------|----------|----------------|---------|-------------|--------|
|                  | Shim             | Shim Pin | Shim Pin Punch | Lever   | Lever Screw | Wrench |
| A16M PWLN R/L 06 | -                | -        | -              | AN09500 | PA0501200   | SS20   |
| A20Q PWLN R/L 06 | -                | -        | -              | AN09500 | PA0501200   | SS20   |
| A25R PWLN R/L 06 | CW060301         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| A32S PWLN R/L 06 | CW060301         | BE04400  | BF40009        | AN01200 | PA0601700   | SS25   |
| A25R PWLN R/L 08 | -                | -        | -              | AC13200 | PA0801700   | SS30   |
| A32S PWLN R/L 08 | CW080300         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |
| A40T PWLN R/L 08 | CW080300         | BE05500  | BF47509        | AN13100 | PA0802100   | SS30   |



# C (S) CENTER SCREW SYSTEM

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

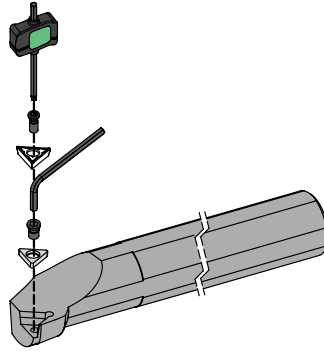
External Toolholders

Internal Toolholders

Automatic Lathes

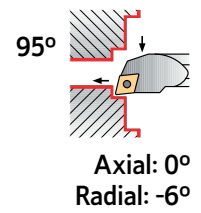
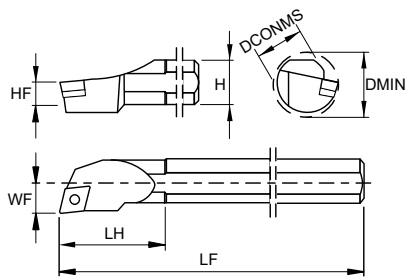
Spare Parts

Technical Data



|  |  |  |  |   |  |
|--|--|--|--|---|--|
| <p><b>SCLC 95°</b></p> <p>PAGE C - 793 CC.. 0602..<br/>CC.. 09T3..<br/>CC.. 1204..</p> | <p><b>A-SCLC 95°</b></p> <p>PAGE C - 794 CC.. 0602..<br/>CC.. 09T3..<br/>CC.. 1204..</p> | <p><b>E-SCLC 95°</b></p> <p>PAGE C - 795 CC.. 0602..<br/>CC.. 09T3..</p>                 | <p><b>SCLC N 95°</b></p> <p>PAGE C - 796 CC.. 0602..<br/>CC.. 09T3..<br/>CC.. 1204..</p> | <p><b>SDQC 107°30'</b></p> <p>PAGE C - 797 DC.. 0702..<br/>DC.. 11T3..</p>    | <p><b>A-SDQC 107°30'</b></p> <p>PAGE C - 798 DC.. 0702..<br/>DC.. 11T3..</p> |
| <p><b>SDUC 93°</b></p> <p>PAGE C - 799 DC.. 0702..<br/>DC.. 11T3..</p>                 | <p><b>A-SDUC 93°</b></p> <p>PAGE C - 800 DC.. 0702..<br/>DC.. 11T3..</p>                 | <p><b>E-SDUC 93°</b></p> <p>PAGE C - 801 DC.. 0702..</p>                                 | <p><b>SDUC 93° - BT</b></p> <p>PAGE C - 802 DC.. 0702..<br/>DC.. 11T3..</p>              | <p><b>A-SDUC 93° - BT</b></p> <p>PAGE C - 803 DC.. 0702..<br/>DC.. 11T3..</p> | <p><b>SSKC 75°</b></p> <p>PAGE C - 804 SC..09T3..<br/>SC.. 1204..</p>        |
| <p><b>A-SSSC 45°</b></p> <p>PAGE C - 805 SC.. 09T3..</p>                               | <p><b>STFC 90°</b></p> <p>PAGE C - 806 TC.. 0902..<br/>TC.. 1102..<br/>TC.. 16T3..</p>   | <p><b>A-STFC 90°</b></p> <p>PAGE C - 807 TC.. 0902..<br/>TC.. 1102..<br/>TC.. 16T3..</p> | <p><b>E-STFC 90°</b></p> <p>PAGE C - 808 TC.. 0902..<br/>TC.. 1102..</p>                 | <p><b>STUC 93°</b></p> <p>PAGE C - 809 TC.. 1102..<br/>TC.. 16T3..</p>        | <p><b>SVQC 107°30'</b></p> <p>PAGE C - 810 VC.. 1103..<br/>VC.. 1604..</p>   |
| <p><b>A-SVQC 107°30'</b></p> <p>PAGE C - 811 VC.. 1103..<br/>VC.. 1604..</p>           | <p><b>SVUB 93°</b></p> <p>PAGE C - 812 VB.. 1604..</p>                                   | <p><b>SVUC 93°</b></p> <p>PAGE C - 813 VC.. 1103..<br/>VC.. 1604..</p>                   | <p><b>A-SVUC 93°</b></p> <p>PAGE C - 814 VC.. 1103..<br/>VC.. 1604..</p>                 | <p><b>A-SVJC 93°</b></p> <p>PAGE C - 815 VC.. 1103..<br/>VC.. 1604..</p>      |  |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212046700  | 212141400 | S08K SCLC R/L 06 | 8               | 7  | 3,5  | 125 | 16 | 5  | 11   | CC.. 0602.. | 0,040 | ⊗     | ⊗ |
| 212039800  | 212141500 | S10M SCLC R/L 06 | 10              | 9  | 4,5  | 150 | 25 | 7  | 13   | CC.. 0602.. | 0,060 | ⊗     | ⊗ |
| 212047300  | 212141600 | S12M SCLC R/L 06 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | CC.. 0602.. | 0,150 | ⊗     | ⊗ |
| 212079200  | 212141700 | S12M SCLC R/L 09 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | CC.. 09T3.. | 0,150 | ⊗     | ⊗ |
| 212315200  | 212315300 | S12Q SCLC R/L 09 | 12              | 11 | 5,5  | 180 | 25 | 9  | 16   | CC.. 09T3.. | 0,150 | ⊗     | ⊗ |
| 212041600  | 212044200 | S16R SCLC R/L 09 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | CC.. 09T3.. | 0,300 | ⊗     | ⊗ |
| 212141900  | 212141800 | S20S SCLC R/L 09 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | CC.. 09T3.. | 0,550 | ⊗     | ⊗ |
| 212142100  | 212142000 | S25T SCLC R7L 09 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | CC.. 09T3.. | 0,550 | ⊗     | ⊗ |
| 212047400  | 212142200 | S20S SCLC R/L 12 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | CC.. 1204.. | 0,550 | ⊗     | ⊗ |
| 212045500  | 212142300 | S25T SCLC R/L 12 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | CC.. 1204.. | 0,700 | ⊗     | ⊗ |
| 212142500  | 212142400 | S32U SCLC R/L 12 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | CC.. 1204.. | 2,050 | ○     | ○ |
| 212142700  | 212142600 | S40V SCLC R/L 12 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | CC.. 1204.. | 3,750 | ○     | ○ |
| 212142900  | 212142800 | S50W SCLC R/L 12 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | CC.. 1204.. | 6,500 | ○     | ○ |

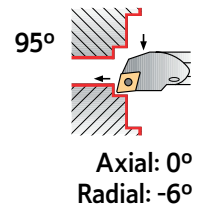
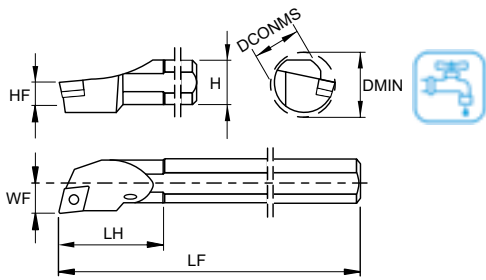
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim S crew | Screw    | Wrench   |
|------------------|----------|-------------|----------|----------|
| S08K SCLC R/L 06 | -        | -           | P0200601 | XT07     |
| S10M SCLC R/L 06 | -        | -           | P0200601 | XT07     |
| S12M SCLC R/L 06 | -        | -           | P0200601 | XT07     |
| S12M SCLC R/L 09 | -        | -           | P0400802 | XT15-S35 |
| S12Q SCLC R/L 09 | -        | -           | P0400802 | XT15-S35 |
| S16R SCLC R/L 09 | -        | -           | P0400802 | XT15-S35 |
| S20S SCLC R/L 09 | -        | -           | P0400802 | XT15-S35 |
| S25T SCLC R7L 09 | -        | -           | P0400802 | XT15-S35 |
| S20S SCLC R/L 12 | -        | -           | P0501200 | XT15-S40 |
| S25T SCLC R/L 12 | -        | -           | P0501200 | XT15-S40 |
| S32U SCLC R/L 12 | CC120401 | T06004000   | P0401400 | XT15-S40 |
| S40V SCLC R/L 12 | CC120401 | T06004000   | P0401400 | XT15-S40 |
| S50W SCLC R/L 12 | CC120401 | T06004000   | P0401400 | XT15-S40 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212315400  | 212315500 | A08F SCLC R/L 06 | 8               | 7  | 3,5  | 80  | 16 | 5  | 11   | CC.. 0602.. | 0,030 |       |   |
| 212315600  | 212315700 | A10H SCLC R/L 06 | 10              | 9  | 4,5  | 100 | 25 | 7  | 13   | CC.. 0602.. | 0,040 |       |   |
| 212315800  | 212315900 | A12K SCLC R/L 06 | 12              | 11 | 5,5  | 125 | 25 | 9  | 16   | CC.. 0602.. | 0,100 |       |   |
| 212316000  | 212316100 | A16M SCLC R/L 09 | 16              | 15 | 7,5  | 150 | 30 | 11 | 20   | CC.. 09T3.. | 0,200 |       |   |
| 212316200  | 212316300 | A20Q SCLC R/L 09 | 20              | 18 | 9,0  | 180 | 35 | 13 | 24   | CC.. 09T3.. | 0,400 |       |   |
| 212316400  | 212316500 | A25R SCLC R/L 09 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | CC.. 09T3.. | 0,700 |       |   |
| 212316600  | 212316700 | A32S SCLC R/L 12 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | CC.. 1204.. | 1,400 |       |   |
| 212316800  | 212316900 | A40T SCLC R/L 12 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | CC.. 1204.. | 2,650 |       |   |

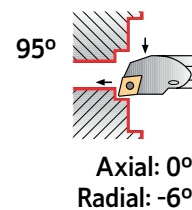
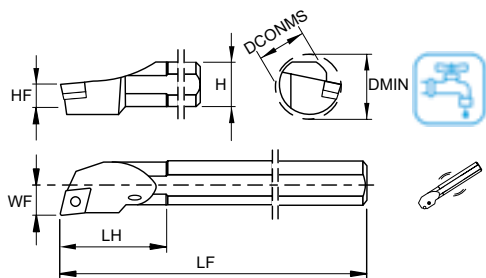
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim S crew | Screw    | Wrench   |
|------------------|----------|-------------|----------|----------|
| A08F SCLC R/L 06 |          |             |          |          |
| A10H SCLC R/L 06 | -        | -           | P0200601 | XT07     |
| A12K SCLC R/L 06 | -        | -           | P0200601 | XT07     |
| A16M SCLC R/L 09 | -        | -           | P0400802 | XT15-S35 |
| A20Q SCLC R/L 09 | -        | -           | P0400802 | XT15-S35 |
| A25R SCLC R/L 09 | -        | -           | P0400802 | XT15-S35 |
| A32S SCLC R/L 12 | CC120401 | T06004000   | P0401400 | XT15-S40 |
| A40T SCLC R/L 12 | CC120401 | T06004000   | P0401400 | XT15-S40 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |     |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF  | LF  | LH | WF | DMIN |             |       | R     | L |
| 212317800  | 212317900 | E08K SCLC R/L 06 | 8               | 7  | 3,5 | 125 | 16 | 5  | 11   | CC.. 0602.. | 0,080 |       |   |
| 212318000  | 212318100 | E10M SCLC R/L 06 | 10              | 9  | 4,5 | 150 | 25 | 7  | 13   | CC.. 0602.. | 0,150 |       |   |
| 212317400  | 212318300 | E12Q SCLC R/L 06 | 12              | 11 | 5,5 | 180 | 25 | 9  | 16   | CC.. 0602.. | 0,250 |       |   |
| 212318400  | 212317600 | E16R SCLC R/L 09 | 16              | 15 | 7,5 | 200 | 30 | 11 | 20   | CC.. 09T3.. | 0,600 |       |   |

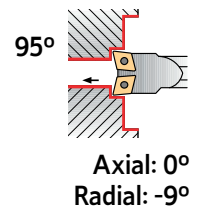
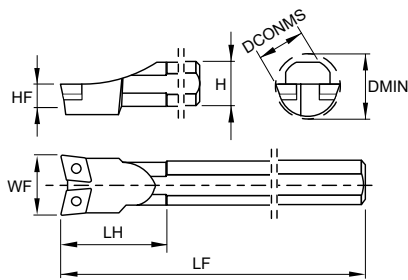
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Screw    | Wrench   |
|------------------|----------|----------|
|                  |          |          |
| E08K SCLC R/L 06 | P0200601 | XT07     |
| E10M SCLC R/L 06 | P0200601 | XT07     |
| E12M SCLC R/L 06 | P0200601 | XT07     |
| E16R SCLC R/L 09 | P0400802 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code | Reference      | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |
|------------|----------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|
|            |                | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       |       |
| 212143000  | S12M SCLC N 06 | 12              | 11 | 5,5  | 150 | 25 | 18 | 20   | CC.. 0602.. | 0,150 | ⊗     |
| 212143100  | S16R SCLC N 06 | 16              | 15 | 7,5  | 200 | 30 | 22 | 25   | CC.. 0602.. | 0,300 | ⊗     |
| 212143200  | S20S SCLC N 06 | 20              | 18 | 9,0  | 250 | 35 | 26 | 30   | CC.. 0602.. | 0,550 | ⊗     |
| 212143300  | S25T SCLC N 09 | 25              | 23 | 11,5 | 300 | 40 | 34 | 40   | CC.. 09T3.. | 0,700 | ⊗     |
| 212143400  | S32U SCLC N 12 | 32              | 30 | 15,0 | 350 | 50 | 44 | 50   | CC.. 1204.. | 2,050 | ○     |
| 212143500  | S40V SCLC N 12 | 40              | 37 | 18,5 | 400 | 60 | 54 | 60   | CC.. 1204.. | 3,750 | ○     |
| 212143600  | S50W SCLC N 12 | 50              | 47 | 23,5 | 450 | 65 | 62 | 68   | CC.. 1204.. | 6,500 | ○     |

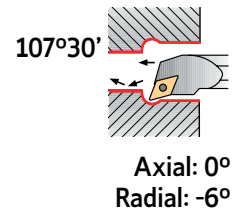
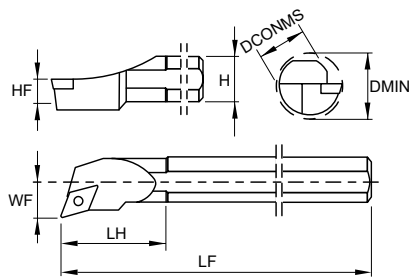
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S12M SCLC N 06   | -        | -          | P0200601 | XT07     |
| S16R SCLC N 06   | -        | -          | P0200601 | XT07     |
| S20S SCLC N 06   | -        | -          | P0200601 | XT07     |
| S25T SCLC N 09   | -        | -          | P0400802 | XT15-S35 |
| S32U SCLC N 12   | CC120401 | T06004000  | P0401400 | XT15-S40 |
| S40V SCLC N 12   | CC120401 | T06004000  | P0401400 | XT15-S40 |
| S50W SCLC N 12   | CC120401 | T06004000  | P0401400 | XT15-S40 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212147000  | 212146900 | S10M SDQC R/L 07 | 10              | 9  | 4,5  | 150 | 25 | 7  | 13   | DC.. 0702.. | 0,060 | ⊗     | ⊗ |
| 212147200  | 212147100 | S12M SDQC R/L 07 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | DC.. 0702.. | 0,150 | ⊗     | ⊗ |
| 212147400  | 212147300 | S16R SDQC R/L 07 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | DC.. 0702.. | 0,300 | ⊗     | ⊗ |
| 212147600  | 212147500 | S20S SDQC R/L 07 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | DC.. 0702.. | 0,550 | ⊗     | ⊗ |
| 212147800  | 212147700 | S20S SDQC R/L 11 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | DC.. 11T3.. | 0,550 | ⊗     | ⊗ |
| 212148000  | 212147900 | S25T SDQC R/L 11 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | DC.. 11T3.. | 0,700 | ⊗     | ⊗ |
| 212148100  | 212148200 | S32U SDQC R/L 11 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | DC.. 11T3.. | 2,050 | ○     | ○ |
| 212148300  | 212148400 | S40V SDQC R/L 11 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | DC.. 11T3.. | 3,750 | ○     | ○ |

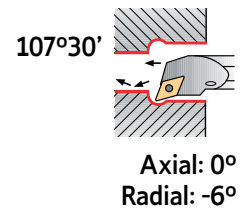
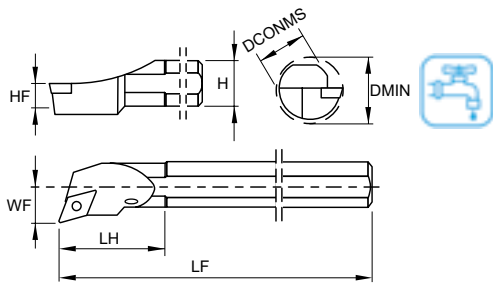
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S10M SDQC R/L 07 | -        | -          | P0200601 | XT07     |
| S12M SDQC R/L 07 | -        | -          | P0250700 | XT07     |
| S16R SDQC R/L 07 | -        | -          | P0250700 | XT07     |
| S20S SDQC R/L 07 | -        | -          | P0250700 | XT07     |
| S20S SDQC R/L 11 | -        | -          | P0401100 | XT15-S35 |
| S25T SDQC R/L 11 | -        | -          | P0401100 | XT15-S35 |
| S32U SDQC R/L 11 | CD110301 | T05003500  | P0351500 | XT15-S35 |
| S40V SDQC R/L 11 | CD110301 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212318600  | 212318700 | A12K SDQC R/L 07 | 12              | 11 | 5,5  | 125 | 25 | 9  | 16   | DC.. 0702.. | 0,100 |       |   |
| 212318800  | 212318900 | A16M SDQC R/L 07 | 16              | 15 | 7,5  | 150 | 30 | 11 | 20   | DC.. 0702.. | 0,200 |       |   |
| 212319000  | 212319100 | A20Q SDQC R/L 11 | 20              | 18 | 9,0  | 180 | 35 | 13 | 24   | DC.. 11T3.. | 0,400 |       |   |
| 212319200  | 212319300 | A25R SDQC R/L 11 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | DC.. 11T3.. | 0,700 |       |   |
| 212319400  | 212319500 | A32S SDQC R/L 11 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | DC.. 11T3.. | 1,400 |       |   |
| 212319600  | 212319700 | A40T SDQC R/L 11 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | DC.. 11T3.. | 2,650 |       |   |

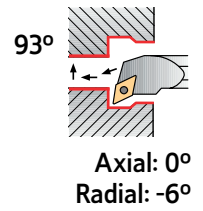
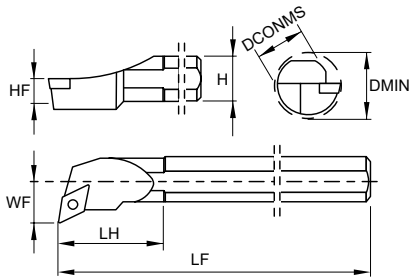
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| A12K SDQC R/L 07 |          |            |          |          |
| A16M SDQC R/L 07 | -        | -          | P0250700 | XT07     |
| A20Q SDQC R/L 11 | -        | -          | P0401100 | XT15-S35 |
| A25R SDQC R/L 11 | -        | -          | P0401100 | XT15-S35 |
| A32S SDQC R/L 11 | CD110301 | T05003500  | P0351500 | XT15-S35 |
| A40T SDQC R/L 11 | CD110301 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212144700  | 212144600 | S10M SDUC R/L 07 | 10              | 9  | 4,5  | 150 | 25 | 7  | 13   | DC.. 0702.. | 0,060 | ⊗     | ⊗ |
| 212028500  | 212028600 | S12M SDUC R/L 07 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | DC.. 0702.. | 0,150 | ⊗     | ⊗ |
| 212319800  | 212319900 | S12Q SDUC R/L 07 | 12              | 11 | 5,5  | 180 | 25 | 9  | 16   | DC.. 0702.. | 0,150 | ⊗     | ⊗ |
| 212028700  | 212028800 | S16R SDUC R/L 07 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | DC.. 0702.. | 0,300 | ⊗     | ⊗ |
| 212144900  | 212144800 | S20S SDUC R/L 07 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | DC.. 0702.. | 0,550 | ⊗     | ⊗ |
| 212036800  | 212028900 | S20S SDUC R/L 11 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | DC.. 11T3.. | 0,550 | ⊗     | ⊗ |
| 212029000  | 212038400 | S25T SDUC R/L 11 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | DC.. 11T3.. | 0,700 | ⊗     | ⊗ |
| 212145200  | 212145100 | S32U SDUC R/L 11 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | DC.. 11T3.. | 2,050 | ○     | ○ |
| 212145400  | 212145300 | S40V SDUC R/L 11 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | DC.. 11T3.. | 3,750 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

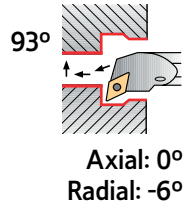
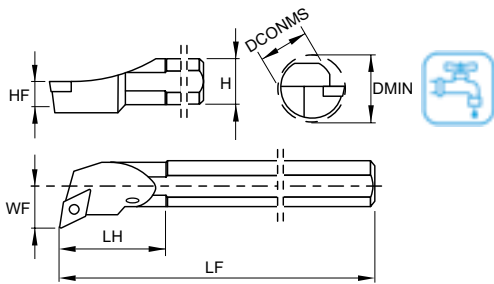
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S10M SDUC R/L 07 | -        | -          | P0200601 | XT07     |
| S12M SDUC R/L 07 | -        | -          | P0250700 | XT07     |
| S12Q SDUC R/L 07 | -        | -          | P0250700 | XT07     |
| S16R SDUC R/L 07 | -        | -          | P0250700 | XT07     |
| S20S SDUC R/L 07 | -        | -          | P0250700 | XT07     |
| S20S SDUC R/L 11 | -        | -          | P0401100 | XT15-S35 |
| S25T SDUC R/L 11 | -        | -          | P0401100 | XT15-S35 |
| S32U SDUC R/L 11 | CD110301 | T05003500  | P0351500 | XT15-S40 |
| S40V SDUC R/L 11 | CD110301 | T05003500  | P0351500 | XT15-S40 |



## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212320000  | 212320100 | A12K SDUC R/L 07 | 12              | 11 | 5,5  | 125 | 25 | 9  | 16   | DC.. 0702.. | 0,100 | ⊗     | ⊗ |
| 212320200  | 212320300 | A16M SDUC R/L 07 | 16              | 15 | 7,5  | 150 | 30 | 11 | 20   | DC.. 0702.. | 0,200 | ⊗     | ⊗ |
| 212320400  | 212320500 | A20Q SDUC R/L 11 | 20              | 18 | 9,0  | 180 | 35 | 13 | 24   | DC.. 11T3.. | 0,400 | ⊗     | ⊗ |
| 212320600  | 212320700 | A25R SDUC R/L 11 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | DC.. 11T3.. | 0,700 | ⊗     | ⊗ |
| 212320800  | 212320900 | A32S SDUC R/L 11 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | DC.. 11T3.. | 1,400 | ⊗     | ⊗ |
| 212321000  | 212321100 | A40T SDUC R/L 11 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | DC.. 11T3.. | 2,650 | ⊗     | ⊗ |

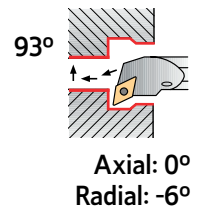
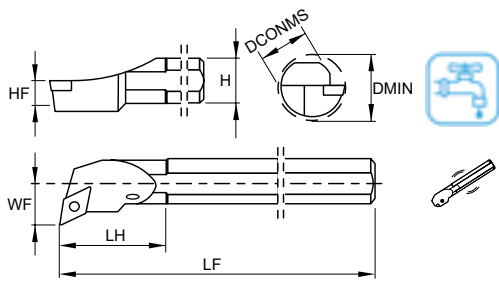
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| A12K SDUC R/L 07 | -        | -          | P0250700 | XT07     |
| A16M SDUC R/L 07 | -        | -          | P0250700 | XT07     |
| A20Q SDUC R/L 11 | -        | -          | P0401100 | XT15-S35 |
| A25R SDUC R/L 11 | -        | -          | P0401100 | XT15-S35 |
| A32S SDUC R/L 11 | CD110301 | T05003500  | P0351500 | XT15-S35 |
| A40T SDUC R/L 11 | CD110301 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |     |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF  | LF  | LH | WF | DMIN |             |       | R     | L |
| 212321800  | 212321300 | E10M SDUC R/L 07 | 10              | 9  | 4,5 | 150 | 25 | 7  | 13   | DC.. 0702.. | 0,150 | ⊗     | ⊗ |
| 212322000  | 212322100 | E12Q SDUC R/L 07 | 12              | 11 | 5,5 | 180 | 25 | 9  | 16   | DC.. 0702.. | 0,250 | ⊗     | ⊗ |
| 212322200  | 212321700 | E16R SDUC R/L 07 | 16              | 15 | 7,5 | 200 | 30 | 11 | 20   | DC.. 0702.. | 0,600 | ⊗     | ⊗ |

