

Inserts
Plaquettes
Wendeschneidplatten **A01**

Toolholders
Porte-outils
Klemmhalter **B01**

Boring bars
Barres d'alésage
Bohrstangen **C01**

Automatic lathes
.....
..... **D01**

Ceramic tools
.....
..... **E01**

Parting & grooving tools
Outils pour tronçonner et rainurer
Stechen und Nuteneinstecken **F01**

Threading
Outils pour filetage
Werkzeuge zum Gewindedrehen **G01**

Drills
Forets
Bohrer **H01**

Cartridges
Cartouches
Kurzklammhalter **I01**

Brazed tools
Outils brasés
Gelötete Werkzeuge **J01**

Milling cutters
Fraises
Fräser **K01**

Solid carbide
Carbure monobloc
Vollhartmetall **L01**

Boring heads
Têtes d'alésage
Bohrköpfe **M01**

Arbors & adaptors
Attachements
Dorne und Aufnahmen **N01**



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Inserts

Turning

Automatic
lathes

Ceramic
tools

Parting &
grooving

Threading

Drills

Cartridges

Brazed
tools

Milling
cutters

Solid
carbide

Boring
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Arbors &
adaptors



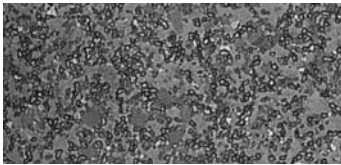
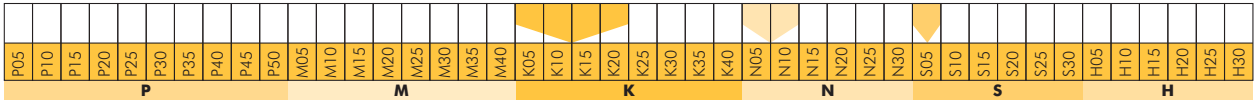
KM 15

K10

Finishing grade in the K10 range. This carbide grade is for use on cast iron, aluminium and heat-resistant alloys. This grade works well on cobalt based alloys and synthetic materials and is suitable for finishing on heat-resistant alloys.

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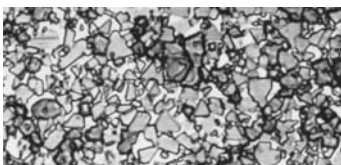
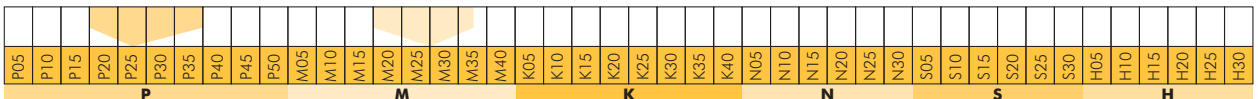
PM 25

P25 - M20

General purpose uncoated grade in the P30 range. This tough, economical grade is suitable to work carbon steels, alloyed steels, tool steels and stainless steels. PM25 provides toughness and resistance to deformation in roughing and semi-finishing applications.

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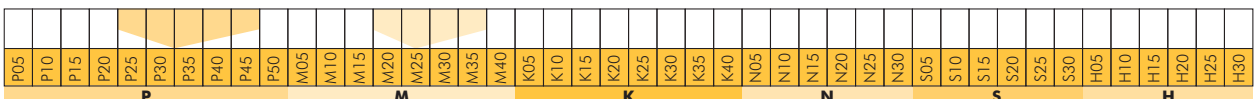
PM 40

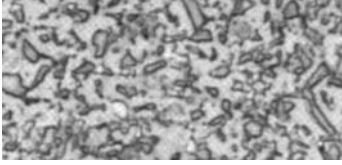
P40 - M30

Roughing grade in the P35 range. This tough grade is for structural, cast and tool steels. It is recommended when toughness is more important than wear resistance.

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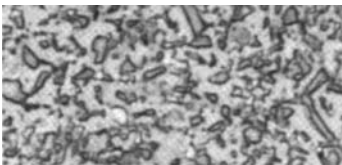
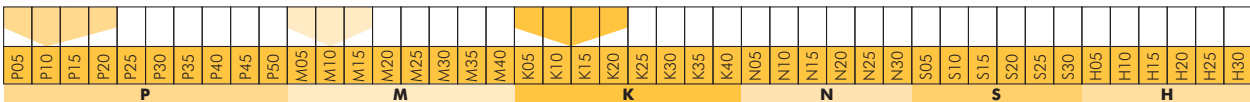
NC 25

P15 - M10 - K10

NC25 is a newly developed Cermet applicable for a wide range of cutting conditions as a standard grade for general machining of steel. It can successfully be used for a range of cutting speeds from (100 to 200 m/min) with better wear resistance than conventional TiC Cermet. It gives an excellent performance from semi-finish operation of ductile cast iron at cutting speeds of 200 m/min. or less.

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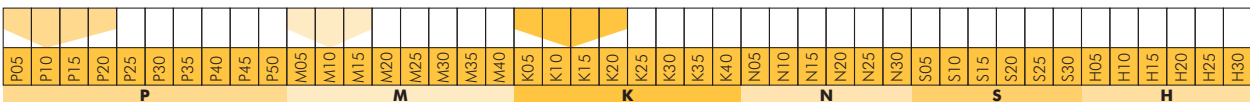
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Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

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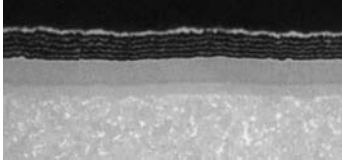
Brazed tools

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Solid carbide

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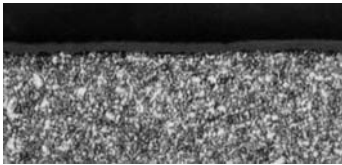
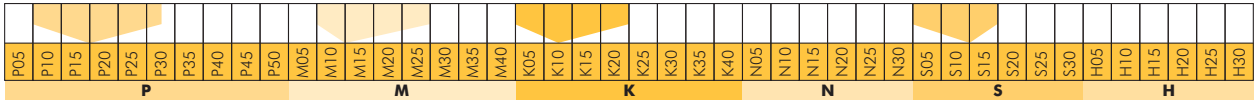
TIN 16

P15 - M15 - K15

Wear resistant finishing to intermediate grade suitable for many applications on steel, cast iron, stainless steel and high temperature alloys. It is generally used at higher speeds where deformation may be a problem. The multi-layer coating includes TiCN and aluminium oxide.

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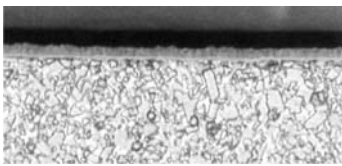
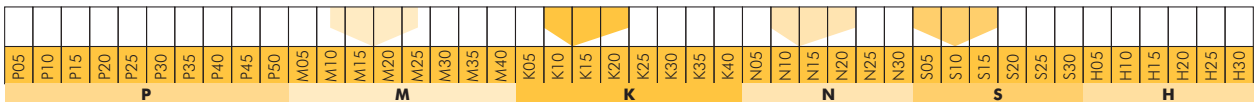
TIN 17

K20 - M20

Coated TiAlN grade in the K20 range. This carbide grade is for use on cast iron, aluminium and heat-resistant alloys. This grade works well on cobalt based alloys and synthetic materials and is suitable for finishing on heat-resistant alloys.

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TIN 21

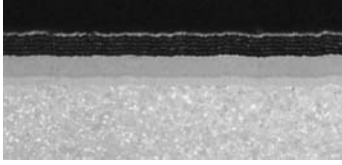
P20 - M20 - K15

Carbide coated grade with Tin-MT TiCN-Al₂O₃ by CVD. For use on steel, alloyed steel and cast iron. With its aluminium oxide coating, the grade TIN 21 is recommended every time wear characteristics are more important than toughness.

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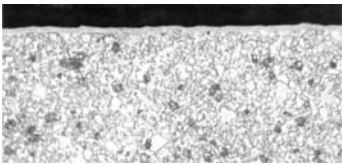
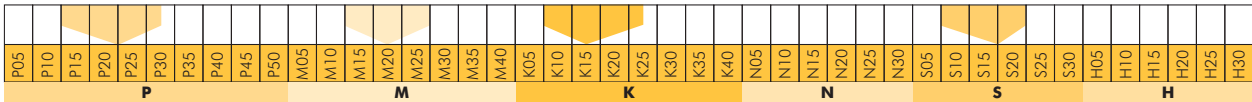
TIN 22

P20 - M20 - K20

General purpose wear resistant grade. It has enriched substrate which has exceptionally good deformation as well as fracture resistance. The multi-layer coating includes aluminium oxide to add additional heat and wear resistance. It is used to machine steel and stainless steel at lower speeds than TIN 16.

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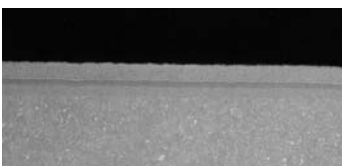
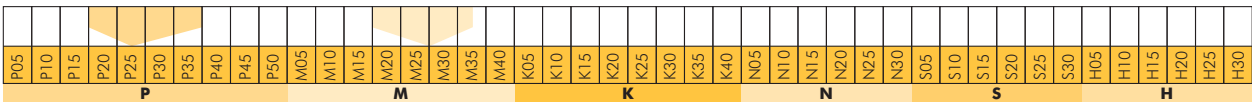
TIN 25

P25 - M20

Coated with TiN-TiC-TiN. Coating thickness 3-5 microns for use on steel, alloyed steel and stainless steel, with or without coolant with coolant, TIN 25 performs well when milling titanium or nickel based alloys, and ductile iron.

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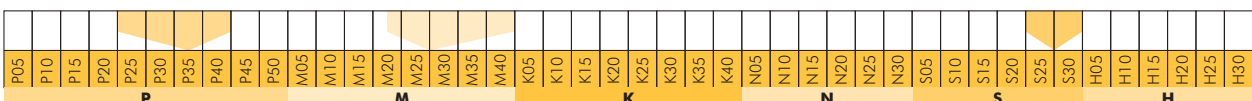
TIN 32

P30 - M20

General purpose wear resistant turning grade. The multi-layer coating includes aluminium oxide to add additional heat and wear resistance. It is used to machine steel at lower speeds than TIN 16. This turning grade is for demanding metal removal operations, including cutting through scale at low speeds through heavy interruption, and problem machining of stainless steel at low speed and poor rigidity.

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Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

Inserts

Turning

Automatic lathes

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Parting & grooving

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Cartridges

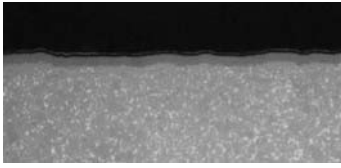
Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors



TIN 35

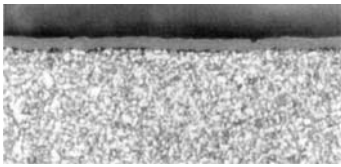
M25

New coated grade developed to machine stainless steel and heat-resistance alloys. This grade is only used in combination with the CS chipbreaker. First choice for stainless steel applications.