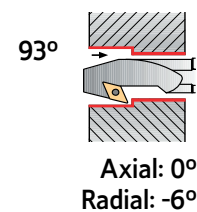
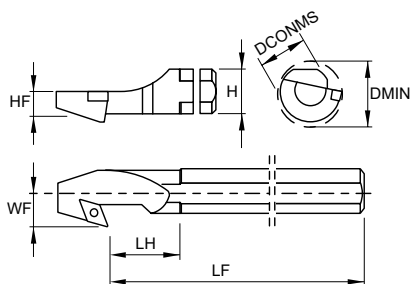
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Screw    | Wrench |
|------------------|----------|--------|
| E10M SDUC R/L 07 | P0200601 | XT07   |
| E12M SDUC R/L 07 | P0250700 | XT07   |
| E16R SDUC R/L 07 | P0250700 | XT07   |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference           | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                     | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212145600  | 212145500 | S12M SDUC R/L 07-BT | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | DC.. 0702.. | 0,150 | ⊗     | ⊗ |
| 212145800  | 212145700 | S16R SDUC R/L 07-BT | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | DC.. 0702.. | 0,300 | ⊗     | ⊗ |
| 212146000  | 212145900 | S20S SDUC R/L 07-BT | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | DC.. 0702.. | 0,550 | ⊗     | ⊗ |
| 212146200  | 212146100 | S20S SDUC R/L 11-BT | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | DC.. 11T3.. | 0,550 | ⊗     | ⊗ |
| 212146400  | 212146300 | S25T SDUC R/L 11-BT | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | DC.. 11T3.. | 0,700 | ⊗     | ⊗ |
| 212146600  | 212146500 | S32U SDUC R/L 11-BT | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | DC.. 11T3.. | 2,050 | ○     | ○ |
| 212146800  | 212146700 | S40V SDUC R/L 11-BT | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | DC.. 11T3.. | 3,750 | ○     | ○ |

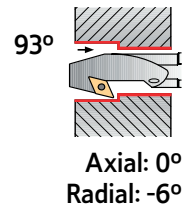
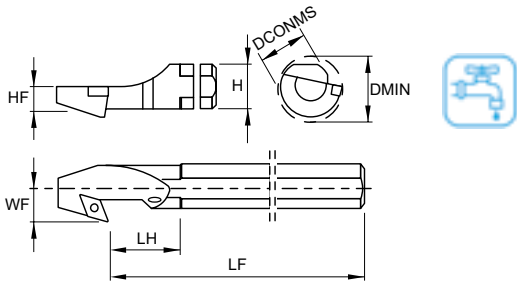
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Shim     | Shim Screw | Screw    | Wrench   |
|---------------------|----------|------------|----------|----------|
| S12M SDUC R/L 07-BT | -        | -          | P0250700 | XT07     |
| S16R SDUC R/L 07-BT | -        | -          | P0250700 | XT07     |
| S20S SDUC R/L 07-BT | -        | -          | P0250700 | XT07     |
| S20S SDUC R/L 11-BT | -        | -          | P0400802 | XT15-S35 |
| S25T SDUC R/L 11-BT | -        | -          | P0401100 | XT15-S35 |
| S32U SDUC R/L 11-BT | CD110301 | T05003500  | P0351500 | XT15-S35 |
| S40V SDUC R/L 11-BT | CD110301 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference           | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|---------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                     | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212322400  | 212322500 | A12K SDUC R/L 07-BT | 12              | 11 | 5,5  | 125 | 25 | 9  | 16   | DC.. 0702.. | 0,100 |       |   |
| 212322600  | 212322700 | A16M SDUC R/L 07-BT | 16              | 15 | 7,5  | 150 | 30 | 11 | 20   | DC.. 0702.. | 0,200 |       |   |
| 212322800  | 212322900 | A20Q SDUC R7L 11-BT | 20              | 18 | 9,0  | 180 | 35 | 13 | 24   | DC.. 11T3.. | 0,400 |       |   |
| 212323000  | 212323100 | A25R SDUC R/L 11-BT | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | DC.. 11T3.. | 0,700 |       |   |

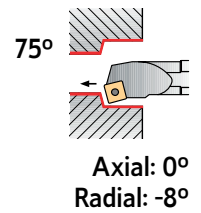
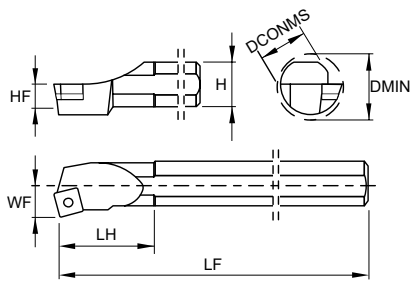
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference    | Screw               | Wrench   |
|---------------------|---------------------|----------|
|                     | A12K SDUC R/L 07-BT | P0250700 |
| A16M SDUC R/L 07-BT | P0250700            | XT07     |
| A20Q SDUC R7L 11-BT | P0400802            | XT15-S35 |
| A25R SDUC R/L 11-BT | P0401100            | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212150400  | 212150300 | S16R SSKC R/L 09 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | SC.. 09T3.. | 0,300 | ⊗     | ⊗ |
| 212150600  | 212150500 | S20S SSKC R/L 09 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | SC.. 09T3.. | 0,550 | ⊗     | ⊗ |
| 212045800  | 212150700 | S25T SSKC R/L 09 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | SC.. 09T3.. | 0,700 | ⊗     | ⊗ |
| 212045900  | 212150800 | S32U SSKC R/L 12 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | SC.. 1204.. | 2,050 | ○     | ○ |
| 212151000  | 212150900 | S40V SSKC R/L 12 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | SC.. 1204.. | 3,750 | ○     | ○ |
| 212151200  | 212151100 | S50W SSKC R/L 12 | 50              | 47 | 23,5 | 450 | 65 | 35 | 61   | SC.. 1204.. | 6,500 | ○     | ○ |

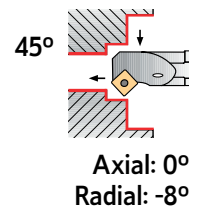
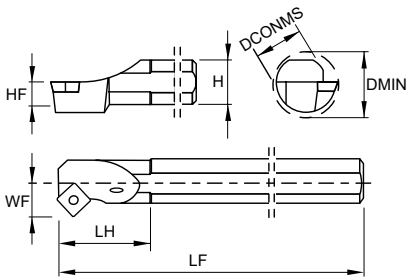
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S16R SSKC R/L 09 | -        | -          | P0400802 | XT15-S35 |
| S20S SSKC R/L 09 | -        | -          | P0400802 | XT15-S35 |
| S25T SSKC R/L 09 | -        | -          | P0400802 | XT15-S35 |
| S32U SSKC R/L 12 | CC120400 | T06004000  | P0401400 | XT15-S40 |
| S40V SSKC R/L 12 | CC120400 | T06004000  | P0401400 | XT15-S40 |
| S50W SSKC R/L 12 | CC120400 | T06004000  | P0401400 | XT15-S40 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212323200  | 212323300 | A16M SSSC R/L 09 | 16              | 15 | 7,5  | 150 | 30 | 11 | 20   | SC.. 09T3.. | 0,300 |       |   |
| 212323400  | 212323500 | A20Q SSSC R/L 09 | 20              | 18 | 9,0  | 180 | 35 | 13 | 24   | SC.. 09T3.. | 0,550 |       |   |
| 212323600  | 212323700 | A25R SSSC R/L 09 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | SC.. 09T3.. | 0,700 |       |   |

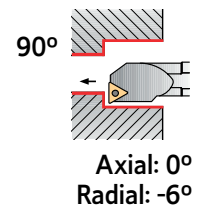
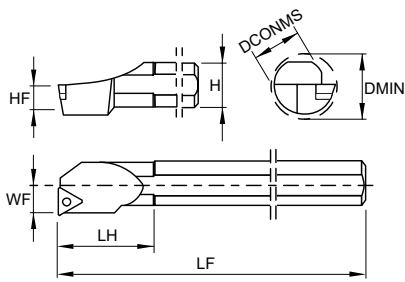
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Screw    | Wrench   |
|------------------|----------|----------|
| A16M SSSC R/L 09 | P0400802 | XT15-S35 |
| A20Q SSSC R/L 09 | P0400802 | XT15-S35 |
| A25R SSSC R/L 09 | P0400802 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212159500  | 212159400 | S10M STFC R/L 09 | 10              | 9  | 4,5  | 150 | 25 | 7  | 13   | TC.. 0902.. | 0,060 | ⊗     | ⊗ |
| 212159700  | 212159600 | S12M STFC R/L 09 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | TC.. 0902.. | 0,150 | ⊗     | ⊗ |
| 212039500  | 212159800 | S12M STFC R/L 11 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | TC.. 1102.. | 0,150 | ⊗     | ⊗ |
| 212323800  | 212323900 | S12Q STFC R/L 11 | 12              | 11 | 5,5  | 180 | 25 | 9  | 16   | TC.. 1102.. | 0,050 | ⊗     | ⊗ |
| 212160000  | 212159900 | S16R STFC R/L 11 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | TC.. 1102.. | 0,300 | ⊗     | ⊗ |
| 212021000  | 212160100 | S20S STFC R/L 11 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | TC.. 1102.. | 0,550 | ⊗     | ⊗ |
| 212250700  | 212324000 | S20S STFC R/L 16 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | TC.. 16T3.. | 0,550 | ⊗     | ⊗ |
| 212160300  | 212160200 | S25T STFC R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | TC.. 16T3.. | 0,700 | ⊗     | ⊗ |
| 212160500  | 212160400 | S32U STFC R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | TC.. 16T3.. | 2,050 | ○     | ○ |
| 212160700  | 212160600 | S40V STFC R/L 16 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | TC.. 16T3.. | 3,750 | ○     | ○ |

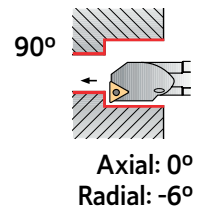
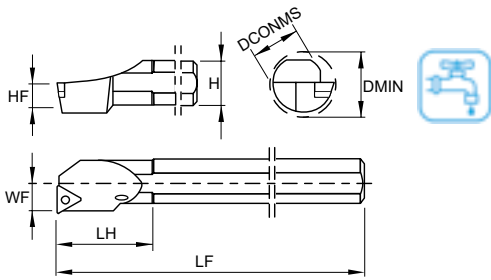
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S10M STFC R/L 09 | -        | -          | P0220600 | XT06     |
| S12M STFC R/L 09 | -        | -          | P0220600 | XT06     |
| S12M STFC R/L 11 | -        | -          | P0250700 | XT07     |
| S12Q STFC R/L 11 | -        | -          | P0250700 | XT07     |
| S16R STFC R/L 11 | -        | -          | P0250700 | XT07     |
| S20S STFC R/L 11 | -        | -          | P0250700 | XT07     |
| S20S STFC R/L 16 | -        | -          | P0401100 | XT15-S35 |
| S25T STFC R/L 16 | -        | -          | P0401100 | XT15-S35 |
| S32U STFC R/L 16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| S40V STFC R/L 16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212324100  | 212324200 | A10H STFC R/L 09 | 10              | 9  | 4,5  | 100 | 25 | 7  | 13   | TC.. 0902.. | 0,040 |       |   |
| 212324300  | 212324400 | A12K STFC R/L 11 | 12              | 11 | 5,5  | 125 | 25 | 9  | 16   | TC.. 1102.. | 0,100 |       |   |
| 212324500  | 212324600 | A16M STFC R/L 11 | 16              | 15 | 7,5  | 150 | 30 | 11 | 20   | TC.. 1102.. | 0,200 |       |   |
| 212324700  | 212324800 | A20Q STFC R/L 11 | 20              | 18 | 9,0  | 180 | 35 | 13 | 24   | TC.. 1102.. | 0,400 |       |   |
| 212324900  | 212325000 | A25R STFC R/L 16 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | TC.. 16T3.. | 0,700 |       |   |
| 212325100  | 212325200 | A32S STFC R/L 16 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | TC.. 16T3.. | 1,400 |       |   |
| 212325300  | 212325400 | A40T STFC R/L 16 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | TC.. 16T3.. | 2,650 |       |   |

Stock item | Produto de stock | Itens de stock

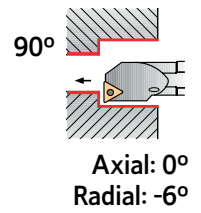
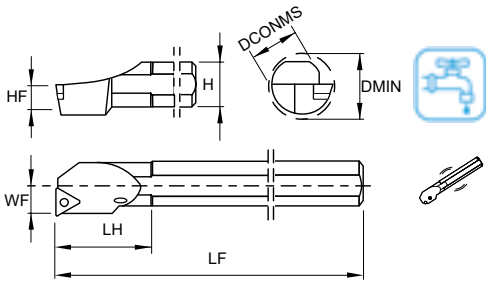
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| A10H STFC R/L 09 | -        | -          | P0220600 | XT06     |
| A12K STFC R/L 11 | -        | -          | P0250700 | XT07     |
| A16M STFC R/L 11 | -        | -          | P0250700 | XT07     |
| A20Q STFC R/L 11 | -        | -          | P0250700 | XT07     |
| A25R STFC R/L 16 | -        | -          | P0401100 | XT15-S35 |
| A32S STFC R/L 16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| A40T STFC R/L 16 | CT160302 | T05003500  | P0351500 | XT15-S35 |



## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |     |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF  | LF  | LH | WF | DMIN |            |       | R     | L |
| 212326200  | 212326300 | E12Q STFC R/L 11 | 12              | 11 | 5,5 | 180 | 25 | 9  | 16   | TC..1102.. | 0,250 |       |   |
| 212326400  | 212326500 | E16R STFC R/L 11 | 16              | 15 | 7,5 | 200 | 30 | 11 | 20   | TC..1102.. | 0,600 |       |   |

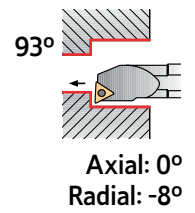
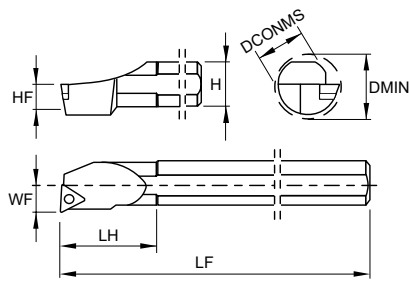
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Screw            | Wrench   |
|------------------|------------------|----------|
|                  | E12M STFC R/L 11 | P0250700 |
| E16R STFC R/L 11 | P0400802         | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212029100  | 212029200 | S12M STUC R/L 11 | 12              | 11 | 5,5  | 150 | 25 | 9  | 16   | TC.. 1102.. | 0,150 |       |   |
| 212029300  | 212029400 | S16R STUC R/L 16 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | TC.. 16T3.. | 0,300 |       |   |
| 212036900  | 212029500 | S20S STUC R/L 16 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | TC.. 16T3.. | 0,550 |       |   |
| 212029600  | 212029700 | S25T STUC R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | TC.. 16T3.. | 0,700 |       |   |
| 212160800  | 212044600 | S32U STUC R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | TC.. 16T3.. | 2,050 |       |   |

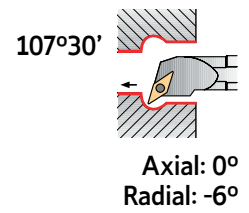
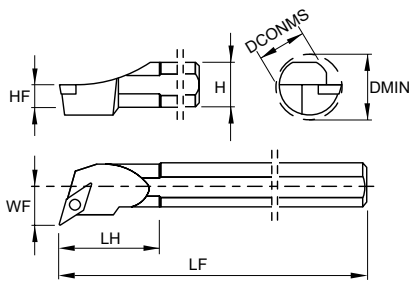
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S12M STUC R/L 11 | -        | -          | P0250700 | XT07     |
| S16R STUC R/L 16 | -        | -          | P0401100 | XT15-S35 |
| S20S STUC R/L 16 | -        | -          | P0401100 | XT15-S35 |
| S25T STUC R/L 16 | -        | -          | P0401100 | XT15-S35 |
| S32U STUC R/L 16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert     | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |            |       | R     | L |
| 212165000  | 212165100 | S16R SVQC R/L 11 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | VC..1103.. | 0,300 |       |   |
| 212165200  | 212165300 | S20S SVQC R/L 11 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | VC..1103.. | 0,550 |       |   |
| 212165500  | 212165400 | S16R SVQC R/L 13 | 16              | 15 | 7,5  | 200 | 30 | 13 | 22   | VC..1103.. | 0,300 |       |   |
| 212165700  | 212165600 | S20S SVQC R/L 13 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | VC..1103.. | 0,550 |       |   |
| 212165900  | 212165800 | S25T SVQC R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | VC..1604.. | 0,700 |       |   |

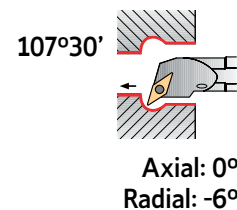
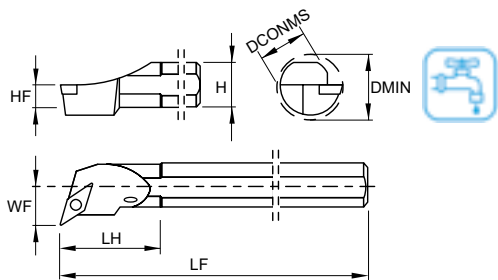
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S16R SVQC R/L 11 | -        | -          | P0250700 | XT07     |
| S20S SVQC R/L 11 | -        | -          | P0250700 | XT07     |
| S16R SVQC R/L 13 | -        | -          | P0300900 | XT08     |
| S20S SVQC R/L 13 | -        | -          | P0300900 | XT08     |
| S25T SVQC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212326600  | 212326700 | A16M SVQC R/L 11 | 16              | 15 | 7,5  | 150 | 30 | 11 | 20   | VC.. 1103.. | 0,200 |       |   |
| 212326800  | 212326900 | A20Q SVQC R/L 11 | 20              | 18 | 9,0  | 180 | 35 | 13 | 24   | VC.. 1103.. | 0,400 |       |   |
| 212327000  | 212327100 | A25R SVQC R/L 16 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | VC.. 1604.. | 0,700 |       |   |
| 212327200  | 212327300 | A32S SVQC R/L 16 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | VC.. 1604.. | 1,400 |       |   |
| 212327400  | 212327500 | A40T SVQC R/L 16 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | VC.. 1604.. | 2,650 |       |   |

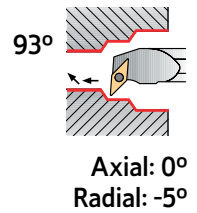
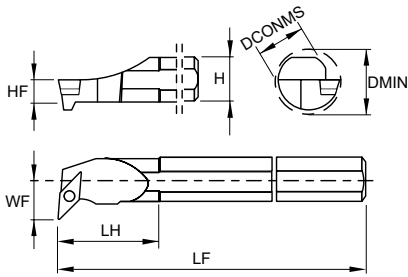
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| A16M SVQC R/L 11 | -        | -          | P0250700 | XT07     |
| A20Q SVQC R/L 11 | -        | -          | P0250700 | XT07     |
| A25R SVQC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| A32S SVQC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| A40T SVQC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212056200  | 212327600 | S25T SVUB R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | VB.. 1604.. | 0,700 | ⊗     | ⊗ |
| 212327700  | 212327800 | S32U SVUB R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | VB.. 1604.. | 2,050 | ○     | ○ |
| 212327900  | 212328000 | S40V SVUB R/L 16 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | VB.. 1604.. | 3,750 | ○     | ○ |

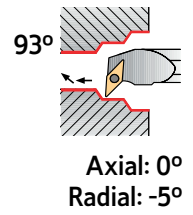
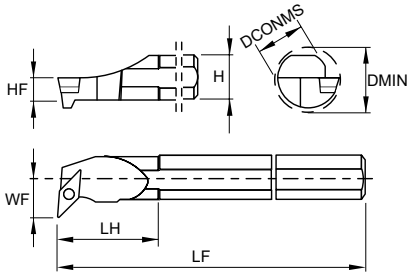
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S25T SVUB R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| S32U SVUB R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| S40V SVUB R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212166000  | 212166100 | S16R SVUC R/L 11 | 16              | 15 | 7,5  | 200 | 30 | 11 | 20   | VC.. 1103.. | 0,300 | ⊗     | ⊗ |
| 212166200  | 212166300 | S20S SVUC R/L 11 | 20              | 18 | 9,0  | 250 | 35 | 13 | 24   | VC.. 1103.. | 0,550 | ⊗     | ⊗ |
| 212328100  | 212166400 | S25T SVUC R/L 16 | 25              | 23 | 11,5 | 300 | 40 | 17 | 31   | VC.. 1604.. | 0,700 | ⊗     | ⊗ |
| 212328200  | 212166500 | S32U SVUC R/L 16 | 32              | 30 | 15,0 | 350 | 50 | 22 | 39   | VC.. 1604.. | 2,050 | ○     | ○ |
| 212166700  | 212166600 | S40V SVUC R/L 16 | 40              | 37 | 18,5 | 400 | 60 | 27 | 48   | VC.. 1604.. | 3,750 | ○     | ○ |

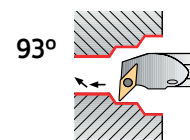
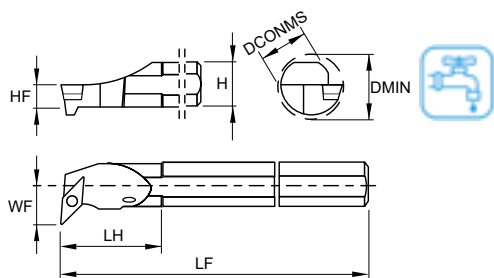
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| S16R SVUC R/L 11 | -        | -          | P0250700 | XT07     |
| S20S SVUC R/L 11 | -        | -          | P0250700 | XT07     |
| S25T SVUC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| S32U SVUC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| S40V SVUC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



Axial: 0°  
Radial: -5°

| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |    |      | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|------|-----|----|----|------|-------------|-------|-------|---|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF | DMIN |             |       | R     | L |
| 212328300  | 212328400 | A16M SVUC R/L 11 | 16              | 15 | 7,5  | 150 | 30 | 11 | 20   | VC.. 1103.. | 0,200 | ⊗     | ⊗ |
| 212328500  | 212328600 | A20Q SVUC R/L 11 | 20              | 18 | 9,0  | 180 | 35 | 13 | 24   | VC.. 1103.. | 0,400 | ⊗     | ⊗ |
| 212328700  | 212328800 | A25R SVUC R/L 16 | 25              | 23 | 11,5 | 200 | 40 | 17 | 31   | VC.. 1604.. | 0,700 | ⊗     | ⊗ |
| 212328900  | 212329000 | A32S SVUC R/L 16 | 32              | 30 | 15,0 | 250 | 50 | 22 | 39   | VC.. 1604.. | 1,400 | ⊗     | ⊗ |
| 212329100  | 212329200 | A40T SVUC R/L 16 | 40              | 37 | 18,5 | 300 | 60 | 27 | 48   | VC.. 1604.. | 2,650 | ⊗     | ⊗ |

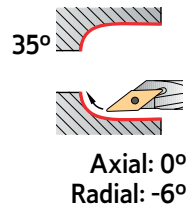
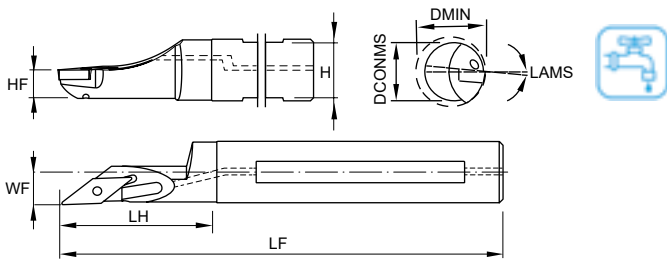
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Shim     | Shim Screw | Screw    | Wrench   |
|------------------|----------|------------|----------|----------|
| A16M SVUC R/L 11 | -        | -          | P0250700 | XT07     |
| A20Q SVUC R/L 11 | -        | -          | P0250700 | XT07     |
| A25R SVUC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| A32S SVUC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| A40T SVUC R/L 16 | CV160300 | T05003500  | P0351500 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS




| Order Code |           | Reference        | Dimensions (mm) |    |      |     |    |      |      |      |             | Insert | WT | Stock |  |
|------------|-----------|------------------|-----------------|----|------|-----|----|------|------|------|-------------|--------|----|-------|--|
| R          | L         |                  | DCONMS          | H  | HF   | LF  | LH | WF   | LAMS | DMIN | R           |        |    | L     |  |
| 212362400  | 212362500 | A16M SVJC R/L 11 | 16              | 15 | 7,5  | 150 | 30 | 8,5  | 22   | 22   | VC.. 1103.. | 0,200  | ⊗  | ⊗     |  |
| 212362600  | 212362700 | A20Q SVJC R/L 11 | 20              | 18 | 9,0  | 180 | 35 | 10,5 | 25   | 25   | VC.. 1103.. | 0,300  | ⊗  | ⊗     |  |
| 212362800  | 212362900 | A25R SVJC R/L 16 | 25              | 23 | 11,5 | 200 | 40 | 13,0 | 28   | 28   | VC.. 1604.. | 0,650  | ⊗  | ⊗     |  |

⊗ Stock item | Produto de stock | Itens de stock

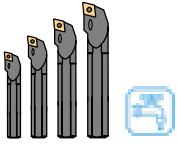
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Screw            | Wrench   |
|------------------|------------------|--|
|                  | A16M SVJC R/L 11 |  P0250700 |
| A20Q SVJC R/L 11 | P0250700         | XT07   |
| A25R SVJC R/L 16 | P0401100         | XT15-S35   |

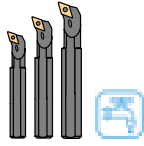


## PK SCLC 95°



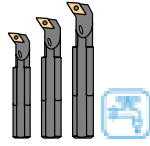
PAGE C - 817 CC.. 0602..