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| P05 | P10 | P15 | P20 | P25 | P30 | P35 | P40 | P45 | P50 | M05 | M10 | M15 | M20 | M25 | M30 | M35 | M40 | K05 | K10 | K15 | K20 | K25 | K30 | K35 | K40 | N05 | N10 | N15 | N20 | N25 | N30 | S05 | S10 | S15 | S20 | S25 | S30 | H05 | H10 | H15 | H20 | H25 | H30 |
| P | | | | | | | | | | M | | | | | | K | | | | | N | | | | | S | | | | | H | | | | | | | | | | | | |



TC 30

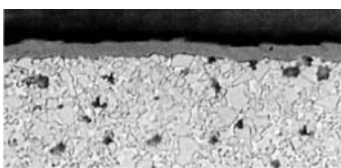
P30 - M30

Tough grade for milling in steel, stainless steel and superalloys. Smooth coating to minimize recutting of chips when milling in sticky materials. Excellent grade for tough demanding applications with or without coolant. Ti(C, N).

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| P05 | P10 | P15 | P20 | P25 | P30 | P35 | P40 | P45 | P50 | M05 | M10 | M15 | M20 | M25 | M30 | M35 | M40 | K05 | K10 | K15 | K20 | K25 | K30 | K35 | K40 | N05 | N10 | N15 | N20 | N25 | N30 | S05 | S10 | S15 | S20 | S25 | S30 | H05 | H10 | H15 | H20 | H25 | H30 |
| P | | | | | | | | | | M | | | | | | K | | | | | N | | | | | S | | | | | H | | | | | | | | | | | | |



TL 20

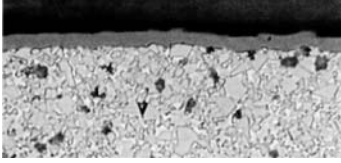
P25 - M20

Carbide coated with TiAlN and lubricity layer PVD coating. It has a lower friction coefficient and a lower cutting energy during finishing. The sharper cutting edge reduces the built-up edge damage and gives the workpiece an excellent surface finish. Recommended for alloyed steel.

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| P05 | P10 | P15 | P20 | P25 | P30 | P35 | P40 | P45 | P50 | M05 | M10 | M15 | M20 | M25 | M30 | M35 | M40 | K05 | K10 | K15 | K20 | K25 | K30 | K35 | K40 | N05 | N10 | N15 | N20 | N25 | N30 | S05 | S10 | S15 | S20 | S25 | S30 | H05 | H10 | H15 | H20 | H25 | H30 |
| P | | | | | | | | | | M | | | | | | K | | | | | N | | | | | S | | | | | H | | | | | | | | | | | | |



TL 40

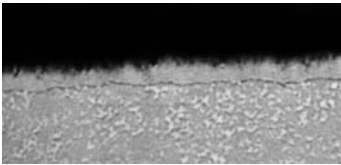
P40 - M30

PVD-coated grade for fine to medium rough milling. First choice for milling with small feeds and/or low cutting speeds. Excellent for milling when there is a risk of vibrations and when coolant is used. Recommended for machining superalloys. Multilayer (TiAl)N.

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| P05 | P10 | P15 | P20 | P25 | P30 | P35 | P40 | P45 | P50 | M05 | M10 | M15 | M20 | M25 | M30 | M35 | M40 | K05 | K10 | K15 | K20 | K25 | K30 | K35 | K40 | N05 | N10 | N15 | N20 | N25 | N30 | S05 | S10 | S15 | S20 | S25 | S30 | H05 | H10 | H15 | H20 | H25 | H30 |
| P | | | | | | | | | M | | | | | | | K | | | | | | N | | | | | S | | | | | H | | | | | | | | | | | |



ZR 10

K10

Micrograin grade with a extremely hard single zirconium layer for machining aluminium, copper alloys and plastics.

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| P05 | P10 | P15 | P20 | P25 | P30 | P35 | P40 | P45 | P50 | M05 | M10 | M15 | M20 | M25 | M30 | M35 | M40 | K05 | K10 | K15 | K20 | K25 | K30 | K35 | K40 | N05 | N10 | N15 | N20 | N25 | N30 | S05 | S10 | S15 | S20 | S25 | S30 | H05 | H10 | H15 | H20 | H25 | H30 |
| P | | | | | | | | | M | | | | | | | K | | | | | | N | | | | | S | | | | | H | | | | | | | | | | | |

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Parting & grooving

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Boring heads

Arbors & adaptors

Grade chart

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Automatic lathes

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Drills

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Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

| | KM15 | PM25 | PM40 | NC25 | NC40 | TIN16 | TIN17 | TIN21 | TIN22 | TIN25 | TIN32 | TIN35 | TC30 | TL20 | TL40 | ZR10 |
|----------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| P | | | | | | | | | | | | | | | | |
| P05 | | | | | | | | | | | | | | | | |
| P10 | | | | | | | | | | | | | | | | |
| P15 | | | | | | | | | | | | | | | | |
| P20 | | | | | | | | | | | | | | | | |
| P25 | | | | | | | | | | | | | | | | |
| P30 | | | | | | | | | | | | | | | | |
| P35 | | | | | | | | | | | | | | | | |
| P40 | | | | | | | | | | | | | | | | |
| P45 | | | | | | | | | | | | | | | | |
| P50 | | | | | | | | | | | | | | | | |
| M | | | | | | | | | | | | | | | | |
| M05 | | | | | | | | | | | | | | | | |
| M10 | | | | | | | | | | | | | | | | |
| M15 | | | | | | | | | | | | | | | | |
| M20 | | | | | | | | | | | | | | | | |
| M25 | | | | | | | | | | | | | | | | |
| M30 | | | | | | | | | | | | | | | | |
| M35 | | | | | | | | | | | | | | | | |
| M40 | | | | | | | | | | | | | | | | |
| K | | | | | | | | | | | | | | | | |
| K05 | | | | | | | | | | | | | | | | |
| K10 | | | | | | | | | | | | | | | | |
| K15 | | | | | | | | | | | | | | | | |
| K20 | | | | | | | | | | | | | | | | |
| K25 | | | | | | | | | | | | | | | | |
| K30 | | | | | | | | | | | | | | | | |
| K35 | | | | | | | | | | | | | | | | |
| K40 | | | | | | | | | | | | | | | | |
| N | | | | | | | | | | | | | | | | |
| N05 | | | | | | | | | | | | | | | | |
| N10 | | | | | | | | | | | | | | | | |
| N15 | | | | | | | | | | | | | | | | |
| N20 | | | | | | | | | | | | | | | | |
| N25 | | | | | | | | | | | | | | | | |
| N30 | | | | | | | | | | | | | | | | |
| S | | | | | | | | | | | | | | | | |
| S05 | | | | | | | | | | | | | | | | |
| S10 | | | | | | | | | | | | | | | | |
| S15 | | | | | | | | | | | | | | | | |
| S20 | | | | | | | | | | | | | | | | |
| S25 | | | | | | | | | | | | | | | | |
| S30 | | | | | | | | | | | | | | | | |
| H | | | | | | | | | | | | | | | | |
| H05 | | | | | | | | | | | | | | | | |
| H10 | | | | | | | | | | | | | | | | |
| H15 | | | | | | | | | | | | | | | | |
| H20 | | | | | | | | | | | | | | | | |
| H25 | | | | | | | | | | | | | | | | |
| H30 | | | | | | | | | | | | | | | | |

CX1

CX1 is ultimate silicon-nitride material that has been developed to improve the notch wear of the conventional ceramics wich contain silicon nitride.

To reduce notch wear amount in machining gray cast iron, the binding intergranular phase of silicon-nitride particles is change to the higher-melting-point compound. This contributes to high temperature and high pressure sintering, so that the high density can be created.

This material doesn't cover only the conventional silicon-nitride ceramics application range, but also appears excellent performance under even-higher-speed machining conditions.

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| | Main components | Major applications | Density g/cm ³ | Hardness HRA | Bending strength MPa | Young's modulus GPa | Thermal expansion coefficient X10 ⁻⁶ /K | Heat conductivity X10 ⁻⁶ /K |
|-----|---------------------------------|--|---------------------------|--------------|----------------------|---------------------|--|--|
| CX1 | Si ₃ Na ₄ | - Highly efficient cutting of gray cast iron | 3,2 | 93,5 | 1200 | 320 | 3,0 | 29 |

CC1

CC1 is a highly wear-resistant tool that has been formed into microstructure by adding a trace amount of zirconia (ZrO₂) to highly pure alumina (Al₂O₃), the main component of this tool material.

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|-----|--------------------------------|--|---------------------------|--------------|----------------------|---------------------|--|--|
| CC1 | Al ₂ O ₃ | - Semi-finishing and finishing of cast iron - Tube scarfing | 4,0 | 94,0 | 700 | 400 | 7,8 | 17 |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

Inserts

CC2

This material is well-balanced between wear resistance and fracture resistance, and it works well in wide range of cutting cast iron and the turning of hard materials.

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Turning

Automatic lathes

Ceramic tools

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|-----|-------------------------------------|--|---------------------------|--------------|----------------------|---------------------|--|--|
| CC2 | Al ₂ O ₃ +TiC | - Semi-finishing and finishing of cast iron - Machining of hardened materials | 4,3 | 94,5 | 800 | 420 | 7,9 | 21 |

Parting & grooving

CC4

Since the finest grain size particle, with high melting point, is composited CC4 improves in both hardness and strength, and it shows superior performance as a special material for machining high-hardened materials.

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Threading

Drills

| | Main components | Major applications | Density g/cm ³ | Hardness HRA | Bending strength MPa | Young's modulus GPa | Thermal expansion coefficient X10 ⁻⁶ /K | Heat conductivity X10 ⁻⁶ /K |
|-----|-------------------------------------|-----------------------------------|---------------------------|--------------|----------------------|---------------------|--|--|
| CC4 | Al ₂ O ₃ +TiC | - Machining of hardened materials | 4,6 | 95,5 | 1000 | 420 | 7,8 | 25 |

Cartridges

Brazed tools

PCBN

This PCBN are formed with special ceramic binder based on CBN (Cubic Boron Nitride) particles, and PCBN sintered layer is increasing thickness by carbide base.

PCBN are high-performance tool materials that have high hardness at room temperature and high temperature and are almost free from chemical reactions against the material to be cut.

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Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

PCD

PCD consists of a 0,5 mm thick diamond layer, which is inseparably connected to a carbide base. This polycrystalline diamond layer originates at a pressing operation by bonding of smallest diamond grains, supported by a metallic bonding agent. This cutting material also has a very long tool life.

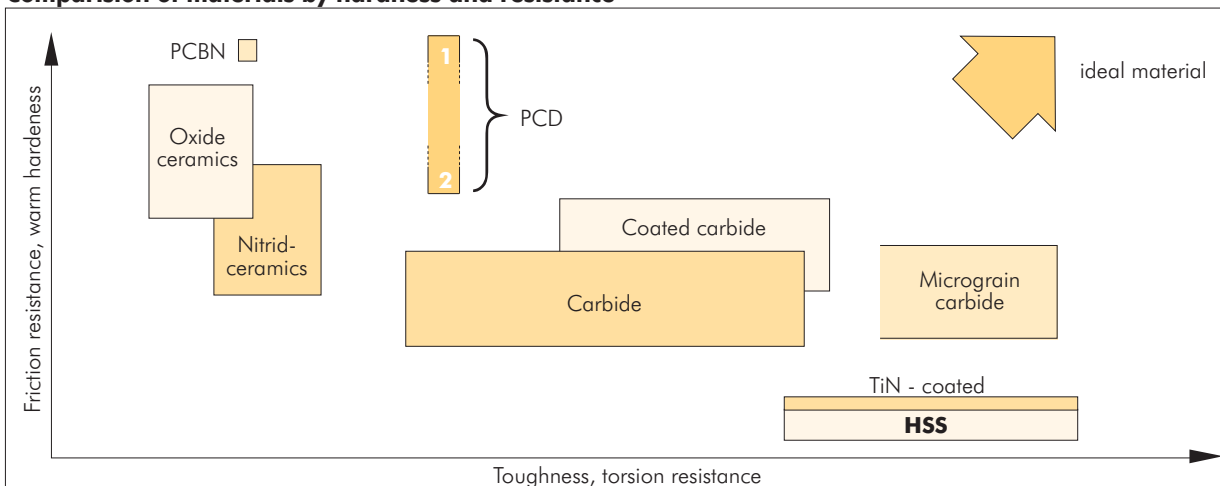
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| Polycrystalline boron nitride cutting material | | | | |
|--|--|-----------------|--------------------|---|
| Material | Vc = m/min. | Infeed f = mm/U | Depth of cut ap=mm | |
| PCBN | - Hardened materials and nitriding steels | 60-120 | 0,03-0,2 | 1 |
| | - High temperature and corrosion resistant alloys with high nickel or cobalt content | 70-150 | 0,03-0,15 | 1 |
| | - Gray cast iron, especially hard and abrasion resistant types | 300-600 | 0,10-0,5 | 3 |
| | - High speed steel (HSS) | 60-120 | 0,03-0,1 | 1 |
| | - Metal powder spraying | 60-120 | 2 | 1 |

| Polycrystalline diamond cutting material | | | | |
|--|--|-----------------|--------------------|--|
| Material | Vc = m/min. | Infeed f = mm/U | Depth of cut ap=mm | |
| PCD | - Aluminium alloys under 3% SiC | 200-2000 | 0,05-0,4 | up to the whole diamond cutting edge up to 700 |
| | - Aluminium alloys up to 12% SiC | 150-1000 | 0,05-0,4 | |
| | - Aluminium alloys up to approx 21% SiC | 100-800 | 0,05-0,4 | |
| | - Brass, magnesium, zinc alloys | 200-2000 | 0,05-0,4 | |
| | - Copper, bronze, lead alloys | 200-1000 | 0,05-0,4 | |
| | - Duro and thermoplastics with and without fillers e. g. epoxy resin | 100-1000 | 0,05-0,2 | |
| | - Hard papers | 200-600 | 0,10-0,3 | |
| | - Hard and soft rubber with and without fillers | 100-500 | 0,10-0,3 | |
| | - Graphite and pre-sintered carbide | 100-500 | 0,10-0,4 | |
| | - Aluminium oxide, silicon, tungsten | 50-180 | 0,1 | |

Comparison of materials by hardness and resistance



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

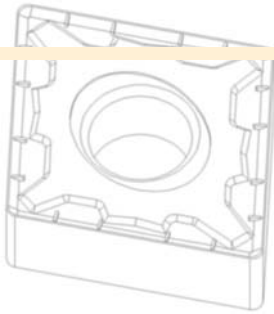
Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

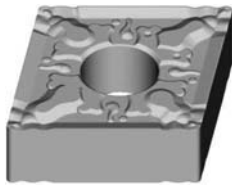


BASIC GEOMETRIES

- CF** - Canela Finishing
- CM** - Canela Medium
- CR** - Canela Roughing
- CS** - Canela Stainless steel

COMPLEMENTARY GEOMETRIES

- CFC** - Canela Finishing Cermet
- CFM** - Canela Finishing Medium
- CMC** - Canela Medium Cermet
- CMF** - Canela Medium Finishing
- CMR** - Canela Medium Roughing



-CF Geometry

CF chipbreakers are engineered for light finishing operations at high speeds in the 0,08 mm to 0,3 mm feed range at depths of cut between (0,2 to 2,5 mm).

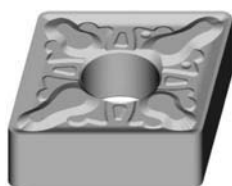
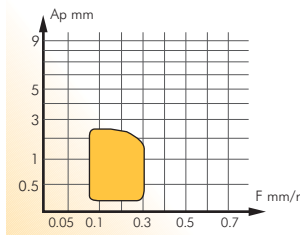
Main application area: Cutting depth (A_p): 0,2 - 2,5 mm
Feed (f): 0,08 - 0,3 mm

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Main application area: Cutting depth (A_p): 0,2 - 2,5 mm
Feed (f): 0,08 - 0,3 mm



-CM Geometry

CM chipbreakers provide a positive rake angle with land for high edge strength in medium duty applications on a wide range of materials.

Recommended for general purpose use on all types of steel.

Main application area: Cutting depth (A_p): 1,0 - 3,5 mm
Feed (f): 0,15 - 0,35 mm

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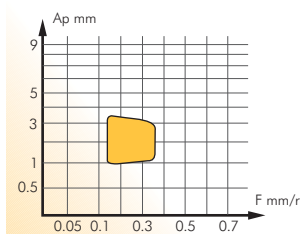
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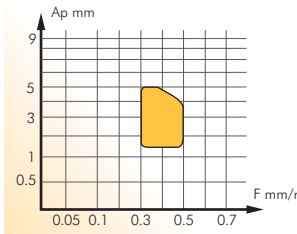




-CR Geometry

The strongest chipbreaker for double-sided inserts. The CR chipbreaker is suitable for high feed rates and depths of cut that normally require single-sided inserts. The chipbreaker has a wide negative T land, which gives high edge strength.

Main application area: Cutting depth (A_p): 1,5 - 5 mm
Feed (f): 0,3 - 0,5 mm

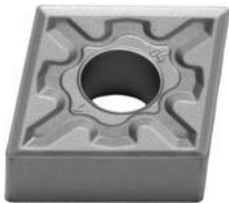


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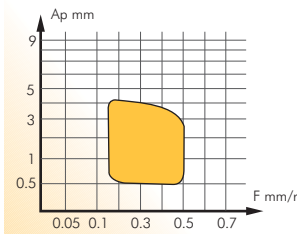
Main application area: Cutting depth (A_p): 1,5 - 5 mm
Feed (f): 0,3 - 0,5 mm



-CS Geometry

First choice for stainless steel. CS chipbreaker provide excellent chip control with low cutting forces.

Main application area: Cutting depth (A_p): 0,5 - 4,0 mm
Feed (f): 0,15 - 0,5 mm



First choice for stainless steel. CS chipbreaker provide excellent chip control with low cutting forces.

Main application area: Cutting depth (A_p): 0,5 - 4,0 mm
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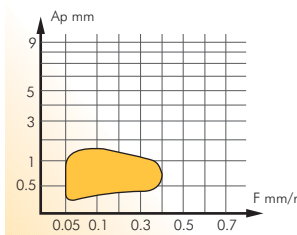
Main application area: Cutting depth (A_p): 0,5 - 4,0 mm
Feed (f): 0,15 - 0,5 mm



-CFC Geometry

CFC chipbreakers combined with the performance of Cermets provide for efficient chip control in finishing and light machining operations. Recommended for finishing steels and cast iron.

Main application area: Cutting depth (A_p): 0,2 - 1,5 mm
Feed (f): 0,05 - 0,4 mm



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Main application area: Cutting depth (A_p): 0,2 - 1,5 mm
Feed (f): 0,05 - 0,4 mm

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

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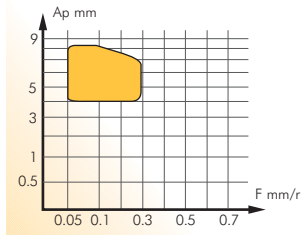
Arbors &
adaptors



-CFM Geometry

Double sided insert for semi-finishing and light roughing. 12° Positive cutting angle which reduces the cutting forces on the working piece. Chipbreaker with differential profile which reduces the contact zone and so improves thermal diffusion. Excellent performance in steel and materials which work harden.

Main application area: Cutting depth (A_p): 0,5 - 2,5 mm
Feed (f): 0,05 - 0,25 mm



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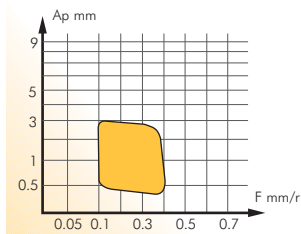
Main application area: Cutting depth (A_p): 0,5 - 2,5 mm
Feed (f): 0,05 - 0,25 mm



-CMC Geometry

Double sided insert for finishing and light roughing. Positive cutting angle and reinforced edge, which ensures a smooth chip control. Optimum resting surface, which ensures maximum stability and effective thermal dissipation. Special geometry for Cermet inserts.

Main application area: Cutting depth (A_p): 0,3 - 3,0 mm
Feed (f): 0,1 - 0,4 mm



Double sided insert for finishing and light roughing. Positive cutting angle and reinforced edge, which ensures a smooth chip control. Optimum resting surface, which ensures maximum stability and effective thermal dissipation. Special geometry for Cermet inserts.

Main application area: Cutting depth (A_p): 0,3 - 3,0 mm
Feed (f): 0,1 - 0,4 mm

Double sided insert for finishing and light roughing. Positive cutting angle and reinforced edge, which ensures a smooth chip control. Optimum resting surface, which ensures maximum stability and effective thermal dissipation. Special geometry for Cermet inserts.

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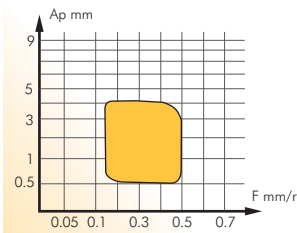


-CMF Geometry

CMF chipbreaker provide excellent chip control with low cutting forces and very free cutting action over a broad range of light duty applications.

Recommended for light duty use on carbon, alloy, and stainless steels.

Main application area: Cutting depth (A_p): 0,5 - 4,0 mm
Feed (f): 0,15 - 0,5 mm



CMF chipbreaker provide excellent chip control with low cutting forces and very free cutting action over a broad range of light duty applications.

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Main application area: Cutting depth (A_p): 0,5 - 4,0 mm
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Main application area: Cutting depth (A_p): 0,5 - 4,0 mm
Feed (f): 0,15 - 0,5 mm

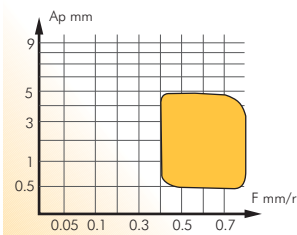


-CMR Geometry

Double sided insert for semi-finishing and light roughing. 12° Positive cutting angle which reduces the cutting forces on the working piece. Chipbreaker with differential profile which reduces the contact zone and so improves thermal diffusion.

Excellent performance in steel and materials which work harden.

Main application area: Cutting depth (A_p): 0,5 - 5,0 mm
Feed (f): 0,4 - 0,8 mm



Double sided insert for semi-finishing and light roughing. 12° Positive cutting angle which reduces the cutting forces on the working piece. Chipbreaker with differential profile which reduces the contact zone and so improves thermal diffusion.

Excellent performance in steel and materials which work harden.

Main application area: Cutting depth (A_p): 0,5 - 5,0 mm
Feed (f): 0,4 - 0,8 mm

Double sided insert for semi-finishing and light roughing. 12° Positive cutting angle which reduces the cutting forces on the working piece. Chipbreaker with differential profile which reduces the contact zone and so improves thermal diffusion.

Excellent performance in steel and materials which work harden.

Main application area: Cutting depth (A_p): 0,5 - 5,0 mm
Feed (f): 0,4 - 0,8 mm

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

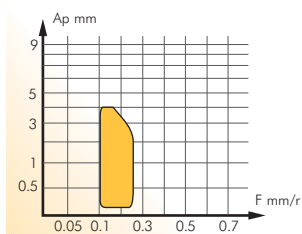
Arbors & adaptors



..NMG Geometry

For medium duty machining of tough work materials, above all chrome-nickel based alloys. Minimises tendency for these materials to adhere to the insert.