## PK SDQC 107°30'



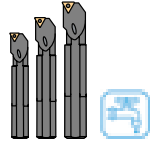
PAGE C - 818 DC.. 0702..

## PK SDUC 93°



PAGE C - 819 DC.. 0702..

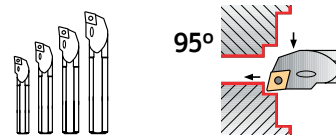
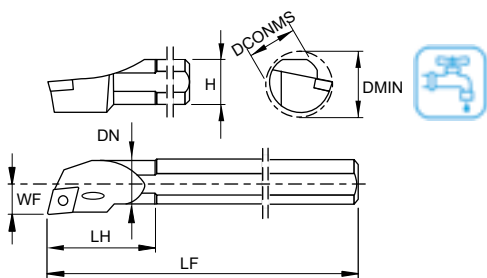
## PK STFC 90°



PAGE C - 820 TC.. 1102..



## INTERNAL TOOLHOLDERS SET



| Order Code |           | Reference        | Dimensions (mm) |    |     |    |    |      |    | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|----|----|------|----|-------------|-------|-------|---|
| R Pack     | R         |                  | DCONMS          | DN | LF  | LH | WF | DMIN | H  |             |       | Pack  | R |
| 212359300  | 212250500 | A0608H SCLC R 06 | 8               | 6  | 100 | 25 | 4  | 10   | 7  | CC.. 0602.. | 0,400 | ⊗     | ⊗ |
|            | 212359400 | A0810J SCLC R 06 | 10              | 8  | 110 | 32 | 6  | 12   | 9  | CC.. 0602.. |       |       | ⊗ |
|            | 212250600 | A1012K SCLC R 06 | 12              | 10 | 125 | 38 | 7  | 14   | 11 | CC.. 0602.. |       |       | ⊗ |
|            | 212167900 | A1216M SCLC R 06 | 16              | 12 | 150 | 50 | 9  | 18   | 15 | CC.. 0602.. |       |       | ⊗ |

| Order Code |           | Reference        | Dimensions (mm) |    |     |    |    |      |    | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|----|----|------|----|-------------|-------|-------|---|
| L Pack     | L         |                  | DCONMS          | DN | LF  | LH | WF | DMIN | H  |             |       | Pack  | L |
| 212359500  | 212359600 | A0608H SCLC L 06 | 8               | 6  | 100 | 25 | 4  | 10   | 7  | CC.. 0602.. | 0,400 | ⊗     | ⊗ |
|            | 212359700 | A0810J SCLC L 06 | 10              | 8  | 110 | 32 | 6  | 12   | 9  | CC.. 0602.. |       |       | ⊗ |
|            | 212359800 | A1012K SCLC L 06 | 12              | 10 | 125 | 38 | 7  | 14   | 11 | CC.. 0602.. |       |       | ⊗ |
|            | 212359900 | A1216M SCLC L 06 | 16              | 12 | 150 | 50 | 9  | 18   | 15 | CC.. 0602.. |       |       | ⊗ |

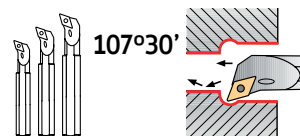
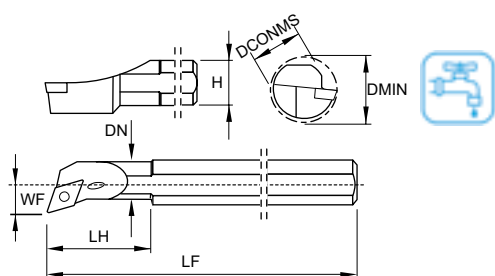
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Screw    | Wrench |
|--------------------|----------|--------|
| A0608H SCLC R/L 06 | P0200601 | XT07   |
| A0810J SCLC R/L 06 | P0200601 | XT07   |
| A1012K SCLC R/L 06 | P0250700 | XT07   |
| A1216M SCLC R/L 06 | P0250700 | XT07   |

## INTERNAL TOOLHOLDERS SET



| Order Code |           | Reference        | Dimensions (mm) |    |     |    |    |      |    | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|----|----|------|----|-------------|-------|-------|---|
| R Pack     | R         |                  | DCONMS          | DN | LF  | LH | WF | DMIN | H  |             |       | Pack  | R |
|            | 212360100 | A0810J SDQC R 07 | 10              | 8  | 110 | 32 | 7  | 12,5 | 9  | DC.. 0702.. |       | ⊗     |   |
| 212360000  | 212360200 | A1012K SDQC R 07 | 12              | 10 | 125 | 38 | 9  | 15,5 | 11 | DC.. 0702.. | 0,350 | ⊗     |   |
|            | 212360300 | A1216M SDQC R 07 | 16              | 12 | 150 | 50 | 11 | 19,5 | 15 | DC.. 0702.. |       | ⊗     |   |

| Order Code |           | Reference        | Dimensions (mm) |    |     |    |    |      |    | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|----|----|------|----|-------------|-------|-------|---|
| L Pack     | L         |                  | DCONMS          | DN | LF  | LH | WF | DMIN | H  |             |       | Pack  | L |
|            | 212360500 | A0810J SDQC L 07 | 10              | 8  | 110 | 32 | 7  | 12,5 | 9  | DC.. 0702.. |       | ⊗     |   |
| 212360400  | 212360600 | A1012K SDQC L 07 | 12              | 10 | 125 | 38 | 9  | 15,5 | 11 | DC.. 0702.. | 0,350 | ⊗     |   |
|            | 212360700 | A1216M SDQC L 07 | 16              | 12 | 150 | 50 | 11 | 19,5 | 15 | DC.. 0702.. |       | ⊗     |   |

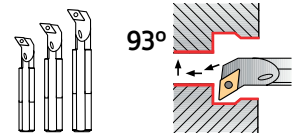
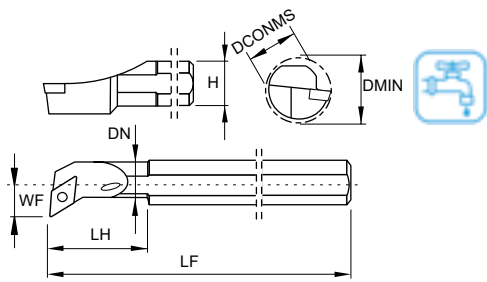
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Screw              | Wrench   |
|--------------------|--------------------|----------|
|                    | A0810J SDQC R/L 07 | P0200601 |
| A1012K SDQC R/L 07 | P0250700           | XT07     |
| A1216M SDQC R/L 07 | P0250700           | XT07     |

## INTERNAL TOOLHOLDERS SET



| Order Code |           | Reference        | Dimensions (mm) |    |     |    |    |      |    | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|----|----|------|----|-------------|-------|-------|---|
| R Pack     | R         |                  | DCONMS          | DN | LF  | LH | WF | DMIN | H  |             |       | Pack  | R |
| 212360800  | 212360900 | A0810J SDUC R 07 | 10              | 8  | 110 | 32 | 7  | 12,5 | 9  | DC.. 0702.. | 0,350 |       | ⊗ |
|            | 212361000 | A1012K SDUC R 07 | 12              | 10 | 125 | 38 | 9  | 15,5 | 11 | DC.. 0702.. |       | ⊗     | ⊗ |
|            | 212361100 | A1216M SDUC R 07 | 16              | 12 | 150 | 50 | 11 | 19,5 | 15 | DC.. 0702.. |       | ⊗     | ⊗ |

| Order Code |           | Reference        | Dimensions (mm) |    |     |    |    |      |    | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|----|----|------|----|-------------|-------|-------|---|
| L Pack     | L         |                  | DCONMS          | DN | LF  | LH | WF | DMIN | H  |             |       | Pack  | L |
| 212361200  | 212361300 | A0810J SDUC L 07 | 10              | 8  | 110 | 32 | 7  | 12,5 | 9  | DC.. 0702.. | 0,350 |       | ⊗ |
|            | 212361400 | A1012K SDUC L 07 | 12              | 10 | 125 | 38 | 9  | 15,5 | 11 | DC.. 0702.. |       | ⊗     | ⊗ |
|            | 212361500 | A1216M SDUC L 07 | 16              | 12 | 150 | 50 | 11 | 19,5 | 15 | DC.. 0702.. |       | ⊗     | ⊗ |

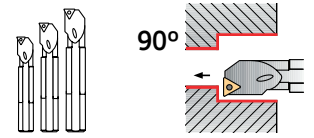
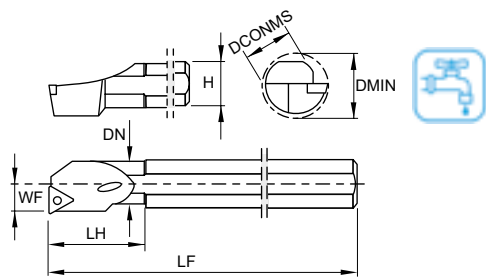
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Screw    | Wrench |
|--------------------|----------|--------|
| A0810J SDUC R/L 07 | P0200601 | XT07   |
| A1012K SDUC R/L 07 | P0250700 | XT07   |
| A1216M SDUC R/L 07 | P0250700 | XT07   |

## INTERNAL TOOLHOLDERS SET



TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

| Order Code |           | Reference        | Dimensions (mm) |    |     |    |    |      |    | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|----|----|------|----|-------------|-------|-------|---|
| R Pack     | R         |                  | DCONMS          | DN | LF  | LH | WF | DMIN | H  |             |       | Pack  | R |
|            | 212361700 | A0810J STFC R 11 | 10              | 8  | 110 | 32 | 7  | 12,5 | 9  | TC.. 1102.. |       | ⊗     |   |
| 212361600  | 212361800 | A1012K STFC R 11 | 12              | 10 | 125 | 38 | 9  | 15,5 | 11 | TC.. 1102.. | 0,350 | ⊗     |   |
|            | 212361900 | A1216M STFC R 11 | 16              | 12 | 150 | 50 | 11 | 19,5 | 15 | TC.. 1102.. |       | ⊗     |   |

| Order Code |           | Reference        | Dimensions (mm) |    |     |    |    |      |    | Insert      | WT    | Stock |   |
|------------|-----------|------------------|-----------------|----|-----|----|----|------|----|-------------|-------|-------|---|
| L Pack     | L         |                  | DCONMS          | DN | LF  | LH | WF | DMIN | H  |             |       | Pack  | L |
|            | 212362100 | A0810J STFC L 11 | 10              | 8  | 110 | 32 | 7  | 12,5 | 9  | TC.. 1102.. |       | ⊗     |   |
| 212362000  | 212362200 | A1012K STFC L 11 | 12              | 10 | 125 | 38 | 9  | 15,5 | 11 | TC.. 1102.. | 0,350 | ⊗     |   |
|            | 212362300 | A1216M STFC L 11 | 16              | 12 | 150 | 50 | 11 | 19,5 | 15 | TC.. 1102.. |       | ⊗     |   |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

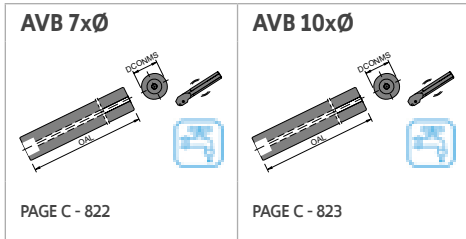
## SPARE PARTS Acessórios | Repuestos

| Cutter Reference   | Screw    | Wrench |
|--------------------|----------|--------|
| A0810J STFC R/L 11 | P0200601 | XT07   |
| A1012K STFC R/L 11 | P0250700 | XT07   |
| A1216M STFC R/L 11 | P0250700 | XT07   |

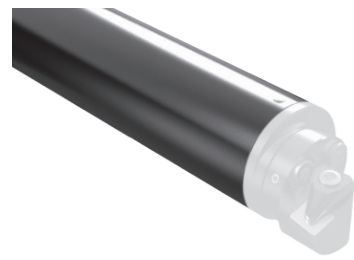
# ANTI-VIBRATION TOOLHOLDERS

Ferramentas anti-vibração | Herramientas anti-vibración

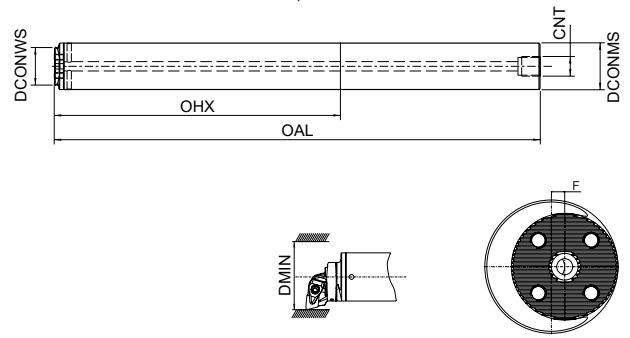
## AVB 7xØ | AVB 10xØ



## ANTI-VIBRATION CYLINDRICAL BARS



\* Maximum depth of cut: 7x Diameter





| Order Code | Reference   | Dimensions (mm) |        |      |    |     |     |       | Stock |
|------------|-------------|-----------------|--------|------|----|-----|-----|-------|-------|
|            |             | DCONMS          | DCONWS | DMIN | F  | OAL | OHX | CNT   |       |
| 212454800  | AVB16-16-7D | 16              | 16     | 20   | -  | 156 | 92  | G1/8" | ⊗     |
| 212454900  | AVB20-20-7D | 20              | 20     | 25   | -  | 200 | 120 | G1/4" | ⊗     |
| 212455000  | AVB25-25-7D | 25              | 25     | 32   | -  | 255 | 155 | G1/4" | ⊗     |
| 212455100  | AVB32-32-7D | 32              | 32     | 40   | -  | 320 | 192 | G3/8" | ⊗     |
| 212455200  | AVB40-40-7D | 40              | 40     | 50   | -  | 408 | 248 | G1/2" | ○     |
| 212455300  | AVB50-40-7D | 50              | 40     | 60   | 5  | 518 | 318 | G1/2" | ○     |
| 212455400  | AVB60-40-7D | 60              | 40     | 72   | 10 | 628 | 388 | G3/4" | ○     |

⊗ Stock item | Produto de stock | Itens de stock

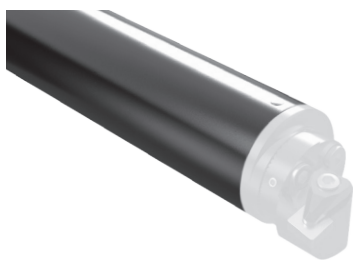
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

**Note:** The toolholder is supplied without the cutting head.

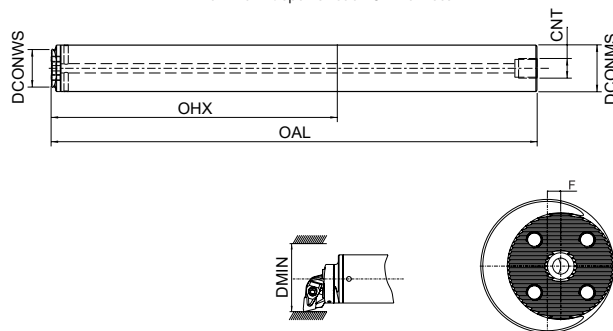
## SPARE PARTS Acessórios | Repuestos

| Reference   | Screw   | Wrench  |
|-------------|---|---|
|             |  |  |
| AVB16-16-7D | D0300800  | SS25  |
| AVB20-20-7D | D0300800  | SS25  |
| AVB25-25-7D | D0401200  | SS25  |
| AVB32-32-7D | D0501200  | SS30  |
| AVB40-40-7D | D0601200  | SS40  |
| AVB50-40-7D | D0601600  | SS50  |
| AVB60-40-7D | D0601600  | SS50  |

## ANTI-VIBRATION CYLINDRICAL BARS



\* Maximum depth of cut: 10x Diameter





| Order Code | Reference    | Dimensions (mm) |        |      |    |     |     |       | Stock |
|------------|--------------|-----------------|--------|------|----|-----|-----|-------|-------|
|            |              | DCONMS          | DCONWS | DMIN | F  | OAL | OHX | CNT   |       |
| 212455500  | AVB25-25-10D | 25              | 25     | 32   | -  | 330 | 230 | G1/4" | ⊗     |
| 212455600  | AVB32-32-10D | 32              | 32     | 40   | -  | 416 | 288 | G3/8" | ⊗     |
| 212455700  | AVB40-40-10D | 40              | 40     | 50   | -  | 528 | 368 | G1/2" | ○     |
| 212455800  | AVB50-40-10D | 50              | 40     | 60   | 5  | 668 | 468 | G1/2" | ○     |
| 212455900  | AVB60-40-10D | 60              | 40     | 72   | 10 | 808 | 568 | G3/4" | ○     |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

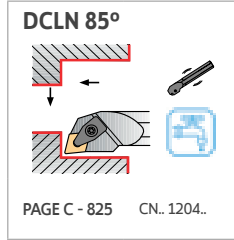
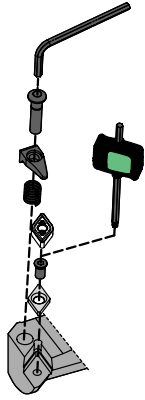
**Note:** The toolholder is supplied without the cutting head.

## SPARE PARTS Acessórios | Repuestos

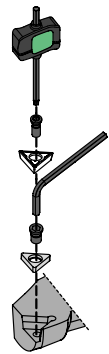
| Reference    | Screw   | Wrench  |
|--------------|---|---|
|              |  |  |
| AVB25-25-10D | D0401200  | SS25  |
| AVB32-32-10D | D0501200  | SS30  |
| AVB40-40-10D | D0601200  | SS40  |
| AVB50-40-10D | D0601600  | SS50  |
| AVB60-40-10D | D0601600  | SS50  |



## (D) DIMPLE LOCK ANTI VIBRATION FOR INTERNAL TURNING



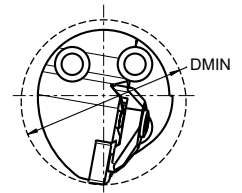
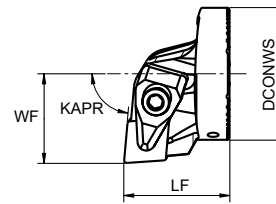
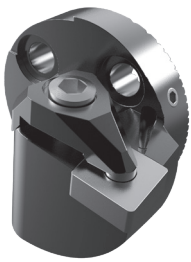
## (S) CENTER SCREW ANTI VIBRATION FOR INTERNAL TURNING



|   |  |   |   |
|---|--|---|---|
| <p><b>SCLC 85°</b></p> <p>PAGE C - 826</p> <p>CC.. 0602..<br/>CC.. 09T3..<br/>CC.. 1204..</p> | <p><b>SDNC 62°30'</b></p> <p>PAGE C - 827</p> <p>DC.. 0702..<br/>DC.. 11T3..</p> | <p><b>SDUC 87°</b></p> <p>PAGE C - 828</p> <p>DC.. 0702..<br/>DC.. 11T3..</p> | <p><b>SDXC 93°</b></p> <p>PAGE C - 829</p> <p>DC.. 0702..<br/>DC.. 11T3..</p> |
| <p><b>STFC 89°</b></p> <p>PAGE C - 830</p> <p>TC.. 1102..<br/>TC.. 16T3..</p>                 | <p><b>SVUB 87°</b></p> <p>PAGE C - 831</p> <p>VB.. 1102..<br/>VB.. 1604..</p>    |   |   |

## CUTTING HEADS FOR BARS

**KAPR = 85°**









| Order Code |           | Reference         | Dimensions (mm) |      |    |    | Insert   | Stock |   |
|------------|-----------|-------------------|-----------------|------|----|----|----------|-------|---|
| L          | R         |                   | DCONWS          | DMIN | WF | LF |          | L     | R |
| 212459100  | 212456000 | AVH32 DCLN R/L-12 | 32              | 40   | 22 | 38 | CN..1204 | ○     | ⊗ |
| 212459200  | 212456100 | AVH40 DCLN R/L-12 | 40              | 50   | 27 | 38 | CN..1204 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

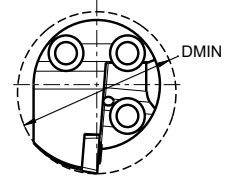
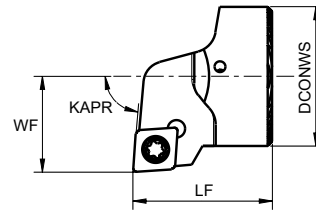
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Reference         | Shim  | Shim Screw  | Spring  | Clamp   | Clamp Screw   | Wrench  |
|-------------------|---|---|---|---|---|---|
| AVH32 DCLN R/L-12 |  |  |  |  |  |  |
| AVH40 DCLN R/L-12 | CC120300  | T06010000   | M09513  | GA07002   | D0602900  | SS40  |
| AVH40 DCLN R/L-12 | CC120300  | T06010000   | M09513  | GA07002   | D0602900  | SS40  |

## CUTTING HEADS FOR BARS

KAPR = 85°



| Order Code |           | Reference         | Dimensions (mm) |      |    |    | Insert    | Stock |   |
|------------|-----------|-------------------|-----------------|------|----|----|-----------|-------|---|
| L          | R         |                   | DCONWS          | DMIN | WF | LF |           | L     | R |
| 212459300  | 212456200 | AVH16 SCLC R/L-06 | 16              | 20   | 11 | 20 | CC.. 0602 |       |   |
| 212459400  | 212456300 | AVH20 SCLC R/L-09 | 20              | 25   | 13 | 20 | CC.. 09T3 |       |   |
| 212459500  | 212456400 | AVH25 SCLC R/L-09 | 25              | 32   | 17 | 20 | CC.. 09T3 |       |   |
| 212459600  | 212456500 | AVH32 SCLC R/L-09 | 32              | 40   | 22 | 32 | CC.. 09T3 |       |   |
| 212459700  | 212456600 | AVH40 SCLC R/L-12 | 40              | 50   | 27 | 38 | CC.. 1204 |       |   |

Stock item | Produto de stock | Itens de stock

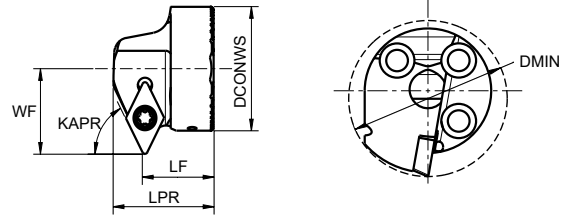
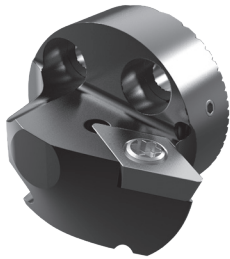
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Reference         | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| AVH16 SCLC R/L-06 |          |            |          |          |
| AVH16 SCLC R/L-06 | -        | -          | P0250700 | XT07     |
| AVH20 SCLC R/L-09 | -        | -          | P0401100 | XT15-S35 |
| AVH25 SCLC R/L-09 | -        | -          | P0401100 | XT15-S35 |
| AVH32 SCLC R/L-09 | -        | -          | P0401100 | XT15-S35 |
| AVH40 SCLC R/L-12 | CC120401 | T06004000  | P0401400 | XT15-S40 |

CUTTING HEADS FOR BARS

**KAPR = 62°30'**



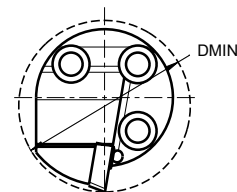
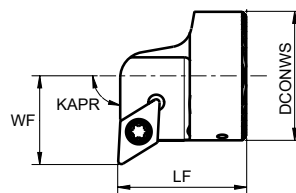
| Order Code |           | Reference         | Dimensions (mm) |      |    |    |      | Insert    | Stock |   |
|------------|-----------|-------------------|-----------------|------|----|----|------|-----------|-------|---|
| L          | R         |                   | DCONWS          | DMIN | WF | LF | LPR  |           | L     | R |
| 212460800  | 212457700 | AVH16 SDNC R/L-07 | 16              | 22   | 13 | 15 | 19,5 | DC.. 0702 |       |   |
| 212460900  | 212457800 | AVH20 SDNC R/L-07 | 20              | 27   | 15 | 15 | 19,5 | DC.. 0702 |       |   |
| 212461000  | 212457900 | AVH25 SDNC R/L-07 | 25              | 33   | 18 | 15 | 19,5 | DC.. 0702 |       |   |
| 212461100  | 212458000 | AVH32 SDNC R/L-11 | 32              | 40   | 22 | 20 | 28   | DC.. 11T3 |       |   |
| 212461200  | 212458100 | AVH40 SDNC R/L-11 | 40              | 50   | 27 | 20 | 28   | DC.. 11T3 |       |   |

## SPARE PARTS Acessórios | Repuestos

| Reference         | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| AVH16 SDNC R/L-07 |          |            |          |          |
| AVH16 SDNC R/L-07 | -        | -          | P0250700 | XT07     |
| AVH20 SDNC R/L-07 | -        | -          | P0250700 | XT07     |
| AVH25 SDNC R/L-07 | -        | -          | P0250700 | XT07     |
| AVH32 SDNC R/L-11 | CD110301 | T05003500  | P0351500 | XT15-S35 |
| AVH40 SDNC R/L-11 | CD110301 | T05003500  | P0351500 | XT15-S35 |

## CUTTING HEADS FOR BARS

KAPR = 87°



| Order Code |           | Reference         | Dimensions (mm) |      |    |    | Insert    | Stock |   |
|------------|-----------|-------------------|-----------------|------|----|----|-----------|-------|---|
| L          | R         |                   | DCONWS          | DMIN | WF | LF |           | L     | R |
| 212459800  | 212456700 | AVH16 SDUC R/L-07 | 16              | 20   | 11 | 20 | DC.. 0702 |       |   |
| 212459900  | 212456800 | AVH20 SDUC R/L-07 | 20              | 25   | 13 | 20 | DC.. 0702 |       |   |
| 212460000  | 212456900 | AVH25 SDUC R/L-11 | 25              | 32   | 17 | 20 | DC.. 11T3 |       |   |
| 212460100  | 212457000 | AVH32 SDUC R/L-11 | 32              | 40   | 22 | 32 | DC.. 11T3 |       |   |
| 212460200  | 212457100 | AVH40 SDUC R/L-11 | 40              | 50   | 27 | 32 | DC.. 11T3 |       |   |

Stock item | Produto de stock | Itens de stock

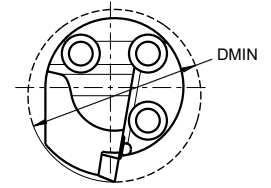
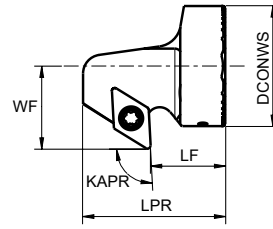
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Reference         | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| AVH16 SDUC R/L-07 |          |            |          |          |
| AVH20 SDUC R/L-07 | -        | -          | P0250700 | XT07     |
| AVH25 SDUC R/L-11 | -        | -          | P0250700 | XT07     |
| AVH32 SDUC R/L-11 | -        | -          | P0401100 | XT15-S35 |
| AVH40 SDUC R/L-11 | CD110301 | T05003500  | P0351500 | XT15-S35 |
| AVH40 SDUC R/L-11 | CD110301 | T05003500  | P0351500 | XT15-S35 |

CUTTING HEADS FOR BARS

KAPR = 93°



| Order Code |           | Reference         | Dimensions (mm) |      |    |    |      | Insert    | Stock |   |
|------------|-----------|-------------------|-----------------|------|----|----|------|-----------|-------|---|
| L          | R         |                   | DCONWS          | DMIN | WF | LF | LPR  |           | L     | R |
| 212460300  | 212457200 | AVH16 SDXC R/L-07 | 16              | 22   | 13 | 15 | 26,5 | DC.. 0702 |       |   |
| 212460400  | 212457300 | AVH20 SDXC R/L-07 | 20              | 27   | 15 | 15 | 26,5 | DC.. 0702 |       |   |
| 212460500  | 212457400 | AVH25 SDXC R/L-07 | 25              | 33   | 18 | 15 | 26,5 | DC.. 0702 |       |   |
| 212460600  | 212457500 | AVH32 SDXC R/L-11 | 32              | 40   | 22 | 20 | 38   | DC.. 11T3 |       |   |
| 212460700  | 212457600 | AVH40 SDXC R/L-11 | 40              | 50   | 27 | 20 | 38   | DC.. 11T3 |       |   |

Stock item | Produto de stock | Itens de stock

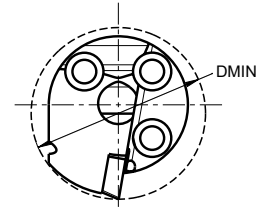
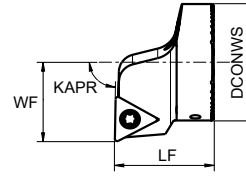
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Reference         | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| AVH16 SDXC R/L-07 |          |            |          |          |
| AVH20 SDXC R/L-07 | -        | -          | P0250700 | XT07     |
| AVH25 SDXC R/L-07 | -        | -          | P0250700 | XT07     |
| AVH32 SDXC R/L-11 | -        | -          | P0250700 | XT07     |
| AVH32 SDXC R/L-11 | CD110301 | T05003500  | P0351500 | XT15-S35 |
| AVH40 SDXC R/L-11 | CD110301 | T05003500  | P0351500 | XT15-S35 |

## CUTTING HEADS FOR BARS

KAPR = 89°



| Order Code |           | Reference         | Dimensions (mm) |      |    |    | Insert    | Stock |   |
|------------|-----------|-------------------|-----------------|------|----|----|-----------|-------|---|
| L          | R         |                   | DCONWS          | DMIN | WF | LF |           | L     | R |
| 212461700  | 212458600 | AVH16 STFC R/L-11 | 16              | 20   | 11 | 20 | TC.. 1102 | ○     | ⊗ |
| 212461800  | 212458700 | AVH20 STFC R/L-11 | 20              | 25   | 13 | 20 | TC.. 1102 | ○     | ⊗ |
| 212461900  | 212458800 | AVH25 STFC R/L-11 | 25              | 32   | 17 | 20 | TC.. 1102 | ○     | ⊗ |
| 212462000  | 212458900 | AVH32 STFC R/L-16 | 32              | 40   | 22 | 32 | TC.. 16T3 | ○     | ○ |
| 212462100  | 212459000 | AVH40 STFC R/L-16 | 40              | 50   | 27 | 32 | TC.. 16T3 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

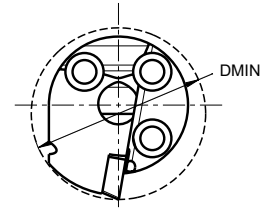
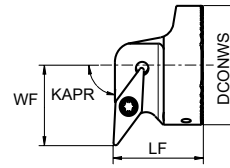
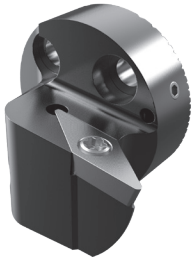
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Reference         | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| AVH16 STFC R/L-11 | -        | -          | P0250700 | XT07     |
| AVH20 STFC R/L-11 | -        | -          | P0250700 | XT07     |
| AVH25 STFC R/L-11 | -        | -          | P0250700 | XT07     |
| AVH32 STFC R/L-16 | CT160302 | T05003500  | P0351500 | XT15-S35 |
| AVH40 STFC R/L-16 | CT160302 | T05003500  | P0351500 | XT15-S35 |

## CUTTING HEADS FOR BARS

**KAPR = 87°**



| Order Code |           | Reference         | Dimensions (mm) |      |    |    | Insert    | Stock |   |
|------------|-----------|-------------------|-----------------|------|----|----|-----------|-------|---|
| L          | R         |                   | DCONWS          | DMIN | WF | LF |           | L     | R |
| 212461300  | 212458200 | AVH20 SVUB R/L-11 | 20              | 27   | 16 | 20 | VB.. 1102 | ○     | ⊗ |
| 212461400  | 212458300 | AVH25 SVUB R/L-11 | 25              | 31   | 17 | 25 | VB.. 1102 | ○     | ⊗ |
| 212461500  | 212458400 | AVH32 SVUB R/L-16 | 32              | 40   | 22 | 32 | VB.. 1604 | ○     | ⊗ |
| 212461600  | 212458500 | AVH40 SVUB R/L-16 | 40              | 50   | 27 | 32 | VB.. 1604 | ○     | ○ |

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

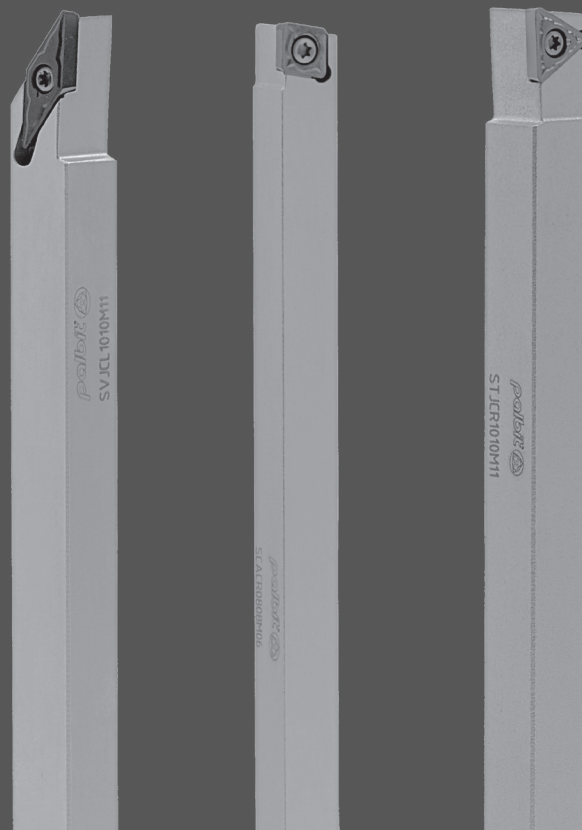
## SPARE PARTS Acessórios | Repuestos

| Reference         | Shim     | Shim Screw | Screw    | Wrench   |
|-------------------|----------|------------|----------|----------|
| AVH20 SVUB R/L-11 | -        | -          | P0250700 | XT07     |
| AVH25 SVUB R/L-11 | -        | -          | P0250700 | XT07     |
| AVH32 SVUB R/L-16 | CV160300 | T05003500  | P0351500 | XT15-S35 |
| AVH40 SVUB R/L-16 | CV160300 | T05003500  | P0351500 | XT15-S35 |



TOOLHOLDERS

# AUTOMATIC LATHES



Automatic lathe toolholders efficiently hold cutting tools during automated machining. They ensure precision and consistency in high-speed operations. Quick-change mechanisms facilitate rapid tool changes, minimizing downtime and maximizing productivity in many industries.

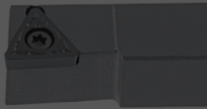
Suportes de torno automático mantêm eficientemente ferramentas de corte durante a maquinação automatizada. Garantem precisão e consistência em operações de alta velocidade. Mecanismos de troca rápida facilitam mudanças ágeis, minimizando o tempo de inatividade e maximizando a produtividade em diversas indústrias.

Los portaherramientas de torno automático mantienen eficientemente las herramientas de corte durante el mecanizado automatizado. Aseguran precisión y consistencia en operaciones de alta velocidad. Los mecanismos de cambio rápido facilitan cambios ágiles de herramientas, minimizando el tiempo de inactividad y maximizando la productividad en muchas industrias.

## Center Screw Toolholders (S) > page 836

- > Solution for ensuring easy insert exchange without interference

Solução ideal para garantir a troca fácil da pastilha sem interferência | Solución para garantizar un intercambio fácil de la plaquita sin interferencias





Maximize efficiency  
**with automatic lathes toolholders**

# CODE KEY FOR AUTOMATIC LATHES (ISO)

Sistema de codificação para tornos automáticos (ISO) | Codificación de herramientas de tornos automáticos (ISO)

|          |          |          |          |          |           |           |          |           |
|----------|----------|----------|----------|----------|-----------|-----------|----------|-----------|
| <b>S</b> | <b>C</b> | <b>A</b> | <b>C</b> | <b>R</b> | <b>12</b> | <b>12</b> | <b>M</b> | <b>09</b> |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b>  | <b>7</b>  | <b>8</b> | <b>9</b>  |

### 1 - Inserts Clamping System

|          |          |          |          |
|----------|----------|----------|----------|
|          |          |          |          |
| <b>C</b> | <b>M</b> | <b>P</b> | <b>S</b> |

### 2 - Insert Shape

|          |          |          |          |
|----------|----------|----------|----------|
|          |          |          |          |
| <b>C</b> | <b>D</b> | <b>E</b> | <b>K</b> |
|          |          |          |          |
| <b>R</b> | <b>S</b> | <b>T</b> | <b>V</b> |
|          |          |          |          |
| <b>W</b> |          |          |          |

### 4 - Inserts Clearance Angle

|          |          |          |          |
|----------|----------|----------|----------|
|          |          |          |          |
| <b>B</b> | <b>C</b> | <b>N</b> | <b>P</b> |

### 5 - Tool Hand

|          |          |          |
|----------|----------|----------|
|          |          |          |
| <b>L</b> | <b>N</b> | <b>R</b> |

### 3 - Toolholder Leading Angle

|          |          |          |
|----------|----------|----------|
|          |          |          |
| <b>A</b> | <b>B</b> | <b>C</b> |
|          |          |          |
| <b>D</b> | <b>E</b> | <b>F</b> |
|          |          |          |
| <b>G</b> | <b>H</b> | <b>J</b> |
|          |          |          |
| <b>K</b> | <b>L</b> | <b>M</b> |
|          |          |          |
| <b>N</b> | <b>Q</b> | <b>R</b> |
|          |          |          |
| <b>S</b> | <b>T</b> | <b>V</b> |
|          |          |          |
| <b>X</b> | <b>Z</b> |          |

### 6 - Height of Shank (mm)

### 7 - Width of Shank (mm)

### 8 - Length of Holder (mm)

|  |          |     |          |         |
|--|----------|-----|----------|---------|
|  | <b>D</b> | 60  | <b>P</b> | 170     |
|  | <b>E</b> | 70  | <b>R</b> | 200     |
|  | <b>F</b> | 80  | <b>S</b> | 250     |
|  | <b>H</b> | 100 | <b>T</b> | 300     |
|  | <b>K</b> | 125 | <b>U</b> | 350     |
|  | <b>L</b> | 140 | <b>V</b> | 400     |
|  | <b>M</b> | 150 | <b>X</b> | Special |

### 9 - Length of Inserts Cutting Edge (mm)

# C (S) CENTER SCREW SYSTEM

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

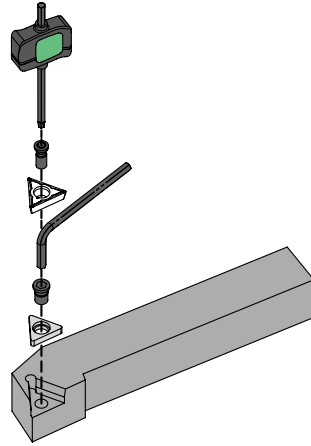
External Toolholders

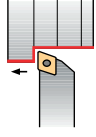
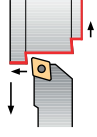
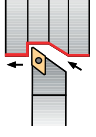
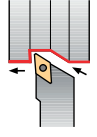
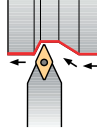
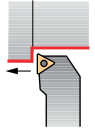
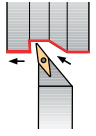
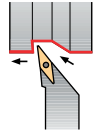
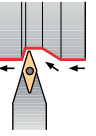
Internal Toolholders

Automatic Lathes

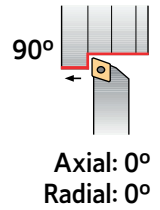
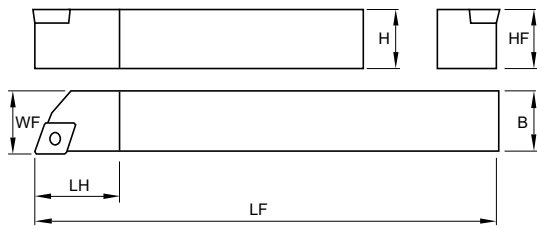
Spare Parts

Technical Data



|  |  |  |  |   |  |
|--|--|--|--|---|--|
| <p><b>SCAC 90°</b></p>  <p>PAGE C - 837 CC.. 0602..<br/>CC.. 09T3..</p>   | <p><b>SCLC 95°</b></p>  <p>PAGE C - 838 CC.. 0602..<br/>CC.. 09T3..</p>   | <p><b>SDAC 90°</b></p>  <p>PAGE C - 839 DC.. 0702..<br/>DC.. 11T3..</p> | <p><b>SDJC 93°</b></p>  <p>PAGE C - 840 DC.. 0702..<br/>DC.. 11T3..</p> | <p><b>SDNC 62°30'</b></p>  <p>PAGE C - 841 DC.. 0702..<br/>DC.. 11T3..</p> | <p><b>STJC 93°</b></p>  <p>PAGE C - 842 TC.. 1102..</p> |
| <p><b>SVAC 90°</b></p>  <p>PAGE C - 843 VC.. 1103..<br/>VC.. 1604..</p> | <p><b>SVJC 93°</b></p>  <p>PAGE C - 844 VC.. 1103..<br/>VC.. 1604..</p> | <p><b>SVVC 72°30'</b></p>  <p>PAGE C - 845 VC.. 1103..</p>            |  |   |  |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212251300  | 212251400 | SCAC R/L 0808 M06 | 8               | 8  | 150 | 8  | 8  | CC.. 0602.. | 0,070 |       |   |
| 212251500  | 212251600 | SCAC R/L 1010 M06 | 10              | 10 | 150 | 10 | 10 | CC.. 0602.. | 0,110 |       |   |
| 212251700  | 212251800 | SCAC R/L 1212 M06 | 12              | 12 | 150 | 12 | 12 | CC.. 0602.. | 0,150 |       |   |
| 212251900  | 212252000 | SCAC R/L 1616 M06 | 16              | 16 | 150 | 16 | 16 | CC.. 0602.. | 0,280 |       |   |
| 212252100  | 212252200 | SCAC R/L 1212 M09 | 12              | 12 | 150 | 12 | 12 | CC.. 09T3.. | 0,150 |       |   |
| 212252300  | 212252400 | SCAC R/L 1616 M09 | 16              | 16 | 150 | 16 | 16 | CC.. 09T3.. | 0,280 |       |   |

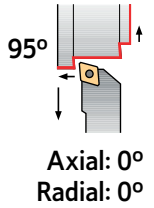
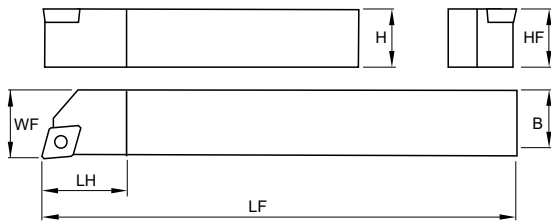
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw    | Wrench   |
|-------------------|----------|----------|
|                   |          |          |
| SCAC R/L 0808 M06 | P0250700 | XT07     |
| SCAC R/L 1010 M06 | P0250700 | XT07     |
| SCAC R/L 1212 M06 | P0250700 | XT07     |
| SCAC R/L 1616 M06 | P0250700 | XT07     |
| SCAC R/L 1212 M09 | P0401100 | XT15-S35 |
| SCAC R/L 1616 M09 | P0401100 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212252500  | 212252600 | SCLC R/L 0808 M06 | 8               | 8  | 150 | 8  | 8  | CC.. 0602.. | 0,070 |       |   |
| 212252700  | 212252800 | SCLC R/L 1010 M06 | 10              | 10 | 150 | 10 | 10 | CC.. 0602.. | 0,110 |       |   |
| 212252900  | 212253000 | SCLC R/L 1212 M06 | 12              | 12 | 150 | 12 | 12 | CC.. 0602.. | 0,150 |       |   |
| 212253100  | 212253200 | SCLC R/L 1616 M06 | 16              | 16 | 150 | 16 | 16 | CC.. 0602.. | 0,280 |       |   |
| 212253300  | 212253400 | SCLC R/L 1212 M09 | 12              | 12 | 150 | 12 | 12 | CC.. 09T3.. | 0,150 |       |   |
| 212253500  | 212250400 | SCLC R/L 1616 M09 | 16              | 16 | 150 | 16 | 16 | CC.. 09T3.. | 0,280 |       |   |

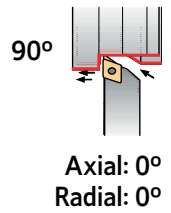
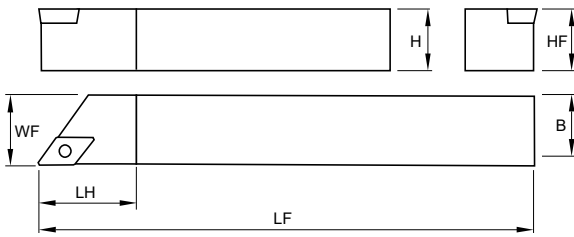
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw    | Wrench   |
|-------------------|----------|----------|
|                   |          |          |
| SCLC R/L 0808 M06 | P0250700 | XT07     |
| SCLC R/L 1010 M06 | P0250700 | XT07     |
| SCLC R/L 1212 M06 | P0250700 | XT07     |
| SCLC R/L 1616 M06 | P0250700 | XT07     |
| SCLC R/L 1212 M09 | P0401100 | XT15-S35 |
| SCLC R/L 1616 M09 | P0401100 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |      |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|------|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH   | WF |             |       | R     | L |
| 212253600  | 212253700 | SDAC R/L 0808 M07 | 8               | 8  | 150 | 12,7 | 8  | DC.. 0702.. | 0,070 |       |   |
| 212253800  | 212253900 | SDAC R/L 1010 M07 | 10              | 10 | 150 | 15,0 | 10 | DC.. 0702.. | 0,110 |       |   |
| 212254000  | 212254100 | SDAC R/L 1212 M07 | 12              | 12 | 150 | 15,0 | 12 | DC.. 0702.. | 0,150 |       |   |
| 212254200  | 212254300 | SDAC R/L 1616 M07 | 16              | 16 | 150 | 16,0 | 16 | DC.. 0702.. | 0,280 |       |   |
| 212254400  | 212254500 | SDAC R/L 1212 M11 | 12              | 12 | 150 | 18,0 | 12 | DC.. 11T3.. | 0,150 |       |   |
| 212254600  | 212254700 | SDAC R/L 1616 M11 | 16              | 16 | 150 | 20,0 | 16 | DC.. 11T3.. | 0,280 |       |   |

Stock item | Produto de stock | Itens de stock

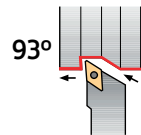
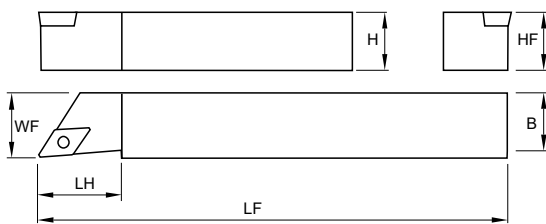
Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw    | Wrench   |
|-------------------|----------|----------|
|                   |          |          |
| SDAC R/L 0808 M07 | P0250700 | XT07     |
| SDAC R/L 1010 M07 | P0250700 | XT07     |
| SDAC R/L 1212 M07 | P0250700 | XT07     |
| SDAC R/L 1616 M07 | P0250700 | XT07     |
| SDAC R/L 1212 M11 | P0401100 | XT15-S35 |
| SDAC R/L 1616 M11 | P0401100 | XT15-S35 |



## (S) CENTER SCREW TOOLHOLDERS



Axial: 0°  
Radial: 0°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212254800  | 212254900 | SDJC R/L 0808 M07 | 8               | 8  | 150 | 8  | 8  | DC.. 0702.. | 0,070 |       |   |
| 212255000  | 212255100 | SDJC R/L 1010 M07 | 10              | 10 | 150 | 10 | 10 | DC.. 0702.. | 0,110 |       |   |
| 212255200  | 212255300 | SDJC R/L 1212 M07 | 12              | 12 | 150 | 12 | 12 | DC.. 0702.. | 0,150 |       |   |
| 212255400  | 212255500 | SDJC R/L 1616 M07 | 16              | 16 | 150 | 16 | 16 | DC.. 0702.. | 0,280 |       |   |
| 212255600  | 212255700 | SDJC R/L 1212 M11 | 12              | 12 | 150 | 12 | 12 | DC.. 11T3.. | 0,150 |       |   |
| 212255800  | 212255900 | SDJC R/L 1616 M11 | 16              | 16 | 150 | 16 | 16 | DC.. 11T3.. | 0,280 |       |   |