Main application area: Cutting depth (A_p): 0,1 - 4 mm
Feed (f): 0,1 - 0,25 mm



For medium duty machining of tough work materials, above all chrome-nickel based alloys. Minimises tendency for these materials to adhere to the insert.

Main application area: Cutting depth (A_p): 0,1 - 4 mm
Feed (f): 0,1 - 0,25 mm

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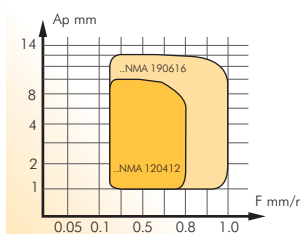
Main application area: Cutting depth (A_p): 0,1 - 4 mm
Feed (f): 0,1 - 0,25 mm



..NMA Geometry

Double sided insert for short chipping materials. Strong cutting edge.

Main application area: Cutting depth (A_p): 1 - 12 mm
Feed (f): 0,2 - 1 mm



Double sided insert for short chipping materials. Strong cutting edge.

Main application area: Cutting depth (A_p): 1 - 12 mm
Feed (f): 0,2 - 1 mm

Double sided insert for short chipping materials. Strong cutting edge.

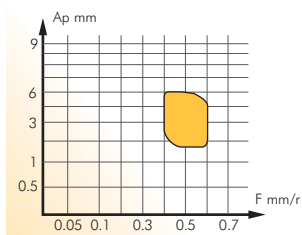
Main application area: Cutting depth (A_p): 1 - 12 mm
Feed (f): 0,2 - 1 mm



..NMM Geometry

Chipbreaker for single-sided inserts. It has a positive cutting edge which gives rise to low cutting forces.

Main application area: Cutting depth (A_p): 2,5 - 6 mm
Feed (f): 0,4 - 0,6 mm



Chipbreaker for single-sided inserts. It has a positive cutting edge which gives rise to low cutting forces.

Main application area: Cutting depth (A_p): 2,5 - 6 mm
Feed (f): 0,4 - 0,6 mm

Chipbreaker for single-sided inserts. It has a positive cutting edge which gives rise to low cutting forces.

Main application area: Cutting depth (A_p): 2,5 - 6 mm
Feed (f): 0,4 - 0,6 mm



..NMX Geometry

Light duty pos/neg inserts provide excellent chip control in light feed ranges using high positive shear angles. Recommended for machining of steels and other materials.

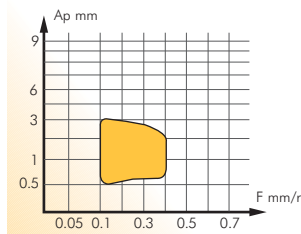
Main application area: Cutting depth (A_p): 0,5 - 3 mm
Feed (f): 0,1 - 0,4 mm

Light duty pos/neg inserts provide excellent chip control in light feed ranges using high positive shear angles. Recommended for machining of steels and other materials.

Main application area: Cutting depth (A_p): 0,5 - 3 mm
Feed (f): 0,1 - 0,4 mm

Light duty pos/neg inserts provide excellent chip control in light feed ranges using high positive shear angles. Recommended for machining of steels and other materials.

Main application area: Cutting depth (A_p): 0,5 - 3 mm
Feed (f): 0,1 - 0,4 mm



Inserts

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Cartridges

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Inserts

Turning

Automatic
lathes

Ceramic
tools

Parting &
grooving

Threading

Drills

Cartridges

Brazed
tools

Milling
cutters

Solid
carbide

Boring
heads

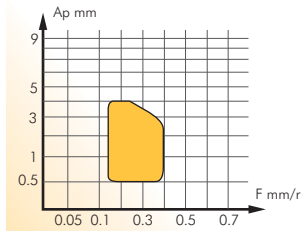
Arbors &
adaptors



-03 Geometry

Light to medium-duty machining operations. Low cutting forces and reduced power requirements thanks to positive rake angle. Good chip control over a wide range. Also used on short-chipping cast-iron materials.

Main application area: Cutting depth (A_p): 0,5 - 4 mm
Feed (f): 0,15 - 0,4 mm



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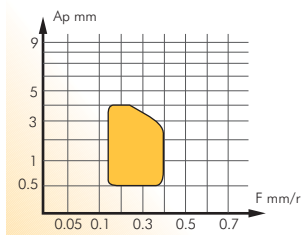
Main application area: Cutting depth (A_p): 0,5 - 4 mm
Feed (f): 0,15 - 0,4 mm



-33 Geometry

Geometry providing chip control in the finishing and medium duty range. Positive rake reduces cutting forces and power consumption. Can also be used on low-strength and stainless steels.

Main application area: Cutting depth (A_p): 0,5 - 4 mm
Feed (f): 0,15 - 0,4 mm



Geometry providing chip control in the finishing and medium duty range. Positive rake reduces cutting forces and power consumption. Can also be used on low-strength and stainless steels.

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Feed (f): 0,15 - 0,4 mm

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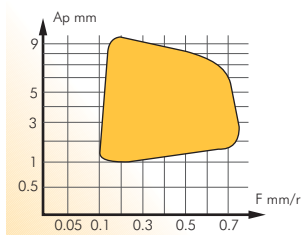
Main application area: Cutting depth (A_p): 0,5 - 4 mm
Feed (f): 0,15 - 0,4 mm



-AL Geometry

Geometry can be used for turning aluminium, light alloys, non ferrous metals, high-melting metals, plastics, glass fiber reinforced plastics, laminated board, carbon and fine ceramics.

Main application area: Cutting depth (A_p): 1 - 10 mm
Feed (f): 0,1 - 0,75 mm



Geometry can be used for turning aluminium, light alloys, non ferrous metals, high-melting metals, plastics, glass fiber reinforced plastics, laminated board, carbon and fine ceramics.

Main application area: Cutting depth (A_p): 1 - 10 mm
Feed (f): 0,1 - 0,75 mm

Geometry can be used for turning aluminium, light alloys, non ferrous metals, high-melting metals, plastics, glass fiber reinforced plastics, laminated board, carbon and fine ceramics.

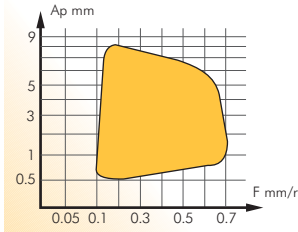
Main application area: Cutting depth (A_p): 1 - 10 mm
Feed (f): 0,1 - 0,75 mm



-AP Geometry

Geometry can be used for turning aluminium, light alloys, non ferrous metals, high-melting metals, plastics, glass fiber reinforced plastics, laminated board, carbon and fine ceramics.

Main application area: Cutting depth (A_p): 0,5 - 8 mm
Feed (f): 0,1 - 0,7 mm



Geometry can be used for turning aluminium, light alloys, non ferrous metals, high-melting metals, plastics, glass fiber reinforced plastics, laminated board, carbon and fine ceramics.

Main application area: Cutting depth (A_p): 0,5 - 8 mm
Feed (f): 0,1 - 0,7 mm

Geometry can be used for turning aluminium, light alloys, non ferrous metals, high-melting metals, plastics, glass fiber reinforced plastics, laminated board, carbon and fine ceramics.

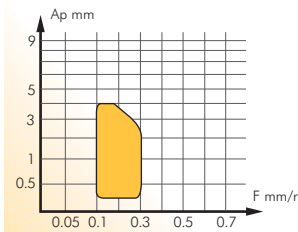
Main application area: Cutting depth (A_p): 0,5 - 8 mm
Feed (f): 0,1 - 0,7 mm



..MW Geometry

Double sided insert for short chipping materials. Strong cutting edge.

Main application area: Cutting depth (A_p): 0,2 - 4 mm
Feed (f): 0,1 - 0,3 mm



Double sided insert for short chipping materials. Strong cutting edge.

Main application area: Cutting depth (A_p): 0,2 - 4 mm
Feed (f): 0,1 - 0,3 mm

Double sided insert for short chipping materials. Strong cutting edge.

Main application area: Cutting depth (A_p): 0,2 - 4 mm
Feed (f): 0,1 - 0,3 mm

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

Basic geometries (steel)

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

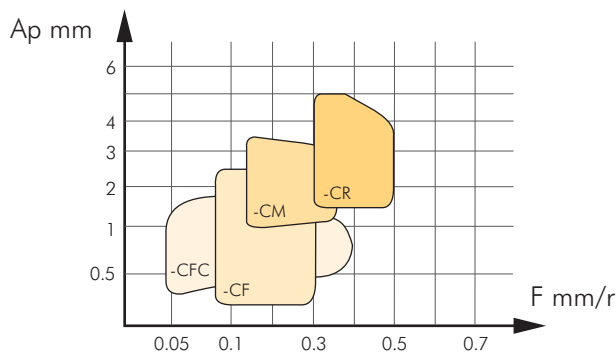
Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

1 - Select geometry



2 - Select grade

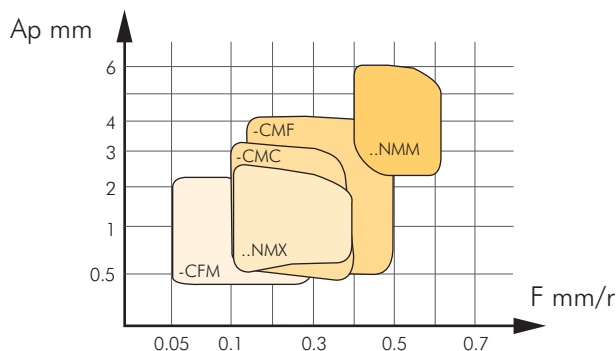
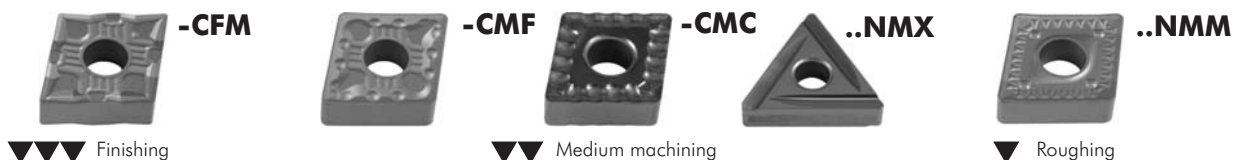
| Cutting condition | Super finishing | Finishing | Medium machining | Roughing |
|--------------------|-----------------|-----------|------------------|---------------|
| ⊗ Interrupted cut | - | TIN32 | TIN32 | PM25 - TIN32 |
| ⊖ Inconsistent cut | NC25 | TIN16 | TIN16 - TIN22 | TIN22 - TIN32 |
| ⊙ Consistent cut | NC25 | TIN16 | TIN16 | TIN22 - TIN32 |

3 - Select cutting speed

Proceed to page B.77 for cutting data

Complementary geometries (steel)

1 - Select geometry



2 - Select grade

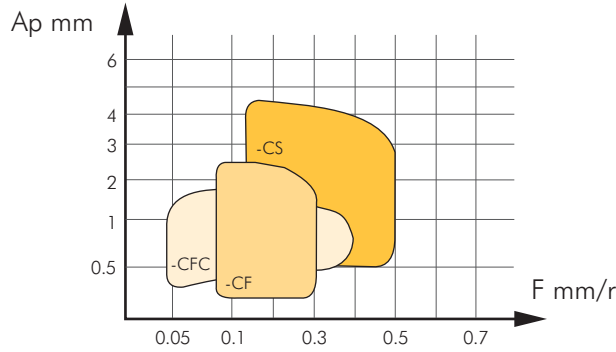
| Cutting condition | Finishing | Medium machining | Roughing |
|--------------------|---------------|----------------------|----------|
| ⊗ Interrupted cut | TIN32 | TIN32 | TIN32 |
| ⊖ Inconsistent cut | TIN16 - TIN32 | NC25 - TIN22 - TIN32 | TIN32 |
| ⊙ Consistent cut | TIN16 | NC25 - TIN16 - TIN32 | TIN32 |

3 - Select cutting speed

Proceed to page B.77 for cutting data

Basic geometries (Stainless steel)

1 - Select geometry



2 - Select grade

Cutting condition

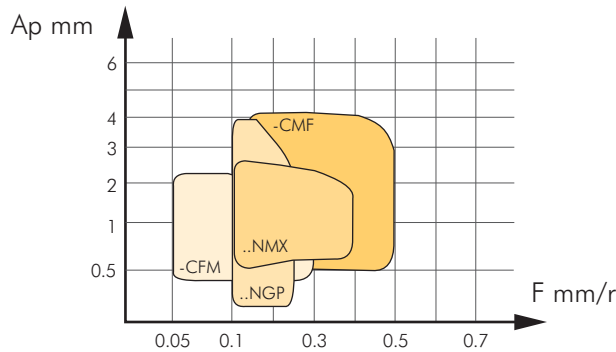
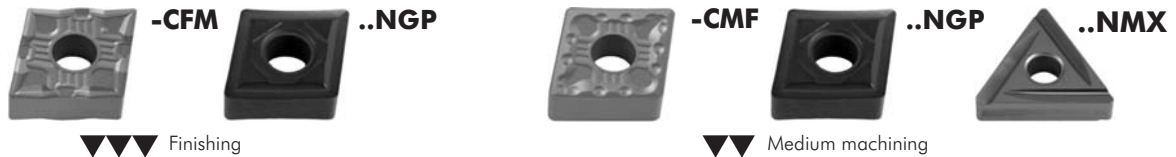
| | Super finishing | Finishing | Medium machining | Roughing |
|------------------|-----------------|-----------------------|------------------|----------|
| Interrupted cut | - | TIN32 - TIN35 | TIN32 - TIN35 | TIN35 |
| Inconsistent cut | NC25 | TIN16 - TIN32 - TIN35 | TIN32 - TIN35 | TIN35 |
| Consistent cut | NC25 | TIN16 - TIN32 - TIN35 | TIN32 - TIN35 | TIN35 |

3 - Select cutting speed

Proceed to page B.77 for cutting data

Complementary geometries (Stainless steel)

1 - Select geometry



2 - Select grade

Cutting condition

| | Finishing | Medium machining |
|------------------|---------------|----------------------|
| Interrupted cut | TIN32 | TIN32 |
| Inconsistent cut | TIN17 - TIN32 | NC25 - TIN17 - TIN32 |
| Consistent cut | TIN17 - TIN32 | NC25 - TIN17 - TIN32 |

3 - Select cutting speed

Proceed to page B.77 for cutting data

Inserts

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Automatic lathes

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Solid carbide

Boring heads

Arbors & adaptors

Basic geometries (Cast iron)

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

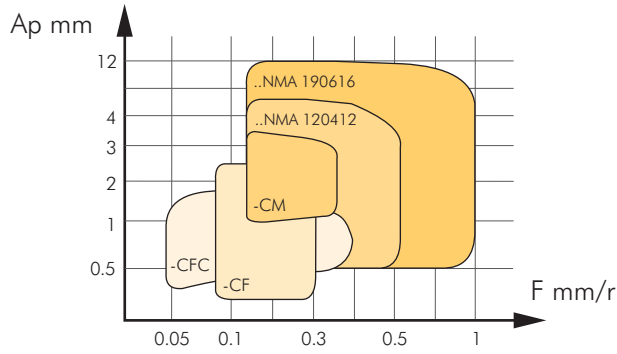
Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

1 - Select geometry



2 - Select grade

Cutting condition

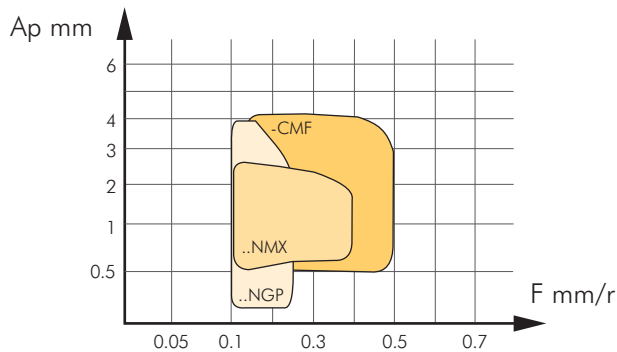
| | ▼▼▼▼ Super finishing | ▼▼▼ Finishing | ▼▼ Medium machining | ▼ Roughing |
|--------------------|----------------------|---------------|---------------------|---------------|
| ⊗ Interrupted cut | - | TIN16 | TIN16 - TIN17 | TIN16 - TIN17 |
| ⊖ Inconsistent cut | NC25 | TIN16 | TIN16 - TIN17 | TIN16 - TIN17 |
| ⊙ Consistent cut | NC25 | TIN16 | TIN16 - TIN17 | TIN16 - TIN17 |

3 - Select cutting speed

Proceed to page B.77 for cutting data

Complementary geometries (Cast iron)

1 - Select geometry



2 - Select grade

Cutting condition


| | ▼▼▼ Finishing | ▼▼ Medium machining |
|--------------------|----------------------|----------------------|
| ⊗ Interrupted cut | TIN16 - TIN17 | NC25 - TIN16 - TIN17 |
| ⊖ Inconsistent cut | NC25 - TIN16 - TIN17 | NC25 - TIN16 - TIN17 |
| ⊙ Consistent cut | NC25 - TIN16 - TIN17 | NC25 - TIN16 - TIN17 |

3 - Select cutting speed

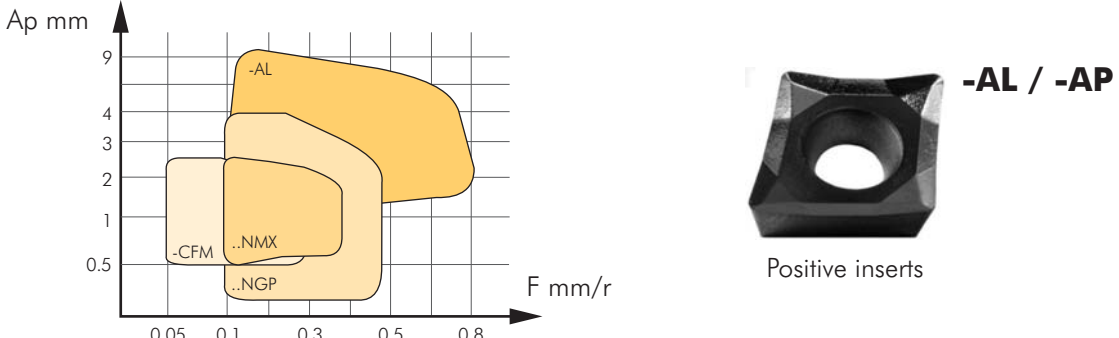
Proceed to page B.77 for cutting data

Basic geometries (Non ferrous materials)

1 - Select geometry



▼▼▼ Finishing ▼▼ Medium machining ▼ Roughing



Positive inserts

2 - Select grade

| Cutting condition | ▼▼▼ Finishing | ▼▼ Medium machining | ▼ Roughing |
|--------------------|-----------------------------|---------------------|---------------------|
| ⊗ Interrupted cut | KM15 - TIN16 - TIN17 - ZR10 | NC25 - TIN17 - ZR10 | NC25 - TIN17 - ZR10 |
| ○ Inconsistent cut | KM15 - TIN16 - TIN17 - ZR10 | NC25 - TIN17 - ZR10 | NC25 - TIN17 - ZR10 |
| ● Consistent cut | KM15 - TIN16 - TIN17 - ZR10 | NC25 - TIN17 - ZR10 | NC25 - TIN17 - ZR10 |

3 - Select cutting speed

Proceed to page B.77 for cutting data

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters


Solid carbide

Boring heads

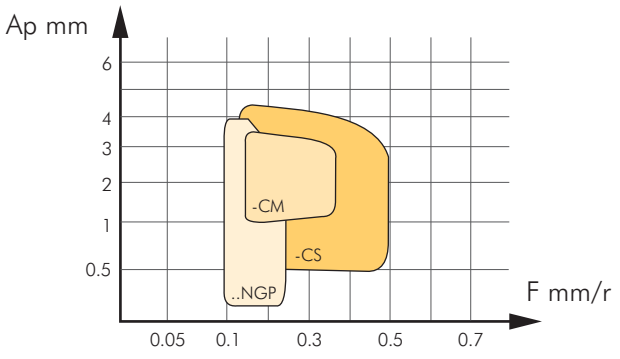
Arbors & adaptors

Basic geometries (Heat resistant alloys)

1 - Select geometry



▼▼▼ Finishing ▼▼ Medium machining ▼ Roughing



2 - Select grade

| Cutting condition | ▼▼▼ Finishing | ▼▼ Medium machining | ▼ Roughing |
|--------------------|---------------|-----------------------|------------|
| ⊗ Interrupted cut | TIN17 | TIN17 - TIN32 - TIN35 | TIN35 |
| ○ Inconsistent cut | TIN17 | TIN17 - TIN32 - TIN35 | TIN35 |
| ● Consistent cut | TIN17 | TIN17 - TIN32 - TIN35 | TIN35 |

3 - Select cutting speed

Proceed to page B.77 for cutting data

Inserts

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Threading

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Cartridges

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Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

| Insert shape | | |
|--------------|------|----------|
| | 35° | V |
| | 55° | D |
| | 75° | E |
| | 80° | C |
| | 86° | M |
| | 55° | K |
| | 82° | B |
| | 85° | A |
| | 90° | L |
| | 108° | P |
| | 120° | H |
| | 135° | O |
| | - | R |
| | 90° | S |
| | 60° | T |
| | 80° | W |

| Clearance angle | | |
|-----------------|--|----------|
| | 3° | A |
| | 5° | B |
| | 7° | C |
| | 15° | D |
| | 20° | E |
| | 25° | F |
| | 30° | G |
| | 0° | N |
| | 11° | P |
| | Clearance angles not included within the standard for which particular information is necessary. | |

| Tolerances | | | |
|------------|-----------|-------|----------|
| 0,025 | 0,005 | 0,025 | A |
| 0,013 | 0,005 | 0,025 | F |
| 0,025 | 0,013 | 0,025 | C |
| 0,013 | 0,013 | 0,025 | H |
| 0,025 | 0,025 | 0,025 | E |
| 0,025 | 0,025 | 0,13 | G |
| 0,05-0,15 | 0,005 | 0,025 | J |
| 0,05-0,15 | 0,013 | 0,025 | K |
| 0,05-0,15 | 0,025 | 0,025 | L |
| 0,05-0,15 | 0,08-0,20 | 0,13 | M |
| 0,05-0,15 | 0,08-0,20 | 0,025 | N |
| 0,08-0,25 | 0,13-0,38 | 0,13 | U |
| | | | |

| Form of top surface | |
|---------------------|----------|
| | N |
| | R |
| | F |
| | A |
| | M |
| | G |
| | W |
| | T |
| | Q |
| | U |
| | B |
| | H |
| | C |
| | J |
| Special version | X |