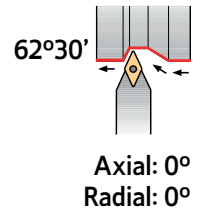
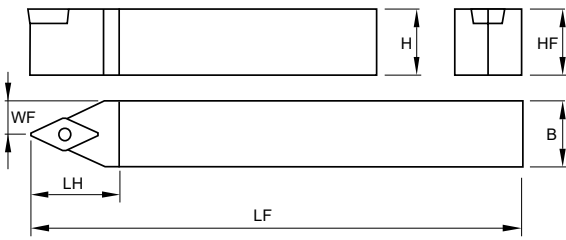
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw    | Wrench   |
|-------------------|----------|----------|
|                   |          |          |
| SDJC R/L 0808 M07 | P0250700 | XT07     |
| SDJC R/L 1010 M07 | P0250700 | XT07     |
| SDJC R/L 1212 M07 | P0250700 | XT07     |
| SDJC R/L 1616 M07 | P0250700 | XT07     |
| SDJC R/L 1212 M11 | P0401100 | XT15-S35 |
| SDJC R/L 1616 M11 | P0401100 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code | Reference       | Dimensions (mm) |    |     |    |     | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|-----|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF  |             |       |       |
| 212256000  | SDNC N 1010 M07 | 10              | 10 | 150 | 15 | 5,2 | DC.. 0702.. | 0,100 |       |
| 212256100  | SDNC N 1212 M11 | 12              | 12 | 150 | 21 | 6,2 | DC.. 11T3.. | 0,140 |       |
| 212256200  | SDNC N 1616 M11 | 16              | 16 | 150 | 21 | 8,6 | DC.. 11T3.. | 0,270 |       |

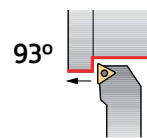
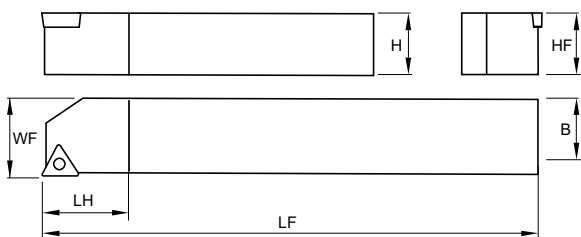
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Screw    | Wrench   |
|------------------|----------|----------|
| SDNC N 1010 M07  | P0250700 | XT07     |
| SDNC N 1212 M11  | P0401100 | XT15-S35 |
| SDNC N 1616 M11  | P0401100 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS





Axial: 0°  
Radial: 0°

| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert     | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |            |       | R     | L |
| 212256300  | 212256400 | STJC R/L 1010 M11 | 10              | 10 | 150 | 16 | 10 | TC..1102.. | 0,110 | ⊗     | ⊗ |
| 212256500  | 212256600 | STJC R/L 1212 M11 | 12              | 12 | 150 | 16 | 12 | TC..1102.. | 0,150 | ⊗     | ⊗ |
| 212256700  | 212256800 | STJC R/L 1616 M11 | 16              | 16 | 150 | 16 | 16 | TC..1102.. | 0,280 | ⊗     | ⊗ |

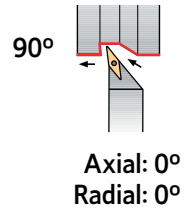
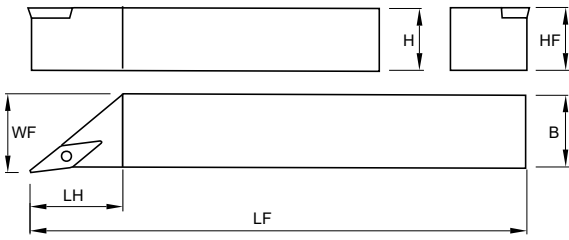
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw  | Wrench   |
|-------------------|--|--|
| STJC R/L 1010 M11 |  P0250700 |  XT07 |
| STJC R/L 1212 M11 | P0250700   | XT07   |
| STJC R/L 1616 M11 | P0250700   | XT07   |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212256900  | 212257000 | SVAC R/L 0808 M11 | 8               | 8  | 150 | 26 | 8  | VC.. 1103.. | 0,070 |       |   |
| 212257100  | 212257200 | SVAC R/L 1010 M11 | 10              | 10 | 150 | 26 | 10 | VC.. 1103.. | 0,100 |       |   |
| 212257300  | 212257400 | SVAC R/L 1212 M11 | 12              | 12 | 150 | 26 | 12 | VC.. 1103.. | 0,140 |       |   |
| 212257500  | 212257600 | SVAC R/L 1616 M11 | 16              | 16 | 150 | 26 | 16 | VC.. 1103.. | 0,270 |       |   |
| 212257700  | 212257800 | SVAC R/L 1212 M16 | 12              | 12 | 150 | 40 | 12 | VC.. 1604.. | 0,140 |       |   |
| 212257900  | 212258000 | SVAC R/L 1616 M16 | 16              | 16 | 150 | 40 | 16 | VC.. 1604.. | 0,270 |       |   |

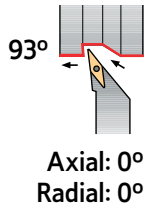
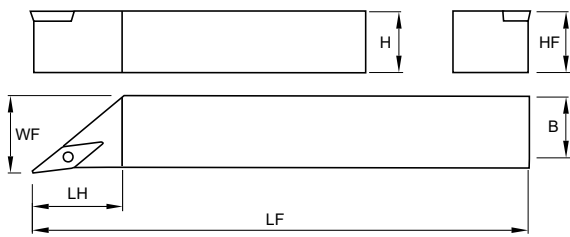
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw    | Wrench   |
|-------------------|----------|----------|
|                   |          |          |
| SVAC R/L 0808 M11 | P0250700 | XT07     |
| SVAC R/L 1010 M11 | P0250700 | XT07     |
| SVAC R/L 1212 M11 | P0250700 | XT07     |
| SVAC R/L 1616 M11 | P0250700 | XT07     |
| SVAC R/L 1212 M16 | P0401100 | XT15-S35 |
| SVAC R/L 1616 M16 | P0401100 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code |           | Reference         | Dimensions (mm) |    |     |    |    | Insert      | WT    | Stock |   |
|------------|-----------|-------------------|-----------------|----|-----|----|----|-------------|-------|-------|---|
| R          | L         |                   | HF = H          | B  | LF  | LH | WF |             |       | R     | L |
| 212258100  | 212258200 | SVJC R/L 0808 M11 | 8               | 8  | 150 | 26 | 8  | VC.. 1103.. | 0,070 |       |   |
| 212258300  | 212258400 | SVJC R/L 1010 M11 | 10              | 10 | 150 | 26 | 10 | VC.. 1103.. | 0,100 |       |   |
| 212258500  | 212258600 | SVJC R/L 1212 M11 | 12              | 12 | 150 | 26 | 12 | VC.. 1103.. | 0,140 |       |   |
| 212258700  | 212258800 | SVJC R/L 1616 M11 | 16              | 16 | 150 | 26 | 16 | VC.. 1103.. | 0,270 |       |   |
| 212258900  | 212259000 | SVJC R/L 1212 M16 | 12              | 12 | 150 | 40 | 12 | VC.. 1604.. | 0,140 |       |   |
| 212259100  | 212259200 | SVJC R/L 1616 M16 | 16              | 16 | 150 | 40 | 16 | VC.. 1604.. | 0,270 |       |   |

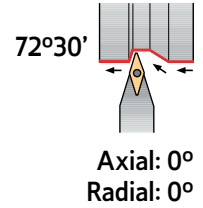
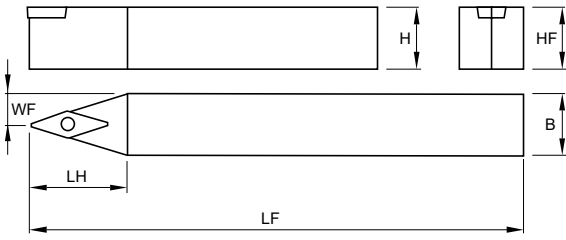
Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference  | Screw    | Wrench   |
|-------------------|----------|----------|
|                   |          |          |
| SVJC R/L 0808 M11 | P0250700 | XT07     |
| SVJC R/L 1010 M11 | P0250700 | XT07     |
| SVJC R/L 1212 M11 | P0250700 | XT07     |
| SVJC R/L 1616 M11 | P0250700 | XT07     |
| SVJC R/L 1212 M16 | P0401100 | XT15-S35 |
| SVJC R/L 1616 M16 | P0401100 | XT15-S35 |

## (S) CENTER SCREW TOOLHOLDERS



| Order Code | Reference       | Dimensions (mm) |    |     |    |     | Insert      | WT    | Stock |
|------------|-----------------|-----------------|----|-----|----|-----|-------------|-------|-------|
|            |                 | HF = H          | B  | LF  | LH | WF  |             |       |       |
| 212259300  | SVVC N 0808 M11 | 8               | 8  | 150 | 21 | 4,3 | VC.. 1103.. | 0,070 |       |
| 212259400  | SVVC N 1010 M11 | 10              | 10 | 150 | 21 | 5,3 | VC.. 1103.. | 0,100 |       |
| 212259500  | SVVC N 1212 M11 | 12              | 12 | 150 | 21 | 6,3 | VC.. 1103.. | 0,140 |       |
| 212259600  | SVVC N 1616 M11 | 16              | 16 | 150 | 21 | 8,3 | VC.. 1103.. | 0,260 |       |

Stock item | Produto de stock | Itens de stock

Available under request | Disponível sobre consulta | Disponible bajo consulta

## SPARE PARTS Acessórios | Repuestos

| Cutter Reference | Screw    | Wrench |
|------------------|----------|--------|
|                  |          |        |
| SVVC N 0808 M11  | P0250700 | XT07   |
| SVVC N 1010 M11  | P0250700 | XT07   |
| SVVC N 1212 M11  | P0250700 | XT07   |
| SVVC N 1616 M11  | P0250700 | XT07   |



**1 CHIP BREAKERS**

> See page C - 848

**2 CLAMPS**

> See page C - 848

**3 DIFFERENTIALS SCREWS**

> See page C - 849

**4 LEVERS**

> See page C - 849

**5 LOCK PINS**

> See page C - 850

**6 SCREWS**

> See page C - 851

**7 SHIM PINS**

> See page C - 852

**8 SHIMS**

> See page C - 852

**9 SPRINGS**

> See page C - 855

**10 WEDGE CLAMPS**

> See page C - 855

**11 KEYS**

> See page C - 855



## CHIP BREAKERS | Quebra Aparas | Rompevirutas

|                                 |                                 |                                 |                                 |                                 |                                 |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>QCS0900</b><br>290071500<br> | <b>QCS1200</b><br>290071700<br> | <b>QCS1201</b><br>290072200<br> | <b>QCS1900</b><br>290071900<br> | <b>QCS1901</b><br>290072400<br> | <b>QCS0901</b><br>290072600<br> |
| <b>QCS0902</b><br>290072900<br> | <b>QCS1202</b><br>290072700<br> | <b>QCT1100</b><br>290071600<br> | <b>QCT1101</b><br>290072100<br> | <b>QCT1600</b><br>290071800<br> | <b>QCT1601</b><br>290072300<br> |
| <b>QCT2200</b><br>290072000<br> | <b>QCT2201</b><br>290072500<br> |                                 |                                 |                                 |                                 |

## CLAMPS (C HOLDERS) | Grampos (Suportes C) | Tornillos Para Brida (Soportes C)

|                                 |                                 |                                 |                                 |                                 |                                 |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>GS03000</b><br>290065100<br> | <b>GS04000</b><br>290009700<br> | <b>GS05002</b><br>290065900<br> | <b>GS05000</b><br>290055800<br> | <b>GS05004</b><br>290066500<br> | <b>GS05001</b><br>290065800<br> |
| <b>GS05003</b><br>290066000<br> | <b>GS06001</b><br>290047700<br> | <b>GS06002</b><br>290046300<br> | <b>GS06003</b><br>290066200<br> | <b>GS06000</b><br>290010500<br> | <b>GS05005</b><br>290005900<br> |
| <b>GS08001</b><br>290066600<br> | <b>GS08000</b><br>290030100<br> |                                 |                                 |                                 |                                 |

CLAMPS (D HOLDERS) | Grampos (Suportes D) | Bridas (Soportes D)

|                                     |                                     |                                     |                                     |                                     |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <p><b>GA05001</b><br/>290082000</p> | <p><b>GA07002</b><br/>290082100</p> | <p><b>GA07001</b><br/>290066300</p> | <p><b>GA07003</b><br/>290082200</p> | <p><b>GA07004</b><br/>290085600</p> |
| <p><b>GAW1400</b><br/>290031800</p> | <p><b>GAW1401</b><br/>290066400</p> |                                     |                                     |                                     |

DIFFERENTIALS SCREWS | Parafusos Diferenciais | Tornillos Diferenciales

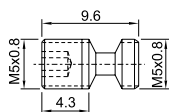
|  |  |  |
|--|--|--|
| <p><b>F0602100</b><br/>290062700<br/>Allen 3</p> | <p><b>F0802900</b><br/>290062300<br/>Allen 4</p> | <p><b>F0602100</b><br/>290062700<br/>Allen 3</p> |
|--|--|--|

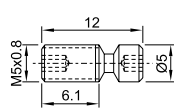
LEVERS | Alavanca | Palanca

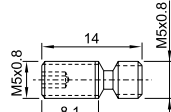
|                                     |                                     |                                     |                                     |                                     |                                     |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <p><b>AN07800</b><br/>290048700</p> | <p><b>AN01200</b><br/>290031200</p> | <p><b>AN13100</b><br/>290009000</p> | <p><b>AN17100</b><br/>290047200</p> | <p><b>AN17200</b><br/>290070500</p> | <p><b>AN20800</b><br/>290047300</p> |
| <p><b>AN25200</b><br/>290070600</p> | <p><b>AN14700</b><br/>290071400</p> | <p><b>AN09500</b><br/>290052800</p> | <p><b>AC11700</b><br/>290019200</p> | <p><b>AC13300</b><br/>290019300</p> | <p><b>AC18700</b><br/>290070800</p> |
| <p><b>AC23000</b><br/>290070900</p> | <p><b>AC26700</b><br/>290071000</p> | <p><b>AC13200</b><br/>290071300</p> | <p><b>AC18000</b><br/>290070700</p> | <p><b>AN12100</b><br/>290071100</p> | <p><b>AN20200</b><br/>290071200</p> |

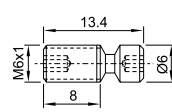
## LEVER SCREWS | Parafusos Para Alavanca | Tornillos De Palanca

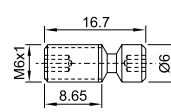
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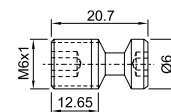
 290048800  
Allen 2

**PA0501200**

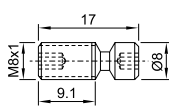
 290063000  
Allen 2

**PA0501400**

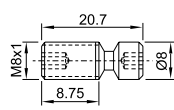
 290019000  
Allen 2

**PA0601300**

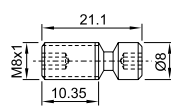
 290063200  
Allen 2,5

**PA0601700**

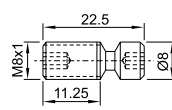
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Allen 2,5

**PA0602100**

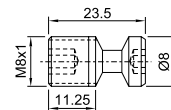
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Allen 2,5

**PA0801700**

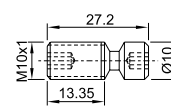
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Allen 3

**PA0802100**

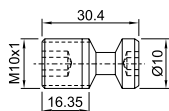
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Allen 3

**PA0802101**

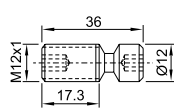
 290063300  
Allen 3

**PA0802300**

 290047100  
Allen 3

**PA0802400**

 290064500  
Allen 3

**PA1002700**

 290048600  
Allen 4

**PA1003000**

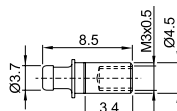
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Allen 4

**PA1203600**

 290063100  
Allen 5


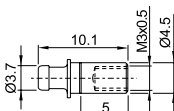
## LOCK PINS | Cavilhas De Bloqueio | Pines De Bloqueo

**BC04502**

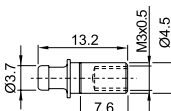
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**BC04501**

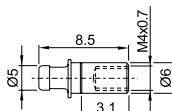
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**BC04500**

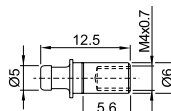
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**BC06001**

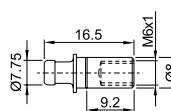
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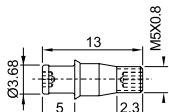

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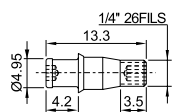
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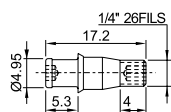

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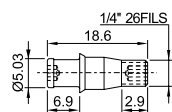
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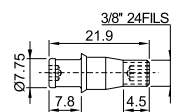

**BS05000**

 290054400  
Allen 2

**BS1-402**

 290064300  
Allen 2,5

**BS1-400**

 290063900  
Allen 2,5

**BS1-401**

 290064000  
Allen 2,5

**BS3-800**

 290064100  
Allen 4


# SPARE PARTS

Acessórios | Repuestos


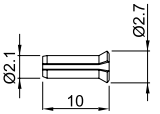

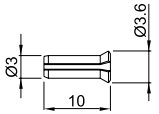

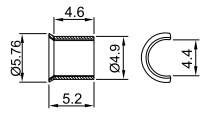

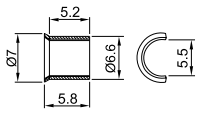

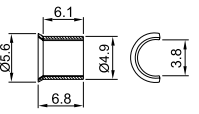

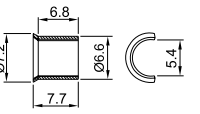

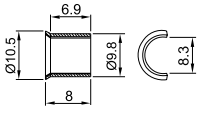

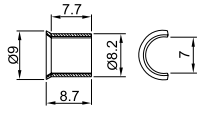

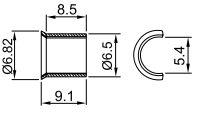

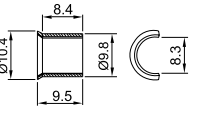
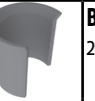
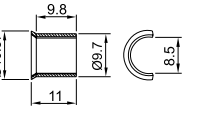

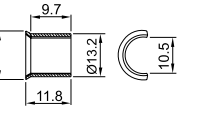

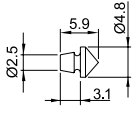

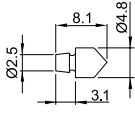

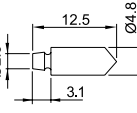

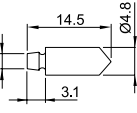
## SCREWS (ALLEN) | Parafusos (Allen) | Tornillos (Allen)

|  |   |   |  |   |  |
|--|---|---|--|---|--|
| <b>D0300700</b><br>290012000<br>Allen 5<br>  | <b>D0300691</b><br>290064800<br>Allen 2<br> | <b>D0300800</b><br>290097700<br>Allen 2.5<br> | <b>D0400691</b><br>290064900<br>Allen 2.5<br>  | <b>D0401200</b><br>290082600<br>Allen 2.5<br> | <b>D0400900</b><br>290053700<br>Allen 5<br>    |
| <b>D0501200</b><br>290082800<br>Allen 3<br>  | <b>D0500801</b><br>290082700<br>Allen 5<br> | <b>D0601400</b><br>290062800<br>Allen 5<br>   | <b>D0601200</b><br>290097800<br>Allen 4<br>    | <b>D0601600</b><br>290083000<br>Allen 5<br>   | <b>D0602200</b><br>290062900<br>Allen 5<br>    |
| <b>D0602900</b><br>290082900<br>Allen 4<br>  | <b>D0702800</b><br>290048100<br>Allen 4<br> | <b>DW142600</b><br>290018200<br>Allen 4<br>   | <b>T05003500</b><br>290020100<br>Allen 3.5<br> | <b>T05008000</b><br>290082300<br>Allen 2<br>  | <b>T06010000</b><br>290082400<br>Allen 2.5<br> |
| <b>T06015000</b><br>290082500<br>Allen 3<br> | <b>T0601575</b><br>290085500<br>Allen 3<br> | <b>T06004000</b><br>290008700<br>Allen 4<br>  | <b>T1000875</b><br>290086000<br>Allen 5<br>    | <b>H0600475</b><br>290085800<br>Allen 3<br>   | <b>H1000875</b><br>290085900<br>Allen 5<br>    |


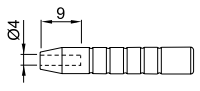

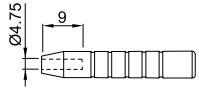

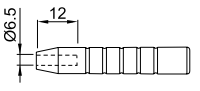

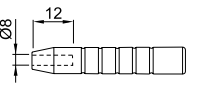
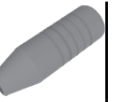
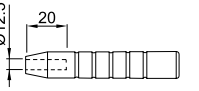
## SCREWS (TORX) | Parafusos (torx) | Tornillos (torx)

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <b>P0220600</b><br>290026000<br>TorxT-6<br>  | <b>P0250700</b><br>290013400<br>TorxT-7<br>  | <b>P0200601</b><br>290010700<br>TorxT-7<br>  | <b>P0300900</b><br>290007500<br>TorxT-8<br>  | <b>P0351500</b><br>290020000<br>TorxT-15<br> | <b>P0401400</b><br>290031100<br>TorxT-15<br> |
| <b>P0400802</b><br>290006500<br>TorxT-15<br> | <b>P0401100</b><br>290007000<br>TorxT-15<br> | <b>P0501200</b><br>290026200<br>TorxT-20<br> | <b>P0801411</b><br>290062600<br>TorxT-25<br> |  |  |


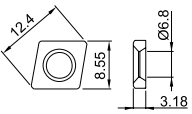

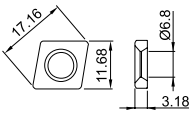

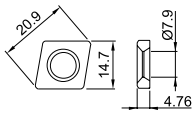

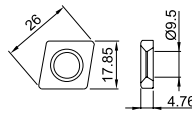

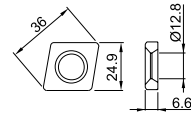

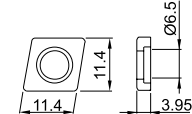

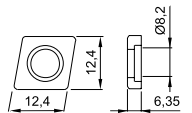

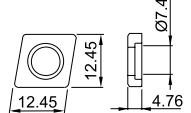
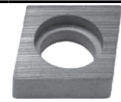
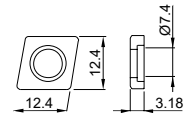

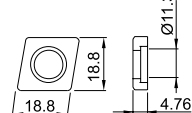

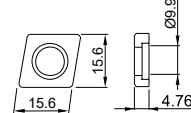
**SHIM PINS | Pino calço | Pino cuña**

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| <b>BE02100</b><br>290020500<br><br> | <b>BE03000</b><br>290038900<br><br> | <b>BE04400</b><br>290007300<br><br> | <b>BE05500</b><br>290069200<br><br> | <b>BE03800</b><br>290019100<br><br> | <b>BE05401</b><br>290069900<br><br> |
| <b>BE08300</b><br>290069700<br><br> | <b>BE07000</b><br>290069300<br><br> | <b>BE05400</b><br>290069400<br><br> | <b>BE08301</b><br>290069800<br><br> | <b>BE08500</b><br>290069500<br><br> | <b>BE10500</b><br>290069600<br><br> |
| <b>BF04806</b><br>290070000<br><br> | <b>BF04808</b><br>290070100<br><br> | <b>BF04813</b><br>290018100<br><br> | <b>BF04815</b><br>290070200<br><br>  |   |   |

**SHIM PIN PUNCHES | Calço | Cuña**

|   |   |   |   |   |
|---|---|---|---|---|
| <b>BF40009</b><br>290033200<br><br> | <b>BF47509</b><br>290020600<br><br> | <b>BF65012</b><br>290061900<br><br> | <b>BF80012</b><br>290062000<br><br> | <b>BF12520</b><br>290062100<br><br> |
|---|---|---|---|---|

**SHIMS (C SHAPES) | Colchões (Pastilhas C) | Placas Base (Plaquitás C)**

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <b>CC090300</b><br>290067800<br><br> | <b>CC120301</b><br>212127000<br><br> | <b>CC160500</b><br>290046400<br><br> | <b>CC190500</b><br>212169300<br><br> | <b>CC250700</b><br>290067900<br><br> | <b>CC120401</b><br>212166800<br><br> |
| <b>CC120600</b><br>290083200<br><br> | <b>CC120500</b><br>290055200<br><br> | <b>CC120300</b><br>290083300<br><br> | <b>CC190502</b><br>290073200<br><br> | <b>CC160501</b><br>290085400<br><br> |  |

# SPARE PARTS

Acessórios | Repuestos

## SHIMS (D SHAPES) | Colchões (Pastilhas D) | Placas Base (Plaquitas D)

|                                  |                                  |                                  |                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>CD110300</b><br>290068000<br> | <b>CD110301</b><br>212166900<br> | <b>CD110302</b><br>290083400<br> | <b>CD150300</b><br>290068100<br> | <b>CD150500</b><br>290068200<br> | <b>CD150501</b><br>290073300<br> |
| <b>CD150502</b><br>116021623<br> | <b>CD150503</b><br>116021723<br> |                                  |                                  |                                  |                                  |

## SHIMS (R SHAPES) | Colchões (Pastilhas R) | Placas Base (Plaquitas R)

|                                  |                                  |                                  |                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>CR090300</b><br>290068700<br> | <b>CR100300</b><br>212054600<br> | <b>CR100301</b><br>212167100<br> | <b>CR120300</b><br>212054700<br> | <b>CR120301</b><br>212167200<br> | <b>CR120302</b><br>290068800<br> |
| <b>CR150500</b><br>290068900<br> | <b>CR160500</b><br>290068300<br> | <b>CR190500</b><br>290069000<br> | <b>CR200500</b><br>290068400<br> | <b>CR250600</b><br>290068500<br> | <b>CR250601</b><br>290069100<br> |
| <b>CR320600</b><br>290068600<br> |                                  |                                  |                                  |                                  |                                  |