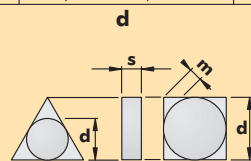
S

E

K

N

| | | | |
|----------|-----------------|-----------------|-------|
| A | 0,0010 | 0,0002 | 0,001 |
| F | 0,0005 | 0,0002 | 0,001 |
| C | 0,0010 | 0,0005 | 0,001 |
| H | 0,0005 | 0,0005 | 0,001 |
| E | 0,0010 | 0,0010 | 0,001 |
| G | 0,0010 | 0,0010 | 0,005 |
| J | 0,002 to 0,006* | 0,0002 | 0,001 |
| K | 0,002 to 0,006* | 0,0005 | 0,001 |
| L | 0,002 to 0,006* | 0,0010 | 0,001 |
| M | 0,002 to 0,006* | 0,003 to 0,008* | 0,005 |
| N | 0,002 to 0,006* | 0,003 to 0,008* | 0,001 |
| U | 0,003 to 0,010* | 0,005 to 0,015* | 0,005 |



* Depends on insert size

Tolerance (inches)

| | |
|-----------|---|
| N / R / F | E |
| A / M / G | D |
| X | X |

IK > 1/4" **IK < 1/4"**

Symbols as above
Changes at inscribed circle IK < 1/4"

Form of top surface

| Edge cutting length | | | |
|---------------------|------|------|-----------|
| 06 | 3,96 | 5/32 | 03 |
| 09 | 5,56 | 7/32 | 05 |
| 11 | 6,35 | 1/4 | 06 |
| 16 | 9,52 | 3/8 | 09 |
| 22 | 12,7 | 1/2 | 12 |
| 27 | 15,8 | 5/8 | 15 |
| 33 | 19,0 | 3/4 | 19 |
| 44 | 25,4 | 1 | 25 |
| mm | mm | inch | mm |
| | | | |
| 06 | 10 | 16 | 25 |
| 08 | 12 | 20 | 32 |
| | | | |

| Insert thickness | | |
|------------------|------|-----------|
| 1/16 | 1,59 | 01 |
| 3/32 | 2,38 | 02 |
| 1/8 | 3,18 | 03 |
| 5/32 | 3,97 | T3 |
| 3/16 | 4,76 | 04 |
| 7/32 | 5,56 | 05 |
| 1/4 | 6,35 | 06 |
| 5/16 | 7,94 | 07 |
| 3/8 | 9,52 | 09 |
| inch | mm | |
| | | |

| Corner radius | | | |
|---|-----|-----------|---------|
| 00 | 0,0 | 12 | 1,2 |
| M0 | 0,0 | 16 | 1,6 |
| 02 | 0,2 | 20 | 2,0 |
| 04 | 0,4 | 24 | 2,4 |
| 08 | 0,8 | 32 | 3,2 |
| Inserts with corner radius | | | |
| Inserts with secondary cutting edge | | | |
| A | 45° | F | 85° |
| D | 60° | P | 90° |
| E | 75° | | |
| Angle of main cutting edge to secondary cutting angle | | | |
| A | 3° | F | 25° |
| B | 5° | G | 30° |
| C | 7° | N | 0° |
| D | 15° | P | 11° |
| E | 20° | Z | Special |
| Clearance angle | | | |

| Cutting edge | |
|--------------|----------------------------|
| F | Sharp |
| E | Honed |
| T | Chamfered |
| S | Chamfered and honed |
| K | Double-chamfered |
| P | Double-chamfered and honed |

| Cutting direction | |
|-------------------|--|
| R | |
| L | |
| N | |

| Cutting edge | |
|--------------|----------|
| ≤ 1,2 | 1 |
| 1,4 | 2 |
| 2,0 | 3 |
| 2,4 | 4 |
| | |

| Cutting direction | |
|-------------------|----------|
| 0 | A |
| 0,08 x 40° | B |
| 0,15 x 15° | C |
| 0,15 x 25° | D |
| 0,20 x 10° | E |
| 0,20 x 15° | F |
| 0,20 x 22° | G |
| 0,15 x 20° | X |
| | |

12

03

AF
04

E

N

- 3

A

4

2

1

| | |
|----------------------------|----------|
| 1/4 | 2 |
| 3/8 | 3 |
| 1/2 | 4 |
| 5/8 | 5 |
| 3/4 | 6 |
| 1 | 8 |
| | |
| Cutting edge length (inch) | |

| | |
|-------------------------|----------|
| 1/16 | 1 |
| 1/8 | 2 |
| 3/16 | 3 |
| 1/4 | 4 |
| 5/16 | 5 |
| 3/8 | 6 |
| | |
| Insert thickness (inch) | |

| | |
|----------------------|----------|
| max. 0,004 | 0 |
| 1/64 | 1 |
| 1/32 | 2 |
| 3/64 | 3 |
| 1/16 | 4 |
| 5/64 | 5 |
| 3/32 | 6 |
| 7/64 | 7 |
| 1/8 | 8 |
| - | X |
| | |
| Corner radius (inch) | |

For special forms of the chip groove in the 10° position, manufacturer specific chip grooves and designations can be indicated.

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

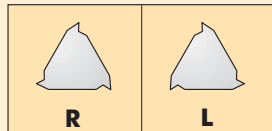
Arbors & adaptors

Inserts

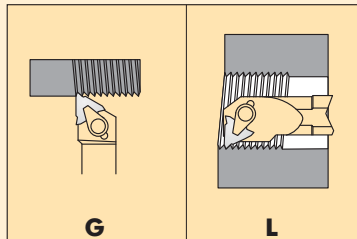
L 166 G - 3 B A 075

1 2 3 4 5 6 7

1



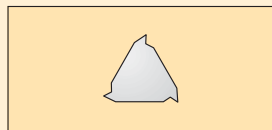
3



6

| | |
|----------|-----------|
| A | ISO mm. |
| C | SI |
| L | ISO Inch |
| K | Whitworth |

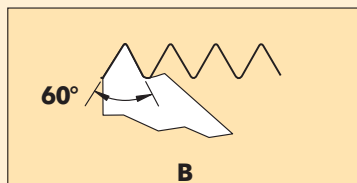
2



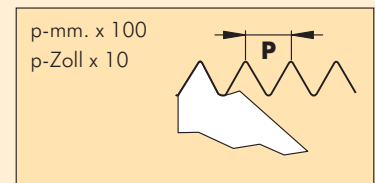
4

| | IC=Inch | D=mm. | |
|--|----------|-------|----------|
| | 2 | 1/4 | 6,35 11 |
| | 3 | 3/8 | 9,52 16 |
| | 4 | 1/2 | 12,70 22 |

5



7



Turning

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Cartridges

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Milling cutters

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Boring heads

Arbors & adaptors

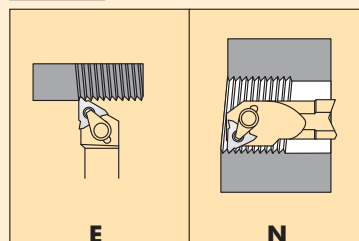
16 E L - AG 55

1 2 3 4 5

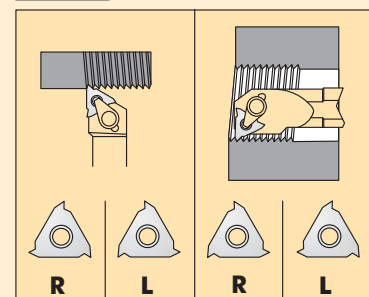
1

| | IC=Inch. | d=mm. |
|--|-----------|-----------|
| | 06 | 5/32 3,96 |
| | 08 | 3/16 4,76 |
| | 11 | 1/4 6,35 |
| | 16 | 3/8 9,52 |
| | 22 | 1/2 12,70 |
| | 27 | 5/8 15,87 |

2



3



4

| | mm. | TPI |
|--|-----------|---------------|
| | A | 0,5-1,5 48-16 |
| | AG | 0,5-3,0 48-8 |
| | G | 1,75-3,0 14-8 |
| | N | 3,5-5,0 7-5 |

5

| | |
|------------|---------------------|
| 55 | Partial profile 55° |
| 60 | Partial profile 60° |
| ISO | ISO metric |
| UN | American, UN |
| W | Whitworth, BSW |
| LG | Groove type LG |



Blank lined writing area for notes.



Inserts

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

























Solid carbide

Boring heads

Arbors & adaptors































































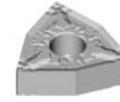

























- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

| | | | | | | |
|---|--|--|--|---|---|--|
| ADMT Rectangular Positive Page A.36 $\Delta 15^\circ$ | ADMW Rectangular Positive Page A.36 $\Delta 15^\circ$ | ADMW-C Rectangular Positive Page A.36 $\Delta 15^\circ$ | ADMW-R Rectangular Positive Page A.36 $\Delta 15^\circ$ | APFT Rectangular Positive Page A.36 $\Delta 11^\circ$ | APHT-AL Rectangular Positive Page A.36 $\Delta 11^\circ$ | APKT Rectangular Positive Page A.37 $\Delta 11^\circ$ |
| APKT-26 Rectangular Positive Page A.37 $\Delta 11^\circ$ | APLT Rectangular Positive Page A.37 $\Delta 11^\circ$ | APLX Rectangular Positive Page A.37 $\Delta 11^\circ$ | APMT Rectangular Positive Page A.37 $\Delta 11^\circ$ | APMT-26 Rectangular Positive Page A.37 $\Delta 11^\circ$ | APMW Rectangular Positive Page A.38 $\Delta 11^\circ$ | |
| CCGT-AL 80° Rhombic Positive Page A.38 $\Delta 7^\circ$ | CCGT-AP 80° Rhombic Positive Page A.38 $\Delta 7^\circ$ | CKKT 80° Rhombic Positive Page A.38 $\Delta 7^\circ$ | CCMT-03 80° Rhombic Positive Page A.38 $\Delta 7^\circ$ | CCMW 80° Rhombic Positive Page A.38 $\Delta 7^\circ$ | CNGP 80° Rhombic Negative Page A.39 0° | CNMA 80° Rhombic Negative Page A.39 0° |
| CNMG-CF 80° Rhombic Negative Page A.39 0° | CNMG-CFC 80° Rhombic Negative Page A.39 0° | CNMG-CFM 80° Rhombic Negative Page A.39 0° | CNMG-CM 80° Rhombic Negative Page A.39 0° | CNMG-CMC 80° Rhombic Negative Page A.40 0° | CNMG-CMF 80° Rhombic Negative Page A.40 0° | CNMG-CMR 80° Rhombic Negative Page A.40 0° |
| CNMG-CR 80° Rhombic Negative Page A.40 0° | CNMG-CS 80° Rhombic Negative Page A.40 0° | CNMM 80° Rhombic Negative Page A.40 0° | | | | |
| DCGT-AL 55° Rhombic Positive Page A.41 $\Delta 7^\circ$ | DCGT-AP 55° Rhombic Positive Page A.41 $\Delta 7^\circ$ | DCMT-03 55° Rhombic Positive Page A.41 $\Delta 7^\circ$ | DCMW 55° Rhombic Positive Page A.41 $\Delta 7^\circ$ | DNGP 55° Rhombic Negative Page A.41 0° | DNMA 55° Rhombic Negative Page A.41 0° | DNMG-CF 55° Rhombic Negative Page A.42 0° |
| DNMG-CFC 55° Rhombic Negative Page A.42 0° | DNMG-CFM 55° Rhombic Negative Page A.42 0° | DNMG-CM 55° Rhombic Negative Page A.42 0° | DNMG-CMC 55° Rhombic Negative Page A.42 0° | DNMG-CMF 55° Rhombic Negative Page A.42 0° | DNMG-CMR 55° Rhombic Negative Page A.43 0° | DNMG-CS 55° Rhombic Negative Page A.43 0° |
| DNMX 55° Rhombic Negative Page A.43 0° | | | ECMT 75° Rhombic Positive Page A.43 $\Delta 7^\circ$ | EPMT 75° Rhombic Positive Page A.43 $\Delta 11^\circ$ | EPMW 75° Rhombic Positive Page A.43 $\Delta 11^\circ$ | EPMX 75° Rhombic Positive Page A.44 $\Delta 11^\circ$ |







| | | | | | | |
|--|--|---|---|--|---|--|
| <p>FRC</p>  <p>Single-ended insert Page A.44</p> | <p>FRCR</p>  <p>Single-ended insert Page A.44</p> | | | <p>GXGP-AL</p>  <p>Double-ended Page A.44</p> | | <p>KNUX</p>  <p>KNUX Negative Page A.45 $\triangleleft 15^\circ$</p> |
| <p>ODMT</p>  <p>Octagonal Positive Page A.45 $\triangleleft 15^\circ$</p> | <p>ODMW</p>  <p>Octagonal Positive Page A.45 $\triangleleft 15^\circ$</p> | | | | | |
| <p>RCGT-AL</p>  <p>Round Positive Page A.45 $\triangleleft 7^\circ$</p> | <p>RCGT-AP</p>  <p>Round Positive Page A.46 $\triangleleft 7^\circ$</p> | <p>RCMT</p>  <p>Round Positive Page A.46 $\triangleleft 7^\circ$</p> | <p>RDHW</p>  <p>Round Positive Page A.46 $\triangleleft 15^\circ$</p> | <p>RDMT</p>  <p>Round Positive Page A.46 $\triangleleft 15^\circ$</p> | <p>RDMW</p>  <p>Round Positive Page A.46 $\triangleleft 15^\circ$</p> | <p>RNMG</p>  <p>Round Negative Page A.46 $\triangleleft 0^\circ$</p> |
| <p>RPMT</p>  <p>Round Positive Page A.47 $\triangleleft 11^\circ$</p> | <p>RPMW</p>  <p>Round Positive Page A.47 $\triangleleft 11^\circ$</p> | | | | | |
| <p>SCGT-AL</p>  <p>Square Positive Page A.47 $\triangleleft 7^\circ$</p> | <p>SCMT-03</p>  <p>Square Positive Page A.47 $\triangleleft 7^\circ$</p> | <p>SCMT-39</p>  <p>Square Positive Page A.47 $\triangleleft 7^\circ$</p> | <p>SCMW</p>  <p>Square Positive Page A.48 $\triangleleft 7^\circ$</p> | <p>SDMT</p>  <p>Square Positive Page A.48 $\triangleleft 15^\circ$</p> | <p>SEHT</p>  <p>Square Positive Page A.48 $\triangleleft 20^\circ$</p> | <p>SEHT-AL</p>  <p>Square Positive Page A.48 $\triangleleft 20^\circ$</p> |
| <p>SEHW</p>  <p>Square Positive Page A.48 $\triangleleft 20^\circ$</p> | <p>SEKN</p>  <p>Square Positive Page A.48 $\triangleleft 20^\circ$</p> | <p>SEKR</p>  <p>Square Positive Page A.49 $\triangleleft 20^\circ$</p> | <p>SFAN</p>  <p>Square Positive Page A.49 $\triangleleft 25^\circ$</p> | <p>SNHX</p>  <p>Square Negative Page A.49 $\triangleleft 0^\circ$</p> | <p>SNKN</p>  <p>Square Negative Page A.49 $\triangleleft 0^\circ$</p> | <p>SNMA</p>  <p>Square Negative Page A.49 $\triangleleft 0^\circ$</p> |
| <p>SNMG-CFM</p>  <p>Square Negative Page A.49 $\triangleleft 0^\circ$</p> | <p>SNMG-CMR</p>  <p>Square Negative Page A.50 $\triangleleft 0^\circ$</p> | <p>SNMG-CR</p>  <p>Square Negative Page A.50 $\triangleleft 0^\circ$</p> | <p>SNMM</p>  <p>Square Negative Page A.50 $\triangleleft 0^\circ$</p> | <p>SNUN</p>  <p>Square Negative Page A.50 $\triangleleft 0^\circ$</p> | <p>SOMT</p>  <p>Square Positive Page A.50 $\triangleleft 7^\circ$</p> | <p>SPKN</p>  <p>Square Positive Page A.50 $\triangleleft 11^\circ$</p> |
| <p>SPKR</p>  <p>Square Positive Page A.51 $\triangleleft 11^\circ$</p> | <p>SPMR-33</p>  <p>Square Positive Page A.51 $\triangleleft 11^\circ$</p> | <p>SPMT</p>  <p>Square Positive Page A.51 $\triangleleft 11^\circ$</p> | <p>SPMW</p>  <p>Square Positive Page A.51 $\triangleleft 11^\circ$</p> | <p>SPUN</p>  <p>Square Positive Page A.51 $\triangleleft 11^\circ$</p> | | |

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors





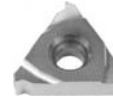


- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

| | | | | | | |
|--|--|---|---|---|---|--|
| TCGT-AL  Triangular Positive Page A.51  | TCMT-03  Triangular Positive Page A.52  | TCMT-39  Triangular Positive Page A.52  | TCMW  Triangular Positive Page A.52  | TEKN  Triangular Positive Page A.52  | TNMA  Triangular Negative Page A.52  | TNMG-CF  Triangular Negative Page A.52  |
| TNMG-CFC  Triangular Negative Page A.53  | TNMG-CFM  Triangular Negative Page A.53  | TNMG-CM  Triangular Negative Page A.53  | TNMG-CMC  Triangular Negative Page A.53  | TNMG-CMF  Triangular Negative Page A.53  | TNMG-CMR  Triangular Negative Page A.53  | TNMG-CS  Triangular Negative Page A.54  |
| TNMX  Triangular Positive Page A.54  | TPKN  Triangular Positive Page A.54  | TPKR  Triangular Positive Page A.54  | TPMN  Triangular Positive Page A.54  | TPMR-33  Triangular Positive Page A.54  | TPUN  Triangular Positive Page A.55  | TPUX  Triangular Negative Page A.55  |
| VBMT  35° Rhombic Positive Page A.55  | VCGT-AL  35° Rhombic Positive Page A.55  | VCGT-AP  35° Rhombic Positive Page A.55  | VCMT-03  35° Rhombic Positive Page A.56  | VNGP  35° Rhombic Negative Page A.56  | VNMG  35° Rhombic Negative Page A.56  | VNMG-CMC  35° Rhombic Negative Page A.56  |
| WCMT  80° Trigon Positive Page A.56  | WCMX  80° Trigon Positive Page A.56  | WNMA  80° Trigon Negative Page A.57  | WNMG-CF  80° Trigon Negative Page A.57  | WNMG-CFM  80° Trigon Negative Page A.57  | WNMG-CM  80° Trigon Negative Page A.57  | WNMG-CMC  80° Trigon Negative Page A.57  |
| WNMG-CMF  80° Trigon Negative Page A.57  | WNMG-CMR  80° Trigon Negative Page A.58  | WNMG-CS  80° Trigon Negative Page A.58  | | | | |
| HPR  Round Positive Page A.44  | INT  Positive ball nose insert Page A.44 | INW  Positive ball nose insert Page A.45 | MTK  Toroidal insert Page A.45 | RPR  Round Positive Page A.47  | WPR  Round Positive Page A.58  | |
| XDKW  High feed Page A.58  | XPMT  Positive insert Page A.58 | | | | | |

60° - 55° (non topping)

| | | | | | | |
|--|--|---|--|---|--|--|
| <p>ER-60°/55</p>  <p>Triangular Negative Page A.59 <input type="checkbox"/> 0°</p> | <p>EL-60°/55</p>  <p>Triangular Negative Page A.59 <input type="checkbox"/> 0°</p> | <p>ER-60°/55 TD</p>  <p>Triangular Negative Page A.59 <input type="checkbox"/> 0°</p> | <p>NR-60°/55</p>  <p>Triangular Negative Page A.60 <input type="checkbox"/> 0°</p> | <p>NL-60°/55</p>  <p>Triangular Negative Page A.60 <input type="checkbox"/> 0°</p> | <p>NR-60°/55° TD</p>  <p>Triangular Negative Page A.60 <input type="checkbox"/> 0°</p> | |
|--|--|---|--|---|--|--|







ISO (full form) BS36

| | | | | | | |
|---|---|--|--|--|---|--|
| <p>ER-ISO</p>  <p>Triangular Negative Page A.61 <input type="checkbox"/> 0°</p> | <p>EL-ISO</p>  <p>Triangular Negative Page A.61 <input type="checkbox"/> 0°</p> | <p>ER-ISO TD</p>  <p>Triangular Negative Page A.61 <input type="checkbox"/> 0°</p> | <p>EL-ISO TD</p>  <p>Triangular Negative Page A.61 <input type="checkbox"/> 0°</p> | <p>NR-ISO</p>  <p>Triangular Negative Page A.62 <input type="checkbox"/> 0°</p> | <p>NL-ISO</p>  <p>Triangular Negative Page A.62 <input type="checkbox"/> 0°</p> | <p>NR-ISO TD</p>  <p>Triangular Negative Page A.62 <input type="checkbox"/> 0°</p> |
|---|---|--|--|--|---|--|



UNIFIED (full form) ASME / ANSI B1.1

| | | | | | | |
|---|---|--|--|--|--|--|
| <p>ER-UN</p>  <p>Triangular Negative Page A.63 <input type="checkbox"/> 0°</p> | <p>NR-UN</p>  <p>Triangular Negative Page A.63 <input type="checkbox"/> 0°</p> | | | | | |
|---|---|--|--|--|--|--|

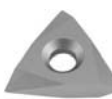
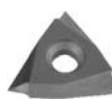
WHITWORTH (full form) BS84

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|---|---|--|---|--|--|--|
| <p>ER-W</p>  <p>Triangular Negative Page A.63 <input type="checkbox"/> 0°</p> | <p>EL-W</p>  <p>Triangular Negative Page A.63 <input type="checkbox"/> 0°</p> | <p>ER-W TD</p>  <p>Triangular Negative Page A.64 <input type="checkbox"/> 0°</p> | <p>NR-W</p>  <p>Triangular Negative Page A.64 <input type="checkbox"/> 0°</p> | <p>NL-W</p>  <p>Triangular Negative Page A.64 <input type="checkbox"/> 0°</p> | <p>NR-W TD</p>  <p>Triangular Negative Page A.65 <input type="checkbox"/> 0°</p> | |
|---|---|--|---|--|--|--|






Lock ring groove inserts type LG

| | | |
|--|--|--|
| <p>ER-LG</p>  <p>Triangular Negative Page A.65 <input type="checkbox"/> 0°</p> | <p>EL-LG</p>  <p>Triangular Negative Page A.65 <input type="checkbox"/> 0°</p> | |
|--|--|--|

Others

| | | |
|--|---|--|
| <p>TNMC</p>  <p>Triangular Negative Page A.65 <input type="checkbox"/> 0°</p> | <p>TPMC</p>  <p>Triangular Negative Page A.65 <input type="checkbox"/> 0°</p> | |
|--|---|--|