## SHIMS (S SHAPES) | Colchões (Pastilhas S) | Placas Base (Plaquitas S)

|                                  |                                  |                                  |                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>CS090300</b><br>290067100<br> | <b>CS090301</b><br>290067500<br> | <b>CS120300</b><br>212056100<br> | <b>CS120400</b><br>212044300<br> | <b>CS120302</b><br>290067600<br> | <b>CS120500</b><br>290053800<br> |
| <b>CS120600</b><br>290083500<br> | <b>CS150400</b><br>290083900<br> | <b>CS190501</b><br>290083600<br> | <b>CS190300</b><br>290067200<br> | <b>CS190400</b><br>290084000<br> | <b>CS250600</b><br>290053000<br> |
| <b>CS150500</b><br>290086100<br> |                                  |                                  |                                  |                                  |                                  |

## SHIMS (T SHAPES) | Colchões (Pastilhas T) | Placas Base (Plaquitas T)

|                                  |                                  |                                  |                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>CT160301</b><br>212026000<br> | <b>CT160303</b><br>212039600<br> | <b>CT160302</b><br>212039900<br> | <b>CT160304</b><br>290073400<br> | <b>CT160600</b><br>290083700<br> | <b>CT220301</b><br>212127500<br> |
| <b>CT220302</b><br>290061700<br> | <b>CT220500</b><br>290052700<br> | <b>CT220600</b><br>290083800<br> | <b>CT270500</b><br>290061500<br> | <b>CT330500</b><br>290067400<br> |                                  |

## SHIMS (V SHAPES) | Colchões (Pastilhas V) | Placas Base (Plaquitas V)

|                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|
| <b>CV160301</b><br>290054300<br> | <b>CV160300</b><br>212044400<br> | <b>CV220400</b><br>212167000<br> |
|----------------------------------|----------------------------------|----------------------------------|

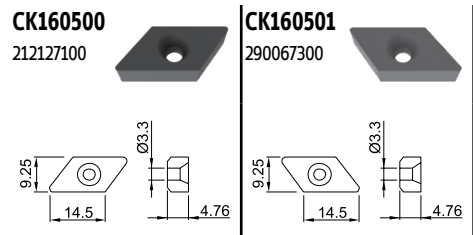
## SHIMS (W SHAPES) | Colchões (Pastilhas W) | Placas Base (Plaquitas W)

|                                  |                                  |                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>CW060301</b><br>212169100<br> | <b>CW060300</b><br>290067000<br> | <b>CW060302</b><br>290085700<br> | <b>CW080300</b><br>212169200<br> | <b>CW080500</b><br>290053400<br> |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|

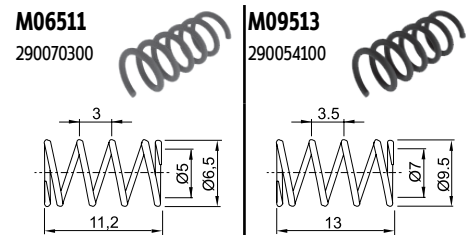
# SPARE PARTS

Acessórios | Repuestos

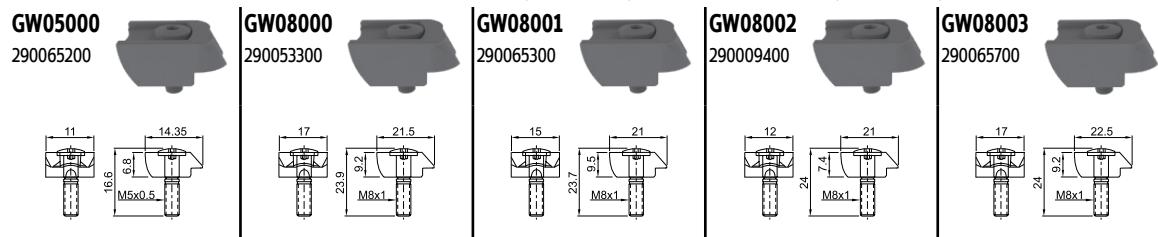
## SHIMS (KNUX SHAPES) | Colchões (Pastilhas Knux) | Placas Base (Plaquitas Knux)



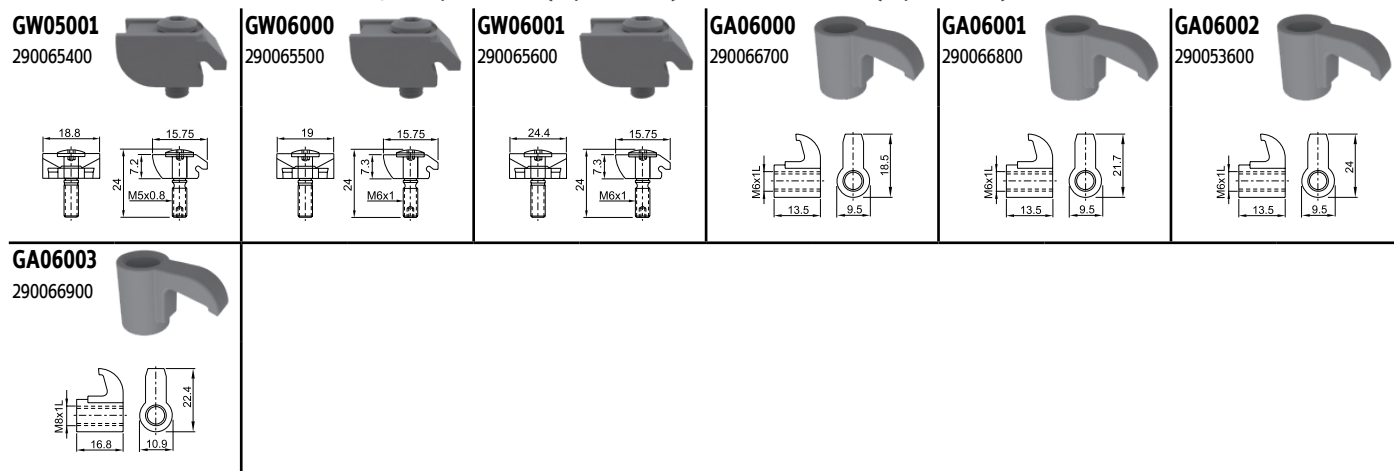
## SPRINGS | Mola | Muelle



## WEDGE CLAMPS (M HOLDERS) | Grampos Cunhas (Suportes M) | Tornillos Para Cuñas (Soportes M)



## WEDGE CLAMPS (M-K HOLDERS) | Grampos Cunhas (Suportes M-K) | Tornillos Para Cuñas (Soportes M-K)



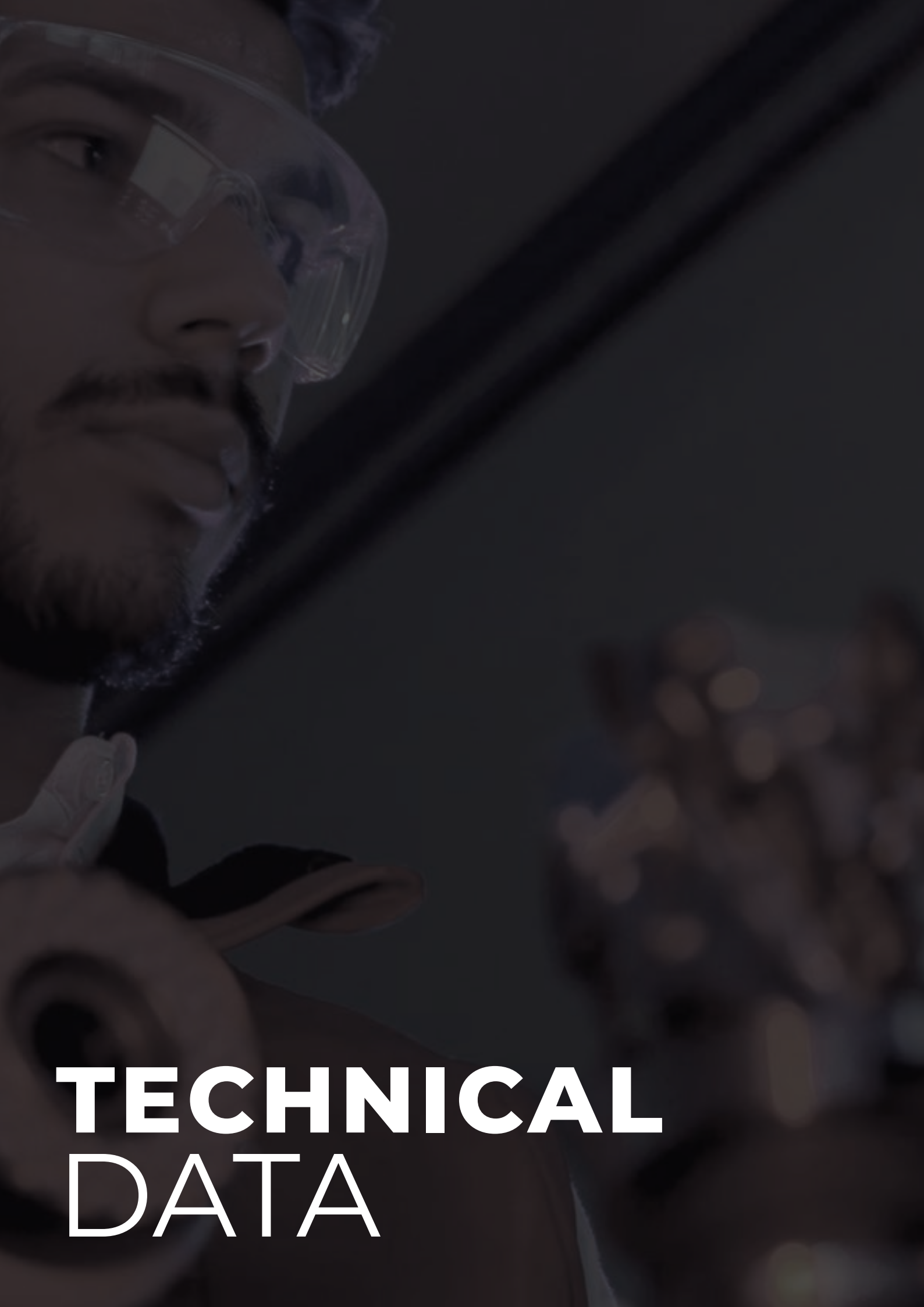
## KEYS (ALLEN) | Chaves (Allen) | Llaves (Allen)



## KEYS (TORX) | Chaves (Torx) | Llaves (Torx)







# TECHNICAL DATA

## **1 TURNING GRADES**

> See page C - 858

## **2 TURNING GRADES DESCRIPTION**

> See page C - 860

## **3 WIPER CONCEPT**

> See page C - 862

## **4 CUTTING SPEED**

> See page C - 863

## **5 CHIP BREAKER SPECIFICATIONS**

> See page C - 864

## **6 CHIP BREAKER COMPARATIVE CHART**

> See page C - 868

## **7 GRADE COMPARATIVE CHART**

> See page C - 870

|                         | 1 | 5 | 10     | 15          | 20     | 25          | 30     | 35 | 40 | 45 | 50 |      |
|-------------------------|---|---|--------|-------------|--------|-------------|--------|----|----|----|----|------|
| P<br>STEEL              |   |   | PH7910 |             |        |             |        |    |    |    |    | PVD  |
|                         |   |   |        | PH7920      |        |             |        |    |    |    |    |      |
|                         |   |   | PHG105 |             |        |             |        |    |    |    |    | CVD  |
|                         |   |   |        | PHG115      |        |             |        |    |    |    |    |      |
|                         |   |   |        | NEW PH2G115 |        |             |        |    |    |    |    |      |
|                         |   |   |        |             |        | PHG125      |        |    |    |    |    |      |
|                         |   |   |        |             |        | NEW PH2G125 |        |    |    |    |    |      |
|                         |   |   |        |             |        |             | PHG140 |    |    |    |    |      |
| M<br>STAINLESS<br>STEEL |   |   | PHH910 |             |        |             |        |    |    |    |    | PVD  |
|                         |   |   | PH7910 |             |        |             |        |    |    |    |    |      |
|                         |   |   |        | PHH920      |        |             |        |    |    |    |    | CVD  |
|                         |   |   |        | PH7920      |        |             |        |    |    |    |    |      |
|                         |   |   |        | PHS215      |        |             |        |    |    |    |    |      |
|                         |   |   |        |             | PHS225 |             |        |    |    |    |    |      |
|                         |   |   |        |             |        |             | PHS240 |    |    |    |    |      |
| K<br>CAST IRON          |   |   | PH5705 |             |        |             |        |    |    |    |    | CVD  |
|                         |   |   |        | PH5320      |        |             |        |    |    |    |    |      |
|                         |   |   |        |             |        | PH5740      |        |    |    |    |    |      |
|                         |   |   | PBH920 |             |        |             |        |    |    |    |    | PCBN |
|                         |   |   |        | PBY930      |        |             |        |    |    |    |    |      |
|                         |   |   |        | PBY940      |        |             |        |    |    |    |    |      |

# TURNING GRADES

Graus para torneamento | Calidades para torneado

|   |  | 1                 | 5      | 10     | 15     | 20 | 25 | 30 | 35 | 40 | 45 | 50 |         |
|---|--|-------------------|--------|--------|--------|----|----|----|----|----|----|----|---------|
| <b>N</b><br>ALUMINIUM &<br>NON FERROUS          |  |                   | PH0910 |        |        |    |    |    |    |    |    |    | UNCOTED |
|   |  |                   | PDP410 |        |        |    |    |    |    |    |    |    | PCD     |
|   |  | PDP403            |        |        |        |    |    |    |    |    |    |    | PCD     |
| <b>S</b><br>HEAT Resistant /<br>TITANIUM ALLOYS |  |                   | PHH910 |        |        |    |    |    |    |    |    |    | PVD     |
|   |  |                   | PH7910 |        |        |    |    |    |    |    |    |    |         |
|   |  |                   |        | PHH920 |        |    |    |    |    |    |    |    | PCBN    |
|   |  |                   |        | PH7920 |        |    |    |    |    |    |    |    |         |
|   |  | PBY603            |        |        |        |    |    |    |    |    |    |    | PCBN    |
|   |  |                   |        |        | PBH920 |    |    |    |    |    |    |    |         |
| <b>H</b><br>HARDENED<br>MATERIALS               |  | PBY603            |        |        |        |    |    |    |    |    |    |    | PCBN    |
|   |  | <b>NEW</b> PBY620 |        |        |        |    |    |    |    |    |    |    |         |
|   |  | PBY625            |        |        |        |    |    |    |    |    |    |    |         |
|   |  |                   | PBY930 |        |        |    |    |    |    |    |    |    |         |
|   |  |                   |        | PBY940 |        |    |    |    |    |    |    |    |         |
|   |  |                   |        |        | PBH920 |    |    |    |    |    |    |    |         |

# TURNING GRADES DESCRIPTION

## PVD GRADES

### PHH...

An exceptionally durable PVD coating boasts superior thermal stability, ensuring outstanding wear resistance and performance. 1<sup>st</sup> choice for finishing operations on stainless steels and HRSA materials.



WEAR RESISTANCE

TOUGHNESS

#### PHH910

M05-M10  
S05-S15

An hard micro grain substrate combined with a thin optimized nanostructure PVD coating with excellent heat dissipation

The solution for Stainless steel and HRSA from medium turning to finishing. For continuous to semi-interrupted turning. First choice for HRSA.

#### PHH920

M10-M25  
S15-S30

A micro grain substrate combined with a thin optimized nanostructure PVD coating with excellent heat dissipation

Solution for general turning of stainless steels and HRSA.

### PH7...

A thin PVD coating is recommended for finishing operations on steel and suitable for stainless steels and HRSA.

WEAR RESISTANCE

TOUGHNESS

#### PH7910

P05-P10  
M05-M10  
S05-S15

#### PH7920

P10-P35  
M10-M25  
S15-S30

## UNCOATED

### PH0910

Uncoated carbide micro-grain grade, characterized by excellent resistance to abrasive wear and toughness, making it suitable for a wide range of machining operations, from rough to finishing, specifically tailored for aluminum alloys.

#### PH0910

N01-N20

## CVD GRADES

### PHS...

CVD coating with excellent resistance to thermal and mechanical shock, providing exceptional performance for both continuous and interrupted turning. 1<sup>st</sup> Choice for stainless steel turning from semi-finishing to roughing.



WEAR RESISTANCE

TOUGHNESS

#### PHS215

M10-M25

Suitable for high to medium cutting speeds in stainless steel. Ideal for turning on good condition of cut (continuous cut).

#### PHS225

M15-M30

First choice for general application on turning of stainless steel.

#### PHS240

M25-M45

First choice for roughing to heavy roughing operations with interrupted cut at medium to low cutting speeds on stainless steel.

## TURNING GRADES DESCRIPTION

Descrição de graus para torneamento | Descripción de calidades para torneado

PHG... | **NEW** PH2G...

PH2G grade series is an innovative combination of a highly dense and hard nanostructured coating base material, including new Al<sub>2</sub>O<sub>3</sub> layer with improved wear resistance which provides superior performance during high-speed turning operations. 1<sup>st</sup> choice for steel turning operations.



WEAR RESISTANCE

TOUGHNESS

|  |   |  |  |  |  |
|--|---|--|--|--|--|
| <b>PHG105</b><br>P05-P10<br><br>First option for continuous cut with hardness higher than 38HRC. | <b>PHG115</b><br>P10-P25<br><br>Suitable for high to medium cutting speeds on steels. | <b>NEW PH2G115</b><br>P10-P25<br><br>For finishing to roughing operations with high cutting speeds in continuous cutting applications. | <b>PHG125</b><br>P20-P35<br><br>Ideal for general application in all kind of steels. | <b>NEW PH2G125</b><br>P20-P35<br><br>Ideal for general applications in all kind of steels with high metal removal rates. | <b>PHG140</b><br>P25-P45<br><br>First choice for roughing to heavy roughing operations with interrupted cut at medium to low cutting speeds. |
|--|---|--|--|--|--|

PH5...

CVD coating with excellent flank wear resistance, ensuring excellent performance during continuous and interrupted cutting processes on cast iron materials.

WEAR RESISTANCE

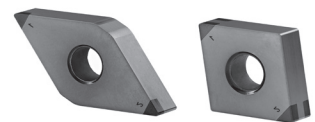
TOUGHNESS

|                          |                                     |                          |                          |                          |
|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <b>PH5705</b><br>K05-K15 | <b>PH5320</b><br>P01-P15<br>K10-K30 | <b>PH5115</b><br>P10-P25 | <b>PH5125</b><br>P20-P35 | <b>PH5740</b><br>K20-K40 |
|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|

## PCBN

PCBN sets new benchmarks in continuous and intermittent cutting with its exceptional wear resistance. It provides unmatched performance in hot hardness, toughness, and chemical stability.

1<sup>st</sup> choice for operations on hard and/or abrasive highly abrasive materials.



|   |   |  |   |  |
|---|---|--|---|--|
| <b>PBY603</b><br>S01-S10<br>H01-H10<br><br>Machining of hardened materials in high continuous cut up to 180m/min cutting speed. | <b>PBY620</b><br>H10-H20<br><br>Machining of hardened materials in light to heavy interrupted cuts. | <b>PBY930</b><br>H20-H30<br><br>High wear resistance and impact toughness. Excels in white iron and steel rolls machining. | <b>PBY940</b><br>H20-H30<br><br>For machining high chrome alloy steels and Ni-hard cast iron. | <b>PBH920</b><br>K01-K30<br>S20-S30<br><br>For machining all types of cast iron. First choice for machining ferrous powder metals. |
|---|---|--|---|--|

## PCD

Diamond particles sintered into a polycrystalline structure yield a robust, wear-resistant material with excellent thermal conductivity. 1<sup>st</sup> choice for operations on non-ferrous materials, such as high-silicon aluminium. Metal matrix composites (MMC) and carbon fiber reinforced plastics (CRFP).

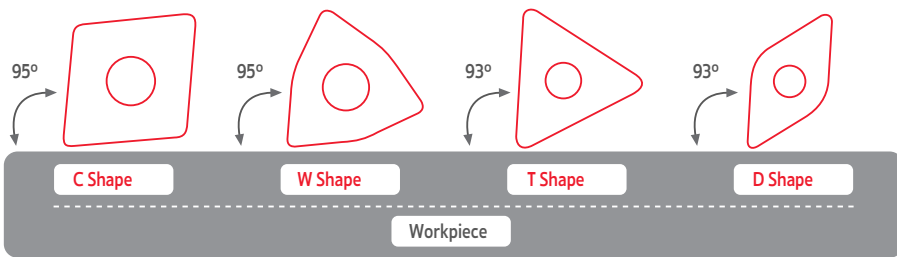
|  |  |
|--|--|
| <b>PDP410</b><br>N01-N20<br><br>General purpose Fine surface finishing. <14% silicon aluminium alloy | <b>PDP403</b><br>N01-N10<br><br>Highest abrasion resistance Bimodal grain structure for increased diamond percentage content. >14% silicon aluminium alloy |
|--|--|



# WIPER CONCEPT

Conceito Wiper | Concepto Wiper

## THE ANGLE POSITION (Kr°)



**Note:** C and W shapes has 2 wiper radius. While one makes longitudinal turning the opposite one makes face turning.



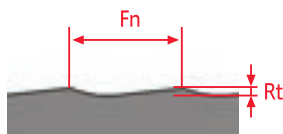
**Note:** Due to shape restrictions (basic angles of 60° and 55°), T and D shapes has 4 wiper radius that works in couple. That is needed to not loose the wiper effect when the insert is turned around.

## THE WIPER PURPOSE IS BASED ON PRODUCTIVITY:

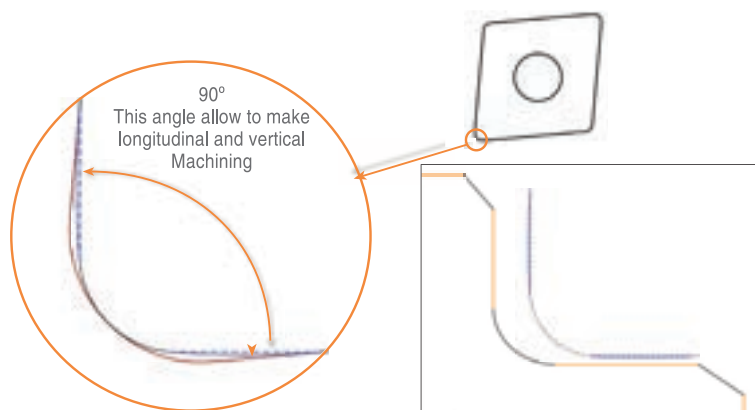


CNMG 120408-##  
VS  
CNMG 120408-MW

Holder Angle Position (Kr°) = 95°



## EXAMPLE CNMG 120404-MW WITH ANGLE POSITION OF 95°



- Wiper nose radius
- Regular nose radius
- Wiper radius profile
- - - Wiper radius length
- Workpiece machinable areas with wiper insert.

**Note:** wiper radius length must be parallel to machinable workpiece areas.

# CUTTING SPEED (m/min)

Velocidade de corte (m/min) | Velocidad de corte (m/min)

| ISO             | Material         | Grade<br>fn (mm/r) | CVD Coating       |         |         |         |         |         |             |         |         |             |         |         |             |         |         |
|-----------------|------------------|--------------------|-------------------|---------|---------|---------|---------|---------|-------------|---------|---------|-------------|---------|---------|-------------|---------|---------|
|                 |                  |                    | ← Wear Resistance |         |         |         |         |         |             |         |         | Toughness → |         |         |             |         |         |
|                 |                  |                    | PHG105            |         |         | PHG115  |         |         | NEW PH2G115 |         |         | PHG125      |         |         | NEW PH2G125 |         |         |
| HB<br>(brinell) | 0.2              | 0.4                | 0.8               | 0.2     | 0.4     | 0.8     | 0.2     | 0.4     | 0.8         | 0.2     | 0.4     | 0.8         | 0.2     | 0.4     | 0.8         |         |         |
| P               | Unalloyed steel  | 125-170            | 280-380           | 210-300 | 200-250 | 250-350 | 180-270 | 170-220 | 285-400     | 205-310 | 195-250 | 200-295     | 170-240 | 150-215 | 230-335     | 195-275 | 170-245 |
|                 | Low-alloy steel  | 180-350            | 220-280           | 200-260 | 170-210 | 190-250 | 170-230 | 140-180 | 215-285     | 195-260 | 160-205 | 170-230     | 140-210 | 120-190 | 195-260     | 160-240 | 135-215 |
|                 | High-alloy steel | 200-325            | 165-250           | 150-235 | 140-230 | 135-220 | 120-205 | 110-200 | 155-250     | 135-235 | 125-230 | 125-215     | 110-185 | 100-170 | 140-245     | 125-210 | 115-195 |
| P               | Material         | Grade<br>fn (mm/r) | CVD Coating       |         |         |         |         |         | PVD Coating |         |         |             |         |         |             |         |         |
|                 |                  |                    | ← Wear Resistance |         |         |         |         |         | Toughness → |         |         |             |         |         |             |         |         |
|                 |                  |                    | PHG140            |         |         | PH5740  |         |         | PH7910      |         |         | PH7920      |         |         |             |         |         |
| HB<br>(brinell) | 0.2              | 0.4                | 0.8               | 0.2     | 0.4     | 0.8     | 0.2     | 0.4     | 0.8         | 0.2     | 0.4     | 0.8         |         |         |             |         |         |
| P               | Unalloyed steel  | 125-170            | 135-230           | 120-210 | 115-200 | 125-220 | 110-200 | 105-190 | 140-245     | 130-225 | 115-220 | 130-230     | 120-220 | 110-210 |             |         |         |
|                 | Low-alloy steel  | 180-350            | 125-205           | 105-185 | 95-185  | 115-195 | 95-175  | 85-175  | 130-230     | 125-225 | 125-215 | 125-220     | 115-210 | 100-200 |             |         |         |
|                 | High-alloy steel | 200-325            | 105-205           | 75-175  | 50-135  | 95-195  | 65-165  | 40-125  | -           | -       | -       | -           | -       | -       |             |         |         |

| ISO             | Material                          | Grade<br>fn (mm/r) | CVD Coating       |         |         |         |         |         |             |         |        |         |         |         |
|-----------------|-----------------------------------|--------------------|-------------------|---------|---------|---------|---------|---------|-------------|---------|--------|---------|---------|---------|
|                 |                                   |                    | ← Wear Resistance |         |         |         |         |         | Toughness → |         |        |         |         |         |
|                 |                                   |                    | PHS215            |         |         | PHS225  |         |         | PHS240      |         |        |         |         |         |
| HB<br>(brinell) | 0.2                               | 0.4                | 0.6               | 0.2     | 0.4     | 0.6     | 0.2     | 0.4     | 0.6         |         |        |         |         |         |
| M               | SS - Ferritic/martensitic         | 200-330            | 125-260           | 100-220 | 80-200  | 115-230 | 90-180  | 70-160  | 110-230     | 85-175  | 70-140 |         |         |         |
|                 | SS - Austenitic                   | 180-330            | 120-255           | 95-215  | 75-195  | 110-225 | 85-175  | 65-155  | 105-225     | 80-170  | 65-135 |         |         |         |
|                 | SS - Austenitic-ferritic (Duplex) | 230-260            | 110-245           | 85-205  | 65-185  | 100-215 | 75-165  | 55-145  | 95-215      | 70-160  | 55-125 |         |         |         |
| M               | Material                          | Grade<br>fn (mm/r) | PVD Coating       |         |         |         |         |         |             |         |        |         |         |         |
|                 |                                   |                    | ← Wear Resistance |         |         |         |         |         | Toughness → |         |        |         |         |         |
|                 |                                   |                    | PH7910            |         |         | PHH910  |         |         | PH7920      |         |        | PHH920  |         |         |
| HB<br>(brinell) | 0.2                               | 0.4                | 0.6               | 0.2     | 0.4     | 0.6     | 0.2     | 0.4     | 0.6         | 0.2     | 0.4    | 0.6     |         |         |
| M               | SS - Ferritic/martensitic         | 200-330            | 120-220           | 110-210 | 105-205 | 130-230 | 120-220 | 115-215 | 110-210     | 100-200 | 95-195 | 120-220 | 110-210 | 105-205 |
|                 | SS - Austenitic                   | 180-330            | 115-215           | 105-205 | 95-195  | 125-225 | 115-215 | 105-205 | 105-205     | 95-195  | 85-185 | 115-215 | 105-205 | 95-195  |
|                 | SS - Austenitic-ferritic (Duplex) | 230-260            | 105-202           | 100-195 | 90-185  | 115-212 | 110-205 | 100-195 | 95-192      | 90-185  | 80-175 | 105-202 | 100-195 | 90-185  |

| ISO             | Material          | Grade<br>fn (mm/r) | CVD Coating       |         |         |         |         |         |             |         |         |
|-----------------|-------------------|--------------------|-------------------|---------|---------|---------|---------|---------|-------------|---------|---------|
|                 |                   |                    | ← Wear Resistance |         |         |         |         |         | Toughness → |         |         |
|                 |                   |                    | PH5705            |         |         | PH5320  |         |         | PH5740      |         |         |
| HB<br>(brinell) | 0.2               | 0.4                | 0.6               | 0.2     | 0.4     | 0.6     | 0.2     | 0.4     | 0.6         |         |         |
| K               | Marble cast iron  | 130-230            | 160-360           | 140-280 | 120-235 | 150-330 | 130-240 | 110-220 | 110-230     | 100-215 | 100-190 |
|                 | Grey cast iron    | 180-220            | 220-380           | 190-330 | 150-290 | 200-330 | 170-280 | 150-230 | 150-230     | 140-220 | 110-210 |
|                 | Nodular cast iron | 160-380            | 150-280           | 135-265 | 120-220 | 140-250 | 125-230 | 110-220 | 125-220     | 115-205 | 105-185 |

| ISO | Material                 | Grade<br>fn (mm/r) | Uncoated |        |
|-----|--------------------------|--------------------|----------|--------|
|     |                          |                    | PH0910   |        |
|     |                          |                    | 0.15     | 0.8    |
| N   | Aluminium alloys         | 60-130             | 375-2400 | 40-240 |
|     | Cooper and cooper alloys | 90-110             | 375-630  | 35-65  |

| ISO             | Material                                  | Grade<br>fn (mm/r) | PVD Coating       |        |        |        |        |        |             |        |        |        |        |        |
|-----------------|---|--------------------|-------------------|--------|--------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|
|                 |   |                    | ← Wear Resistance |        |        |        |        |        | Toughness → |        |        |        |        |        |
|                 |   |                    | PH7910            |        |        | PHH910 |        |        | PH7920      |        |        | PHH920 |        |        |
| HB<br>(brinell) | 0.1                                       | 0.3                | 0.5               | 0.2    | 0.4    | 0.6    | 0.1    | 0.3    | 0.5         | 0.2    | 0.4    | 0.6    |        |        |
| S               | Heat Resistant super alloys (Iron base)   | 200-280            | 65-140            | 60-130 | 50-110 | 75-150 | 70-140 | 60-120 | 60-135      | 55-125 | 45-105 | 70-145 | 65-135 | 55-115 |
|                 | Heat Resistant super alloys (Nickel base) | 250-320            | 45-120            | 40-110 | 30-100 | 55-130 | 50-120 | 40-110 | 40-115      | 35-105 | 25-95  | 50-125 | 45-115 | 35-105 |
|                 | Heat Resistant super alloys (Cobalt base) | 200-320            | 45-115            | 40-105 | 30-90  | 55-125 | 50-115 | 40-100 | 40-110      | 35-100 | 25-85  | 50-120 | 45-110 | 35-95  |
|                 | Titanium alloys (400<or<1050[MPa])        | -                  | 50-130            | 45-120 | 40-100 | 60-140 | 55-130 | 50-110 | 45-125      | 40-115 | 35-95  | 55-135 | 50-125 | 45-105 |



NEGATIVES | Negativas | Negativas

| Insert Type             | Application         | Tolerance Class | Major field of Application | Geometry | Cutting Edge*       |              | Cutting Conditions** | Available Shapes |                       |       |              |              |       |       |              |              |  |  |  |  |  |
|-------------------------|---------------------|-----------------|----------------------------|----------|---------------------|--------------|----------------------|------------------|-----------------------|-------|--------------|--------------|-------|-------|--------------|--------------|--|--|--|--|--|
|                         |                     |                 |                            |          | at the nose radius  | at the flank |                      | KN __            | CN __                 | DN __ | RN __        | SN __        | TN __ | VN __ | WN __        |              |  |  |  |  |  |
|                         |                     |                 |                            |          |                     |              |                      | Feed Fn (mm/rev) | Depth of cut DOC (mm) |       |              |              |       |       |              |              |  |  |  |  |  |
| Knux's                  | Finishing           | U               | P<br>M<br>K                | 01       |                     |              | 0,20 to 0,35         | 1,00 to 6,00     |                       |       |              |              |       |       |              |              |  |  |  |  |  |
|                         |                     |                 |                            |          | Medium              | U            | P<br>M<br>K          | 02               |                       |       | 0,40 to 0,70 | 1,50 to 6,00 |       |       |              |              |  |  |  |  |  |
| NEGATIVES - double side | Medium to Finishing | M               | P<br>M                     | 01       |                     |              | 0,12 to 0,50         | 1,00 to 6,50     |                       |       |              |              |       |       |              |              |  |  |  |  |  |
|                         |                     |                 |                            |          | Roughing to Medium  | M            | P<br>M               | 02               |                       |       | 0,14 to 0,50 | 0,70 to 5,00 |       |       |              |              |  |  |  |  |  |
|                         | Medium to Finishing | M               | P<br>M                     | 03       |                     |              | 0,15 to 0,50         | 0,80 to 6,00     |                       |       |              |              |       |       |              |              |  |  |  |  |  |
|                         |                     |                 |                            |          | Fine Finishing      | M            | M<br>S<br>NEW<br>GSF |                  |                       |       | 0,08 to 0,15 | 0,10 to 2,50 |       |       |              |              |  |  |  |  |  |
|                         | Finishing           | M               | P                          | MF       |                     |              | 0,05 to 0,60         | 0,10 to 2,50     |                       |       |              |              |       |       |              |              |  |  |  |  |  |
|                         |                     |                 |                            |          | Medium to Finishing | M            | M<br>N<br>S          | MS               |                       |       | 0,08 to 0,80 | 0,20 to 4,50 |       |       |              |              |  |  |  |  |  |
|                         | Medium to Finishing | M               | M<br>S                     | SF       |                     |              |                      |                  |                       |       | 0,10 to 0,55 | 0,60 to 3,00 |       |       |              |              |  |  |  |  |  |
|                         |                     |                 |                            |          |                     |              |                      |                  | Medium to Finishing   | M     | P            | LC           |       |       | 0,07 to 0,50 | 0,60 to 3,00 |  |  |  |  |  |
|                         | Medium to Finishing | M               | M<br>S                     | GS       |                     |              | 0,10 to 0,60         | 0,40 to 2,00     |                       |       |              |              |       |       |              |              |  |  |  |  |  |
|                         | Medium to Finishing | M               | K                          | ST       |                     |              | 0,10 to 0,50         | 0,15 to 10,50    |                       |       |              |              |       |       |              |              |  |  |  |  |  |
|                         | Medium to Finishing | M               | P                          | MR       |                     |              | 0,10 to 0,70         | 0,30 to 9,00     |                       |       |              |              |       |       |              |              |  |  |  |  |  |

\* T-Land varies according to the IC (IC reference used: 12,7mm)

\*\* Cutting Conditions varies according to the Insert shape, IC and Nose Radius

# CHIP BREAKER SPECIFICATIONS

Especificações de quebra-apanas | Especificaciones de rompevirutas

NEGATIVES | Negativas | Negativas

| Insert Type             | Application        | Tolerance Class | Major field of Application | Geometry | Cutting Edge*      |              | Cutting Conditions**            |                          | Available Shapes |       |       |       |       |       |       |       |  |  |
|-------------------------|--------------------|-----------------|----------------------------|----------|--------------------|--------------|---------------------------------|--------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|--|--|
|                         |                    |                 |                            |          | at the nose radius | at the flank | Feed F <sub>n</sub><br>(mm/rev) | Depth of cut DOC<br>(mm) | KN __            | CN __ | DN __ | RN __ | SN __ | TN __ | VN __ | WN __ |  |  |
|                         |                    |                 |                            |          |                    |              |                                 |                          |                  |       |       |       |       |       |       |       |  |  |
| NEGATIVES - double side | Medium             | M               | P                          | PM       |                    |              | 0,10 to 0,60                    | 0,30 to 9,00             |                  |       |       |       |       |       |       |       |  |  |
|                         | Medium Wiper       | M               | P<br>K                     | MW       |                    |              | 0,15 to 0,90                    | 0,30 to 6,00             |                  |       |       |       |       |       |       |       |  |  |
|                         | Roughing           | M               | K                          | Flat     |                    |              | 0,08 to 2,50                    | 0,10 to 15,00            |                  |       |       |       |       |       |       |       |  |  |
|                         | Roughing to Medium | M               | P                          | MA       |                    |              | 0,30 to 0,70                    | 1,20 to 8,00             |                  |       |       |       |       |       |       |       |  |  |
|                         | Roughing to Medium | M               | M<br>S                     | SS       |                    |              | 0,10 to 1,00                    | 0,30 to 8,50             |                  |       |       |       |       |       |       |       |  |  |
|                         | Roughing           | M               | P<br>M<br>K                | HR       |                    |              | 0,20 to 1,20                    | 0,80 to 15,00            |                  |       |       |       |       |       |       |       |  |  |
| NEGATIVES - Single side | Roughing           | M               | P<br>M                     | RP       |                    |              | 0,30 to 1,50                    | 2,00 to 12,00            |                  |       |       |       |       |       |       |       |  |  |
|                         |                    | M               | P                          | GR       |                    |              | 0,20 to 1,50                    | 0,80 to 8,00             |                  |       |       |       |       |       |       |       |  |  |
|                         | Heavy to Roughing  | M               | P<br>M                     | HY       |                    |              | 0,35 to 1,60                    | 2,00 to 15,00            |                  |       |       |       |       |       |       |       |  |  |
|                         | Heavy to Roughing  | M               | P<br>K                     | HZ       |                    |              | 0,35 to 1,60                    | 2,40 to 17,00            |                  |       |       |       |       |       |       |       |  |  |

\* T-Land varies according to the IC (IC reference used: 12,7mm)

\*\* Cutting Conditions varies according to the Insert shape, IC and Nose Radius

| Insert Type                           | Application                 | Tolerance Class | Major field of Application | Geometry | Cutting Edge*      |              | Cutting Conditions** |                       | Available Shapes |              |       |       |       |       |       |  |  |  |  |  |
|---------------------------------------|-----------------------------|-----------------|----------------------------|----------|--------------------|--------------|----------------------|-----------------------|------------------|--------------|-------|-------|-------|-------|-------|--|--|--|--|--|
|                                       |                             |                 |                            |          | at the nose radius | at the flank | Feed Fn (mm/rev)     | Depth of cut DOC (mm) | CC __            | DC __        | RC __ | SC __ | TC __ | VC __ | VB __ |  |  |  |  |  |
|                                       |                             |                 |                            |          |                    |              |                      |                       | 80°              | 55°          |       | 90°   | 60°   | 35°   | 35°   |  |  |  |  |  |
| POSITIVES - Clearance angle 5° and 7° | Fine Finishing              | M               | M                          | NEW      | FF                 |              |                      | 0,04 to 0,45          | 0,08 to 2,00     |              |       |       |       |       |       |  |  |  |  |  |
|                                       |                             |                 | S                          |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
|                                       | Finishing to Fine finishing | G               | P                          | M        | S                  | FS           |                      |                       | 0,01 to 0,25     | 0,10 to 3,00 |       |       |       |       |       |  |  |  |  |  |
|                                       |                             |                 | M                          |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
|                                       | Finishing                   | M               | K                          | M        | S                  | Flat         |                      |                       | 0,04 to 0,80     | 0,05 to 6,30 |       |       |       |       |       |  |  |  |  |  |
|                                       |                             |                 | P                          |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               | P                          | M        | S                  | FP           |                      |                       | 0,03 to 0,45     | 0,06 to 2,40 |       |       |       |       |       |  |  |  |  |  |
|                                       |                             |                 | M                          |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               | P                          | M        | S                  | BO           |                      |                       | 0,05 to 0,30     | 0,30 to 1,50 |       |       |       |       |       |  |  |  |  |  |
|                                       |                             |                 | M                          |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
|                                       | M                           | M               | S                          | M        | S                  | FM           |                      |                       | 0,03 to 0,45     | 0,06 to 2,40 |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               |                            |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
|                                       | M                           | M               | K                          | M        | S                  | FK           |                      |                       | 0,03 to 0,30     | 0,06 to 2,40 |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               |                            |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
| Fine Finishing wiper                  | M                           | P               | M                          | K        | S                  | FW           |                      |                       | 0,05 to 0,50     | 0,30 to 3,50 |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               |                            |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
| Finishing                             | M                           | M               | S                          | M        | LM                 |              |                      | 0,08 to 0,35          | 0,20 to 3,00     |              |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               |                            |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
| Finishing Wiper                       | M                           | P               | M                          | K        | S                  | MW           |                      |                       | 0,10 to 0,50     | 0,50 to 4,00 |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               |                            |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
| Medium to Finishing                   | M                           | M               | S                          | M        | GS                 |              |                      | 0,05 to 4,00          | 0,40 to 5,00     |              |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               |                            |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
| Medium to Finishing                   | G                           | N               | M                          | S        | LN                 |              |                      | 0,05 to 1,60          | 0,05 to 7,00     |              |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               |                            |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |
| Medium                                | M                           | P               | M                          | S        | MP                 |              |                      | 0,06 to 0,60          | 0,19 to 3,60     |              |       |       |       |       |       |  |  |  |  |  |
|                                       |                             | M               |                            |          |                    |              |                      |                       |                  |              |       |       |       |       |       |  |  |  |  |  |

\* T-Land varies according to the IC (IC reference used: 12,7mm)

\*\* Cutting Conditions varies according to the Insert shape, IC and Nose Radius

# CHIP BREAKER SPECIFICATIONS

Especificações de quebra-afaras | Especificaciones de rompevirutas

POSITIVES | Positivas | Positivas

| Insert Type                           | Application        | Tolerance Class | Major field of Application | Geometry | Cutting Edge*      |              | Cutting Conditions**            |                          | Available Shapes |       |       |       |       |       |       |  |
|---------------------------------------|--------------------|-----------------|----------------------------|----------|--------------------|--------------|---------------------------------|--------------------------|------------------|-------|-------|-------|-------|-------|-------|--|
|                                       |                    |                 |                            |          | at the nose radius | at the flank | Feed F <sub>n</sub><br>(mm/rev) | Depth of cut DOC<br>(mm) | CC __            | DC __ | RC __ | SC __ | TC __ | VC __ | VB __ |  |
|                                       |                    |                 |                            |          |                    |              |                                 |                          | 80°              | 55°   |       |       |       |       |       |  |
| POSITIVES - Clearance angle 5° and 7° | Medium             | M               | MM                         | M        |                    |              | 0,06 to 0,60                    | 0,19 to 3,60             |                  |       |       |       |       |       |       |  |
|                                       |                    |                 |                            | S        |                    |              | 0,06 to 0,60                    | 0,19 to 3,60             |                  |       |       |       |       |       |       |  |
|                                       |                    |                 |                            | K        |                    |              | 0,06 to 0,60                    | 0,19 to 3,60             |                  |       |       |       |       |       |       |  |
|                                       | Roughing to Medium | M               | CP                         | ST       | P                  |              |                                 | 0,04 to 0,17             | 0,50 to 2,40     |       |       |       |       |       |       |  |
|                                       |                    |                 |                            |          | M                  |              |                                 | 0,04 to 0,17             | 0,50 to 2,40     |       |       |       |       |       |       |  |
|                                       |                    |                 |                            |          | S                  |              |                                 | 0,04 to 0,17             | 0,50 to 2,40     |       |       |       |       |       |       |  |
|                                       |                    |                 |                            |          | P                  |              |                                 | 0,05 to 3,20             | 0,80 to 12,80    |       |       |       |       |       |       |  |
|                                       |                    |                 |                            |          | M                  |              |                                 | 0,05 to 3,20             | 0,80 to 12,80    |       |       |       |       |       |       |  |
|                                       |                    |                 |                            |          | K                  |              |                                 | 0,05 to 3,20             | 0,80 to 12,80    |       |       |       |       |       |       |  |
|                                       |                    |                 |                            |          | RF                 |              |                                 | 0,25 to 2,50             | 2,50 to 10,00    |       |       |       |       |       |       |  |
| RM                                    | RM                 | RM              | RM                         | P        |                    |              | 0,80 to 2,50                    | 3,20 to 13,00            |                  |       |       |       |       |       |       |  |
|                                       |                    |                 |                            | M        |                    |              | 0,80 to 2,50                    | 3,20 to 13,00            |                  |       |       |       |       |       |       |  |
|                                       |                    |                 |                            | K        |                    |              | 0,80 to 2,50                    | 3,20 to 13,00            |                  |       |       |       |       |       |       |  |
| RR                                    | RR                 | RR              | RR                         | P        |                    |              | 0,80 to 2,50                    | 3,20 to 13,00            |                  |       |       |       |       |       |       |  |
|                                       |                    |                 |                            | M        |                    |              | 0,80 to 2,50                    | 3,20 to 13,00            |                  |       |       |       |       |       |       |  |

\* T-Land varies according to the IC (IC reference used: 12,7mm)

\*\* Cutting Conditions varies according to the Insert shape, IC and Nose Radius

| Insert Type                     | Application         | Tolerance Class | Major field of Application | Geometry | Cutting Edge*      |              | Cutting Conditions**            |                          | Available Shapes |       |
|---------------------------------|---------------------|-----------------|----------------------------|----------|--------------------|--------------|---------------------------------|--------------------------|------------------|-------|
|                                 |                     |                 |                            |          | at the nose radius | at the flank | Feed F <sub>n</sub><br>(mm/rev) | Depth of cut DOC<br>(mm) | CC __            | DC __ |
|                                 |                     |                 |                            |          |                    |              |                                 |                          | 80°              | 55°   |
| POSITIVES - Clearance angle 11° | Medium to Finishing | U               | Flat                       | P        |                    |              | 0,05 to 2,20                    | 1,00 to 10,00            |                  |       |
|                                 |                     |                 |                            | M        |                    |              | 0,05 to 2,20                    | 1,00 to 10,00            |                  |       |
|                                 |                     |                 |                            | K        |                    |              | 0,05 to 2,20                    | 1,00 to 10,00            |                  |       |
| Finishing to Fine Finishing     | M                   | 12              | 12                         | P        |                    |              | 0,03 to 0,55                    | 0,10 to 3,00             |                  |       |
|                                 |                     |                 |                            | M        |                    |              | 0,03 to 0,55                    | 0,10 to 3,00             |                  |       |
| Medium                          | M                   | 13              | 13                         | P        |                    |              | 0,03 to 0,55                    | 0,20 to 7,00             |                  |       |
|                                 |                     |                 |                            | M        |                    |              | 0,03 to 0,55                    | 0,20 to 7,00             |                  |       |

\* T-Land varies according to the IC (IC reference used: 12,7mm)

\*\* Cutting Conditions varies according to the Insert shape, IC and Nose Radius

# CHIP BREAKER COMPARATIVE CHART

NEGATIVES | Negativas | Negativas

| Application |                            | Palbit          | Sandvik                 | Kennametal           | Iscar                | Seco               | Tungaloy                              | Mitsubishi              | Sumitomo             | Walter               | Kyocera                         | Taegutec                  | Korloy   | Ceratzit                   |
|-------------|----------------------------|-----------------|-------------------------|----------------------|----------------------|--------------------|---------------------------------------|-------------------------|----------------------|----------------------|---------------------------------|---------------------------|----------|----------------------------|
| Mat.        | Operations                 |                 |                         |                      |                      |                    |                                       |                         |                      |                      |                                 |                           |          |                            |
| P           | Finishing                  | MF              | QF                      | FS, LF               | SF, PP TF            |                    | O1 TF                                 | PK FH                   | FA                   |                      | DP                              | FA                        | VF, HU   |                            |
|             | Medium to Finishing        | MF, LC          | PF, QF, LC MF, R/L-K    | FF, FN               | F3P, NF, SF          | FF2, FF1           | TS, TSF, ZF 11, NS, AS, TQ, NM, CB, C | SA, FY, C, SH, MP       | SU, FL, SE, SX       | NF3, NS6             | PQ, VFCJ PQ, GP, PP, HQ, GS, CQ | FG, VF, EA FC, MC, ML, MP | VL       | CF, TF                     |
|             | Medium Wiper               | MW*             | WL, WF, WMX WM, WR      | FW, MW, RW           | WF, WG               | W-MF2, W-MF3       | AFW, FW, ASW, SW                      | SW                      | LWJ, SEW, GUW        | NF, NM               | WP, WQ                          | WS, WT                    |          | TFQ, TMQ                   |
|             | Medium to Roughing         | PM, MR, GR, MA  | PM, QM, XM, XRM         | P, MN                | M3P, M3M, PP, TF, GN | MR7, MR6, M5, M6   | TM, AM, DM, ZM All-round              | MA, MH, MP              | GU GE, UX            | NMT, NM4             | HS, PT, GT, CS, PS              | PC, MT MC, MG-            | VM       | TMF, TMM M50               |
|             | Roughing                   | HR, RP", GR, MA | HM, PR MR               | RN, RP MR            | NR MR                | MR6, R5            | TH, THS                               | RP, GH HZ, HL           | MU, ME HG            | NM5, NM6 NM9         | PH All-round                    | RT                        | GR, HR   | TM, TRM                    |
|             | Heavy Roughing             | RP", HY", HZ"   | PR, MR, HR, QR          | RM RH                | R3P, NM              | R4, RR6            | TU, TRS, TUS                          | HM, HX HV               | HG, HP HU, HW HF     | NR6, NRF NRR         | PX                              | HT, HD RX, RH HY, HZ      | GH, VT   | TRR, TR, R28, R58 R88      |
| M           | Fine Finishing             | GSF             |                         |                      |                      |                    |                                       |                         |                      |                      |                                 |                           |          |                            |
|             | Finishing                  | SF, GS          | MF, SM, XF, LC, R/L-K   | FP                   | TF, VL               | FF2, FF1, MF1      | SF, SA, SS                            | GM, MS, SH, LM          | EX, EG, SU, EF       | NF4 NMS              | GU, MQ                          | EA, SF, SU, FG            | VP2      | CF, F30 M34 F32, TF        |
|             | Medium                     | MS, SF, GS      | MM, QM, SM XM, XRM      | MP, P                | M3M, PP              | MF2, FF2, MF5      | SM S                                  | MM, MA ES               | GU HM                | NM4                  | TK MU                           | EM, ET                    | VP3, HS  | TMF, M42 M30, M52          |
|             | Roughing                   | SS, RP, HZ"     | MR HM, PR               | UP, RP               | MR, MH               | M5, M6, R8, RS, R6 | TH, SH, TU                            | GH, RM, HZ              | EM, MU               | NR4, NRT, NRS        | MS                              | "GR, VM, VH, GH"          |          | TM, M60, TRM, TMR, TRR R80 |
| K           | Medium to Finishing        | ST              | KF, XF                  | FN                   | GN                   | M4, M5             | CF                                    | LK, MA                  | UZ                   |                      | C                               | FG                        | B25      | CF                         |
|             | Medium                     | ST, HR, FLAT    | KM, QM, XM, XRM         | RP, UN               |                      | FLAT               | CM All-round                          | MK GK                   | GZ                   | NM5                  | ZS All-round                    | MT MG                     | FLAT     | M50                        |
|             | Roughing to Heavy Roughing | HR, FLAT, HZ"   | KR Without chip breaker | Without chip breaker |                      | MR7, M5            | CH Without chip breaker               | RK Without chip breaker | Without chip breaker | Without chip breaker | GC Without chip breaker         | RT                        | GR       | TMR, TR R28, R58, R88      |
| Z           | Medium                     | MS              | MF, QM                  | MS, MP MG            | PP                   | -                  | P                                     |                         | AX                   |                      | AH, A3                          | ML                        | HA       | F32                        |
|             | Medium                     |                 |                         |                      |                      |                    |                                       |                         |                      |                      |                                 |                           |          |                            |
| S           | Finishing                  | GS, SF, MS      | SF, SM 01               | FS, LS MS            |                      | MF1, M1            | HRF                                   | FJ, LS                  | EF EX                | NFT NF4              | MQ                              | SF                        | VP1      |                            |
|             | Medium                     | SF, SS, DOMX    | MM, QM SMR              | UP, P, NGP RP        | PP                   | MR3, MR4           | HRM, HMM, SA                          | MS RS GJ                | EG MU                | NMS NM4, NRS, NR4    | TK MS MU                        | SU                        | VP2, VP3 | M34, M52                   |

\* = Wiper  
" = Single face insert

TURNING

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

# CHIP BREAKER COMPARATIVE CHART

Tabela comparativa de quebra-afaras | Tabla de comparación de rompevirutas

POSITIVES - CLEARANCE ANGLE 5°, 7° AND 11° | Positivas - Alívio 5°, 7° e 11° | Positivas - Alivio 5°, 7° y 11°

| Application     |                           | Palbit     | Sandvik           | Kennametal     | Iscar                  | Seco             | Tungaloy                 | Mitsubishi     | Sumitomo                           | Walter        | Kyocera                | Taegutec | Korloy           | Ceratzit     |
|-----------------|---------------------------|------------|-------------------|----------------|------------------------|------------------|--------------------------|----------------|------------------------------------|---------------|------------------------|----------|------------------|--------------|
| Mat.            | Operations                |            |                   |                |                        |                  |                          |                |                                    |               |                        |          |                  |              |
| STEEL           | Fine Finishing            | FS         | UM                | UF             | SF                     | F1, MF2          | O1                       | FV, SMG        | FC, FW                             | PF2           | CF, CK                 | FA       | HFP              | F32          |
|                 | Finishing                 | FS, FP     | R/L-K, PF, XF, UF | 11, GM, LF     | PF, SM, 14, 17, 19, XL | FF1, F2, M3, MF2 | PSF, PF, SS, PS, PSS, TS | FP, FV, SV, LP | FP, FZ, LU, FK, SS, SC, SU, SK, SF | PF5, PF4, PS5 | CQ, GK, GP, HQ, XP, XQ | FG, GF   | VF, VL, F        | SF, SMF, SMQ |
|                 | Finishing Wiper           | FW*        | WF                | FW             | WF                     | W-F1             | TSW, W08                 | SW             | LWU, SDW                           | PF            |                        |          |                  |              |
|                 | Finishing to Medium       | MP         | PM                | MF, MP, GM, MR | DT, HQ                 | MF2              | PM, 23, 24, RS           | MP, MV         | SU, UM, UJ                         | PM5           | VF, MF                 | MT, PC   | HMP, C25, M, CMX | SM           |
|                 | Finishing to Medium Wiper | MW*        | WM                | MW             | WG                     |                  |                          | MW             |                                    | PM            |                        | WT       |                  |              |
| STAINLESS STEEL | Fine Finishing            | FS, FF     | UM                | LF, GM         | SM                     | F1, MF2, FF1     | PSF                      | FJ             | FC                                 | PF2           | GQ, GF                 | FG       | HFP              |              |
|                 | Finishing                 | FS, FM, LM | MF, UF, R/L-K     | MF             | PF, 14                 | F2, M3           | SS, PSS                  | FM, FV, SV     | SU                                 | PF4           | MQ                     | FA       | VF, F            | SF, SMF, SMQ |
|                 | Finishing Wiper           | FW*        | WF                | FW             | WF                     | W-F1             |                          | SW             |                                    | PF            |                        |          |                  |              |
|                 | Finishing to Medium       | MM, LM     | MM, XM            | MF, MP         | SM                     | MF2, M5          | PM                       | MM, MV         | UM                                 | PM5           | XQ, VF                 | MT, PC   | HMP, C25, M      | F23, F43, SM |
|                 | Finishing to Medium Wiper | MW*        | WM                | MW             | WG                     |                  |                          | MW             |                                    | PM            |                        | WT       |                  |              |
| CAST IRON       | Finishing                 | FK         | KF                | 11             | PF                     | M3               |                          | FV             | SK                                 |               | GK                     | FA       | HMP              | SF           |
|                 | Finishing Wiper           | FW*        | WF                | FW             | PF                     | W-F1             |                          | SW             | LWU                                | PF            |                        | MT, PC   |                  |              |
|                 | Finishing to Medium       | MK, FLAT   | KM, KR            | MF, MP, FLAT   | PM5, 19, FLAT          | M5               | CM, FLAT                 | MV, MK, FLAT   | UM, FLAT                           | PM5, PS5      | FLAT                   | FALT     | C25, HMP, FLAT   | 25P, 27, 29  |
|                 | Finishing to Medium Wiper | MW*        | WM                | MW             |                        | W-F2             |                          | MW             |                                    | PM            |                        | WT       |                  |              |
| ALUMINIUM       | Medium                    | LN         | AL                | HP, GT         | AF, AS                 | AL               | AL, PP                   | AZ, R/L-F      | AG, AX, AY                         | PF2, PM2      | AH, A3                 | FL       | AK, AR           | 23P, 25P, 27 |
| HRSA            | Fine Finishing            | FS, FF     | UM                | LF             | SM                     | F1, MF2          | PSF, PF, SS, PS, PSS, TS | FJ             | FC                                 | PF2           | GQ                     |          | HFP              | SF           |
|                 | Finishing                 | FM, LM     | MF, UF, R/L-K     | GM             | PF, 14                 | F1               | PSS, PS                  | FV             | FX, FY                             | PF4           | MQ                     | FA       | HFP              | F23, F43, SM |
|                 | Finishing Wiper           | FW*        | WF                | FW             | WF                     |                  |                          |                |                                    | PF            |                        |          |                  |              |
|                 | Finishing to Medium       | MM, LM     | MM, XM            | MF             | SM                     |                  | PM                       | MV             | SI                                 | PM5           | MQ                     | FG       | HMP              | SM, 25P, 29  |
|                 | Finishing to Medium Wiper | MW*        | WM                | MW             | WG                     |                  |                          |                |                                    | PM            |                        |          |                  |              |
|                 | Medium to Roughing        | GS         |                   |                |                        |                  |                          |                |                                    |               |                        |          |                  |              |

# GRADES COMPARATIVE CHART

CVD COATED GRADES | Graus revestidos a CVD | Calidades con recubrimiento CVD

| ISO | Material | Palbit                                 | Sandvik  | Kennametal   | Iscar  | Seco   | Mitsubishi   | Sumitomo   | Tungaloy   | Walter                               | Kyocera  | Taegutec  | Korloy                     | Ceratizit   |
|-----|----------|--|--|--|--|--|--|--|--|--------------------------------------|--|---|----------------------------|---|
|     |          |  |  |  |  |  |  |  |  |                                      |  |   |                            |   |
| P   | P05      | PHG105                                 | GC4305   | KCP05B<br>KC9105   | IC9150<br>IS8080<br>IC428                      | TP0500<br>TP1500   | UE6105<br>MC6005   | ACP810P<br>AC700G                                | T9105<br>T9005                                     | WPP01                                | CA510<br>CA5505  | TT1300<br>TT8105  | NC3010                     |   |
|     | P10      | PHG105<br>PHG115<br>PH2G115            | GC4215<br>GC4315<br>GC4415                               | KCP10B<br>KCP10<br>KCP25<br>KCP25C<br>KC9110             | IC9150<br>IC9015<br>IC8150<br>IC8250           | TP1500<br>TP1501<br>TP2500                               | UE6105<br>MC6015<br>MC6115<br>UE6110<br>MY5015                     | AC810P<br>AC8015P<br>AC700G<br>AC820P<br>AC2000  | T6215<br>T9105<br>T9005<br>T9115<br>T9215          | WPP05<br>WPP10S<br>WPP10G            | CAS510<br>CA115P<br>CA5505<br>CA515<br>CA5515                    | TT1300<br>TT7310<br>TT7400<br>TT8115<br>TT8115B           | NC3215                     | CTC1110<br>CTC1115<br>CTC3110<br>TCC410             |
|     | P20      | PHG115<br>PH2G115<br>PHG125<br>PH2G125 | GC4215<br>GC4315<br>GC4415<br>GC4225<br>GC4325<br>GC4425 | KCP25B<br>KCP25<br>KCP25C<br>KC9125                      | IC9015<br>IC8250<br>IC9050<br>IC9250<br>IC8350 | TP1501<br>TP2500<br>TP2501                               | MC6015<br>MC6115<br>UE6110<br>MC6025<br>MC6125<br>UE6020<br>MY5015 | AC8015P<br>AC8025P<br>AC820P<br>AC2000<br>AC830P | T6215<br>T6225<br>T9115<br>T9215<br>T9125<br>T9225 | WPP10S<br>WPP10G<br>WPP20S<br>WPP20G | CA115P<br>CA515<br>CA5515<br>CA525<br>CA5525<br>CA6525<br>CR9025 | TT3500<br>TT5100<br>TT7400<br>KT7300<br>TT7800<br>TT8115B | NC3220<br>NC3220<br>NC3120 | CTC1110<br>CTC1115<br>CTC1125<br>CTC1130<br>CTC1425 |
|     | P30      | PHG125<br>PH2G125                      | GC4225<br>GC4325<br>GC4425<br>GC4335                     | KCP25B<br>KCP25C<br>KCP30<br>KCP40<br>KCP8050            | IC8250<br>IC8350<br>IC9250<br>IC9350           | TP2500<br>TP2501<br>TP3500<br>TP3000                     | MC6025<br>MC6125<br>UE6020<br>UE6035<br>UH6400                     | AC8025P<br>AC830P<br>AC630M                      | T6225<br>T9125<br>T9225<br>T9135<br>T9035          | WPP20S<br>WPP20G<br>WPP30S<br>WPP30G | CA525<br>CA5525<br>CA6525<br>CA530<br>CA5335<br>CR9025           | TT3500<br>TT5100<br>TT7400<br>TT8125B<br>KT7300           | NC3215<br>NC3225<br>NC3120 | CTC1125<br>CTC1130<br>CTC1135<br>CTC1425            |
|     | P40      | PH5740<br>PHG140                       | GC4235<br>GC4335   | KCP30B<br>KCP40B<br>KC9140<br>KC9040<br>KC9240<br>KC9245 | IC8350<br>IC9350                               | TP3500<br>TP3000   | MC6030<br>UE6035<br>UH6400   | AC630M   | T9135<br>T9035                                     | WPP30S                               | CA530<br>CA5535  | TT5100<br>TT7100<br>TT8135<br>KT7300<br>TT7800            | NC500H<br>NC5330           | CTC1135<br>CTC1435<br>CTC2135                       |
| M   | M10      | PHS215                                 | GC2015   | KCM15  | IC9250<br>IC6015<br>IC8250                     | TM2000   | MC7015<br>US7020   | AC610M<br>AC620M                                 | T6120<br>T9115<br>T9215                            | WMP10S<br>WAM20                      | CA6515   |   | NC9020                     | CTC1110<br>CTC1115                                  |
|     | M20      | PHS215<br>PHS225                       | GC2015<br>GC2220   | KCM15<br>KCM25<br>KC9225                                 | IC9250<br>IC6015<br>IC6025<br>IC9025<br>IC656  | TM2000<br>TM4000   | MC7015<br>US7020<br>MC7025   | AC610M<br>AC620M<br>AC6030M<br>AC630M            | T6020<br>T6120<br>T6130<br>T9125<br>T9215          | WMP10S<br>WMP20S                     | CA6515<br>CA6525   | TT5100<br>TT9225  | NC9020                     | CTC1115<br>CTC1125<br>CTC1130<br>CTC1135            |
|     | M30      | PHS225<br>PHS240                       | GC2025<br>GC2220   | KCM25<br>KCM35<br>KC9230                                 | IC9350<br>IC6025<br>IC635                      | TM4000   | MC7025<br>MC7035<br>US735  | AC6030M<br>AC6040M<br>AC630M                     | T6030<br>T6130                                     | WMP20S<br>WMP30                      | CA6525   | TT5100<br>TT7100<br>TT9225<br>TT9235                      | NC9025                     | CTC1125<br>CTC1135<br>CTC1425<br>CTC1435<br>CTC2135 |
|     | M40      | PHS240                                 | GC2025   | KCM35<br>KC9240<br>KC9245                                | IC6025<br>IC9350                               | TM4000   | MC7035<br>US735  | AC6030M<br>AC6040M<br>AC630M                     |  | WMP30                                |  | TT7100<br>TT9235  | NC9025                     | CTC2135   |
|     | M50      | PHS228                                 | GC2035   | KC9245   | IC9350   |  |  |  |  |                                      |  |   |                            | NC9035  |
| K   | K05      | PH5705                                 | GC3205<br>GC3210   | KCK05<br>KC9315  | IC5005<br>IC9007                               | TH1500<br>TK1001<br>TK1000<br>TK1501                     | MC5005<br>UC5105   | AC405K<br>AC4010K                                | T5105  | WAK10<br>WVK10                       | CA310<br>CA4505<br>CA4010  | TT7005  |                            |   |
|     | K10      | PH5705<br>PH5320                       | GC3205<br>GC3210<br>GC3215                               | KCK15B<br>KCK15B<br>KC920<br>KC9315<br>KC9325            | IC5005<br>IC5010<br>IC9150<br>IC428<br>IC4028  | TK1001<br>TK1000<br>TK1501<br>TK2000<br>TK2001<br>TK2501 | MC5015<br>UC5105<br>UC5115<br>MY5015                               | AC405K<br>AC4010K<br>AC4015K<br>AC420K<br>AC700G | T5105<br>T5115                                     | WVK10<br>WAK20<br>WVK20              | CA310<br>CA315<br>CA320<br>CA4515<br>CA4110<br>CA4115            | TT7005<br>TT7015<br>TT3100<br>TT7310<br>TT8115            | NC6205<br>NC6210<br>NC6215 | CTC1110<br>CTC1115<br>CTC3110<br>TCC410<br>CTC3215  |
|     | K20      | PH5320                                 | GC3215   | KCK20<br>KC9110<br>KC9325                                | IC5010<br>IC8150<br>IC9150<br>IC9015<br>IC418  | TK2001<br>TK2000<br>TK2501                               | MC5015<br>UC5115<br>UE6110<br>MY5015                               | AC4015K<br>AC420K<br>AC700G<br>AC820P            | T5115<br>T5125                                     | WVK20<br>WAK30                       | CA315<br>CA320<br>CA4515<br>CA4115<br>CA4120                     | TT7310<br>TT7015<br>TT8115                                | NC6215                     | CTC1115<br>CTC1125<br>CTC1130<br>CTC1425<br>CTC3215 |
|     | K30      | PH5740                                 |  | KC9125<br>KC9325   | IC9015<br>IC418                                |  | UE6110   | AC820P   | T5125  |                                      |  |   |                            |   |

# GRADES COMPARATIVE CHART

Tabela comparativa de graus | Tabla de comparación de calidades

UNCOATED GRADES | Graus não revestidos | Calidades sin recubrimiento

| ISO       |     | Palbit | Sandvik     | Kennametal          | Iscar                | Seco            | Mitsubishi | Sumitomo | Tungaloy | Walter | Kyocera       | Taegutec | Korloy | Ceratizit |
|-----------|-----|--------|-------------|---------------------|----------------------|-----------------|------------|----------|----------|--------|---------------|----------|--------|-----------|
| Material  |     |        |             |                     |                      |                 |            |          |          |        |               |          |        |           |
| ALUMINIUM | N01 | PH0910 | H10         |                     | IC20                 |                 |            |          | KS05F    | WK1    | KW10          | K10      |        |           |
|           | N10 |        | H10<br>H13A | KU10<br>K313<br>K68 | IC20<br>IC08<br>IC28 | 890<br>HX<br>KX | HTi10      |          | TH10     | WK1    | KW10<br>KWK15 | K10      | H01    |           |
|           | N20 |        | H10<br>H13A | KU10<br>K313<br>K68 | IC08<br>IC28         | HX<br>KX<br>883 |            | H1       | KS15F    | WK1    | KW10<br>KWK15 |          | H01    |           |



# GRADES COMPARATIVE CHART

TURNING

PVD COATED GRADES | Graus Revestidos a PVD | Calidades con recubrimiento PVD

| ISO                    | Palbit | Sandvik          | Kennametal                                     | Iscar   | Seco   | Mitsubishi               | Sumitomo                                       | Tungaloy         | Walter  | Kyocera  | Taegutec                                       | Korloy           | Ceratizit                                       |
|------------------------|--------|------------------|--|---|--|--------------------------|--|------------------|---|--|--|------------------|---|
| Material               |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |
| <b>P</b>               | P01    | PH7910           |  |   |  |                          |  |                  |   | PR915<br>PR1005  | PV3030   | PC8110           |   |
|                        | P10    | PH7910           | GC1525<br>GC1025                               | KC5010<br>KC5510<br>KU10T                     | IC250<br>IC350<br>IC507<br>IC570<br>IC807<br>IC907<br>IC908  | CP200<br>TS2001          | VP10MF   | AH710            |   | PR915<br>PR1005<br>PR930<br>PR1025<br>PR1115<br>PR1225<br>PR1425 | PV3010<br>PV3030<br>TT7080<br>TT1040           | PC230            |   |
|                        | P20    | PH7920           | GC1525<br>GC1025<br>GC1125                     | KC5025<br>KC5525<br>KC7215<br>KC7315<br>KU25T | IC228<br>IC250<br>IC308<br>IC328<br>IC350<br>IC354<br>IC507<br>IC528<br>IC570<br>IC807<br>IC808<br>IC907<br>IC908<br>IC928<br>IC1008<br>IC1028<br>IC3028 | CP250<br>TS2500          | VP10RT<br>VP20RT<br>VP15TF<br>VP20MF           | AC520U           | AH710<br>AH725<br>AH120<br>SH730<br>GH730<br>GH130      | PR930<br>PR1025<br>PR1115<br>PR1225                              | TT7220<br>TT9020<br>TT7080<br>TT9080<br>TT7070 | PC5300<br>PC8115 | SR226<br>GM127                                  |
|                        | P30    | PH7920           | GC1025<br>GC1125                               | KC7015<br>KC7020<br>KU25T<br>KC7235           | IC228<br>IC250<br>IC328<br>IC330<br>IC354<br>IC528<br>IC1008<br>IC1028<br>IC3028   | CP500                    | VP10RT<br>VP20RT<br>VP20MF                     | AC530U           | AH725 AH120<br>SH730 GH730<br>GH130 AH740<br>J740       |  | TT9030<br>TT7030<br>TT7080<br>TT9030<br>TT9080 | PC8115           | GM40<br>CTP1235<br>CTP2235<br>SR226<br>GM127    |
| <b>M</b>               | M01    | PH7910<br>PHH910 | GC1005   |   | IC520  | TS2000<br>CP200          | VP10MF   |                  | WSM10S  | PR915  | TT5080   |                  |   |
|                        | M10    | PH7910<br>PHH910 | GC1005<br>GC1025<br>GC1115<br>GC1125<br>GC1105 | KC5010<br>KC5510<br>KC6005<br>KC6015          | IC330<br>IC354<br>IC507<br>IC520<br>IC570<br>IC807<br>IC907<br>IC3028  | CP200<br>TS2000          | VP10MF   | AH710            | WSM20S  | PR915<br>PR1025<br>PR1225<br>PR1425                              | TT5030<br>PV3010<br>PV3030<br>TT9030           | PC8110<br>PC9030 |   |
|                        | M20    | PH7920<br>PHH920 | GC1005<br>GC1025<br>GC1125<br>GC1105           | KC5025<br>KC5525<br>KC7020<br>KC7025          | IC250<br>IC330<br>IC354<br>IC808<br>IC908<br>IC1008<br>IC1028<br>IC3028  | CP250<br>TS2500<br>CP500 | VP10RT<br>VP20RT<br>VP15TF<br>VP20MF           | AC520U           | AH710 AH725<br>AH120 SH730<br>GH730 GH130<br>GH330 AH60 | WSM30S<br>PR1025<br>PR1125<br>PR1225<br>PR915<br>PR930           | TT5030<br>PV3030<br>TT9020<br>TT9030           | PC9030<br>PC8115 | CTP2120<br>CTP1235<br>SR226<br>GM127            |
|                        | M30    | PH7920<br>PHH920 | GC1125<br>GC2035                               | KC7030<br>KC7225                              | IC228<br>IC250<br>IC328<br>IC330<br>IC1008<br>IC1028<br>IC3028   | CP500                    | VP10RT<br>VP20RT<br>VP15TF<br>VP20MF<br>MP7035 | AC520U<br>AC530U | GH330 AH725<br>AH120 AH730<br>GH730 GH130<br>J740 AH645 | PR1125   | TT9030<br>TT9080<br>TT8030                     | PC9030           | CTP2240<br>CTP1235<br>CTP2235<br>SR226<br>GM127 |
| <b>STEEL</b>           |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |
|                        |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |
|                        |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |
|                        |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |
| <b>STAINLESS STEEL</b> |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |
|                        |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |
|                        |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |
|                        |        |                  |  |   |  |                          |  |                  |   |  |  |                  |   |

Negative inserts

Positive inserts

PCBN & PCD inserts

Heavy turning

External Toolholders

Internal Toolholders

Automatic Lathes

Spare Parts

Technical Data

# GRADES COMPARATIVE CHART

Tabela comparativa de graus | Tabla de comparación de calidades

| ISO      |     | Palbit           | Sandvik                              | Kennametal                 | Iscar                             | Seco  | Mitsubishi                 | Sumitomo         | Tungaloy                | Walter  | Kyocera | Taegutec         | Korloy                     | Ceratizit             |
|----------|-----|------------------|--------------------------------------|----------------------------|-----------------------------------|---|----------------------------|------------------|-------------------------|---------|---------|------------------|----------------------------|-----------------------|
| Material |     |                  |                                      |                            |                                   |   |                            |                  |                         |         |         |                  |                            |                       |
| S        | S01 | PH7910<br>PHH910 |                                      |                            | IC507<br>IC907                    |   | MP9005<br>VP05RT           |                  | AH905<br>AH905<br>SH730 | WDSM10S | PR915   |                  | PC8110                     |                       |
|          | S10 | PH7910<br>PHH910 | GC1105<br>GC1115<br>GC1005<br>GC1025 | KC5010<br>KC5410<br>KC5510 | IC507<br>IC903<br>IC300<br>IC808  | CP200<br>CP250<br>TS2000<br>TS2500<br>CP250 | MP9015<br>VP10RT<br>MP9015 | AC510U           | AH110<br>AH120          | WSM20S  | PR915   | TT5030<br>TT5030 | PC8110<br>PC8115<br>PC8105 | CM40<br>SR226<br>CM45 |
|          | S20 | PH7920<br>PHH920 | GC1025<br>GC1125                     | KC5025<br>KC5525           | IC908<br>IC928<br>IC3028<br>IC806 | TS2500<br>CP500                             | MT9015<br>VP20RT           | AC510U<br>AC520U | AH120<br>AH720          | WSM30S  | PR1125  | TT8020<br>TT8030 | PC8815<br>PC5300           | CTP2440<br>GM127      |
|          | S30 | PH7920<br>PHH920 | GC1125                               |                            |                                   |   | VP15TF                     | AC520U           | AH725                   |         | PR1125  | TT8020           | PC5400                     | CTP2135               |

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