ISO

| | | | | | | |
|--|--|--|--|---|--|--|
| <p>L166G-ISO</p>  <p>Triangular Positive Page A.65 <input type="checkbox"/> 7°</p> | <p>R166G-ISO</p>  <p>Triangular Positive Page A.66 <input type="checkbox"/> 7°</p> | <p>R166G-B</p>  <p>Triangular Positive Page A.66 <input type="checkbox"/> 7°</p> | <p>L166L-ISO</p>  <p>Triangular Positive Page A.66 <input type="checkbox"/> 7°</p> | <p>R166L-ISO</p>  <p>Triangular Positive Page A.66 <input type="checkbox"/> 7°</p> | | |
|--|--|--|--|---|--|--|

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters








Solid carbide


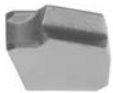
Boring heads

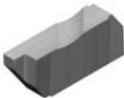
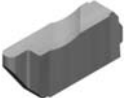

Arbors & adaptors


Parting & grooving inserts

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors









| | | | | | | |
|---|---|--|--|--|--|---|
| MRCN  Single-ended Page A.67 | MRCR/L  Single-ended Page A.67 | MTE  Single-ended Page A.67 | MTC  Double-ended Page A.67 | MTCJ  Double-ended Page A.67 | MTR  Double-ended Page A.67 | MTRJ  Double-ended Page A.68 |
|---|---|--|--|--|--|---|

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|---|---|--|--|--|--|--|
| PTNT  Single-ended Page A.68 | PTR/LT  Single-ended Page A.68 | | | | | |
|---|---|--|--|--|--|--|

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|--|---|--|--|--|--|--|
| NG  Double-ended For Parting Page A.68 | NR  Double-ended For Parting (radius) Page A.69 | NT  Double-ended For Threading Page A.69 | | | | |
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| ER/LG  Triangular Negative Page A.69 | | | | | | |
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Inserts (Brazed tools)

| | | | | | | |
|---|--|--|--|---|--|---|
| AB  Page A.70 | ABC  Page A.70 | C  Page A.70 | D  Page A.70 | E  Page A.70 | FIL  Page A.70 | PR  Page A.71 |
| TR  Page A.71 | | | | | | |

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

Inserts (Automatic lathes)

Inserts

Turning

GISG



Standard grooving inserts
Page A.72

GIGP



Grooving and cut-off inserts
Page A.72

GIGR



Full radius grooving inserts
Page A.72

GIGW



Threading inserts
Page A.72

GIST



Turning inserts
Page A.72

GISC



Copying inserts
Page A.72

Automatic lathes

Ceramic tools

L



Insert for turning
Page A.73

R



Insert for turning
Page A.73

L



Insert for grooving with radius
Page A.73

R



Insert for grooving with radius
Page A.73

L



Insert for threading
Page A.74

L



Insert for grooving
Page A.74

R



Insert for threading
Page A.75

Parting & grooving

R



Insert for grooving
Page A.75

Threading

Drills

Cartridges

Brazed tools










Milling cutters

Solid carbide









Boring heads

Arbors & adaptors

Ceramic inserts

| | | | | | | |
|--|--|--|--|---|--|--|
| <p>CNGA</p>  <p>80° Rhombic Negative Page A.76</p> | <p>CNGN</p>  <p>80° Rhombic Negative Page A.76</p> | <p>CNGX</p>  <p>80° Rhombic Negative Page A.76</p> | <p>DNGA</p>  <p>55° Rhombic Negative Page A.76</p> | <p>DNGN</p>  <p>55° Rhombic Negative Page A.76</p> | <p>DNGX</p>  <p>55° Rhombic Negative Page A.77</p> | <p>ENGN</p>  <p>75° Rhombic Negative Page A.77</p> |
| <p>GWC R/L</p>  <p>Positive Page A.77</p> | <p>GWF</p>  <p>Positive Page A.77</p> | <p>GWG</p>  <p>Positive Page A.77</p> | <p>RCGX</p>  <p>Round Positive Page A.77</p> | <p>RNGN</p>  <p>Round Negative Page A.78</p> | <p>SNGA</p>  <p>Square Negative Page A.78</p> | <p>SNGN</p>  <p>Square Negative Page A.78</p> |
| <p>SNGX</p>  <p>Square Negative Page A.78</p> | <p>SNKN</p>  <p>Square Negative Page A.78</p> | <p>TNGA</p>  <p>Triangular Negative Page A.79</p> | <p>TNGN</p>  <p>Triangular Negative Page A.79</p> | <p>VNGA</p>  <p>35° Rhombic Negative Page A.79</p> | <p>VNGN</p>  <p>35° Rhombic Negative Page A.79</p> | <p>WNGA</p>  <p>80° Trigon Negative Page A.79</p> |

PCBN/PCD inserts

| | | | | | | |
|--|--|--|--|--|---|---|
| <p>CCMW</p>  <p>80° Rhombic Positive Page A.79</p> | <p>CNGA</p>  <p>80° Rhombic Negative Page A.80</p> | <p>DCMW</p>  <p>55° Rhombic Negative Page A.80</p> | <p>DNGA</p>  <p>55° Rhombic Negative Page A.80</p> | <p>SNGA</p>  <p>55° Square Negative Page A.80</p> | <p>TCMW</p>  <p>Triangular Positive Page A.80</p> | <p>TNGA</p>  <p>Triangular Negative Page A.80</p> |
| <p>TPMN</p>  <p>Triangular Positive Page A.81</p> | | | | | | |

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

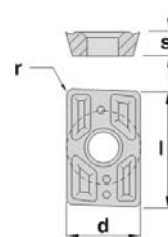
Inserts

Turning

ADMT



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| ADMT 150308 | 15,00 | 3,18 | 9,52 | 0,8 | | • | | | | • | • | | | |
| ADMT 1503PDER | 15,00 | 3,18 | 9,52 | - | | • | | | | | • | | | |

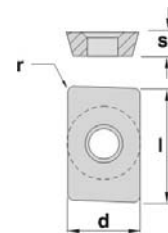


Automatic lathes

ADMW



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|--------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| ADMW 150308E | 15,00 | 3,18 | 9,52 | 0,8 | | • | | | | • | • | | ○ | |
| ADMW 150308F | 15,00 | 3,18 | 9,52 | 0,8 | • | | | | | | | | | ○ |



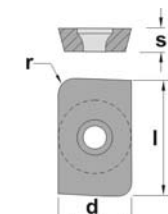
Ceramic tools

Parting & grooving

ADMW-C



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|-----------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| ADMW 1503R1.0-C | 15,00 | 3,18 | 9,52 | 1,0 | | | | | | | • | | | |
| ADMW 1503R1.5-C | 15,00 | 3,18 | 9,52 | 1,5 | | | | | | | • | | | |
| ADMW 1503R2.0-C | 15,00 | 3,18 | 9,52 | 2,0 | | | | | | | • | | | |
| ADMW 1503R2.5-C | 15,00 | 3,18 | 9,52 | 2,5 | | | | | | | • | | | |
| ADMW 1503R3.0-C | 15,00 | 3,18 | 9,52 | 3,0 | | | | | | | • | | | |
| ADMW 1503R3.5-C | 15,00 | 3,18 | 9,52 | 3,5 | | | | | | | • | | | |
| ADMW 1503R4.0-C | 15,00 | 3,18 | 9,52 | 4,0 | | | | | | | • | | | |
| ADMW 1503R4.5-C | 15,00 | 3,18 | 9,52 | 4,5 | | | | | | | • | | | |
| ADMW 1503R5.0-C | 15,00 | 3,18 | 9,52 | 5,0 | | | | | | | • | | | |
| ADMW 1503R6.0-C | 15,00 | 3,18 | 9,52 | 6,0 | | | | | | | • | | | |



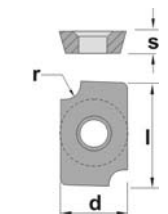
Threading

Drills

ADMW-R



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| ADMW 1503R1.0 | 15,00 | 3,18 | 9,52 | 1,0 | | | | | | | • | | | |
| ADMW 1503R1.5 | 15,00 | 3,18 | 9,52 | 1,5 | | | | | | | • | | | |
| ADMW 1503R2.0 | 15,00 | 3,18 | 9,52 | 2,0 | | | | | | | • | | | |
| ADMW 1503R2.5 | 15,00 | 3,18 | 9,52 | 2,5 | | | | | | | • | | | |
| ADMW 1503R3.0 | 15,00 | 3,18 | 9,52 | 3,0 | | | | | | | • | | | |
| ADMW 1503R3.5 | 15,00 | 3,18 | 9,52 | 3,5 | | | | | | | • | | | |
| ADMW 1503R4.0 | 15,00 | 3,18 | 9,52 | 4,0 | | | | | | | • | | | |
| ADMW 1503R4.5 | 15,00 | 3,18 | 9,52 | 4,5 | | | | | | | • | | | |
| ADMW 1503R5.0 | 15,00 | 3,18 | 9,52 | 5,0 | | | | | | | • | | | |
| ADMW 1503R6.0 | 15,00 | 3,18 | 9,52 | 6,0 | | | | | | | • | | | |



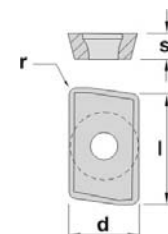
Cartridges

Brazed tools

APFT



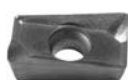
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------|-------|------|------|---|------|------|------|------|------|-------|-------|------|------|------|
| APFT 1604PDTR | 16,00 | 4,76 | 9,52 | - | | • | | | | | • | | | |



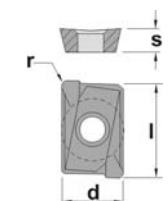
Milling cutters

Solid carbide

APHT-AL




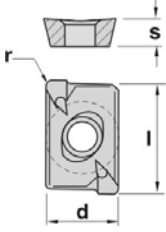
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|------------------|-------|------|------|---|------|------|------|------|------|-------|-------|------|------|------|
| APHT 1003PDFR-AL | 9,52 | 3,18 | 6,35 | - | • | | | | | | | | | • |
| APHT 1604PDFR-AL | 17,00 | 4,76 | 9,52 | - | • | | | | | | | | | • |




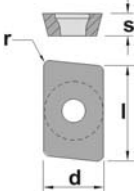
Boring heads


Arbors & adaptors

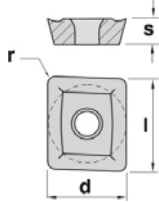
| APKT | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---|---------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| | | | | | | | | | | | | | | | |
|  | APKT 1003PDTR | 9,52 | 3,18 | 6,35 | 0,4 | | • | | | | • | • | | | |
| | APKT 1604PDR | 16,00 | 4,76 | 9,52 | 0,8 | | • | | | | • | • | | | |




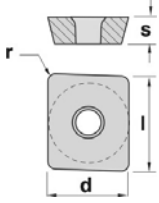
| APKT-26 | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---|-----------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| | | | | | | | | | | | | | | | |
|  | APKT 160408E-26 | 16,66 | 4,76 | 9,52 | 0,8 | | | | | | • | • | | | |




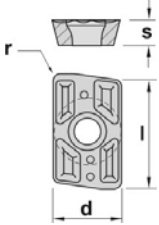
| APLT | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|--|--------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| | | | | | | | | | | | | | | | |
|  | APLT 1504ZZR | 15,87 | 4,76 | 12,70 | 0,8 | | • | | | | | • | | | |




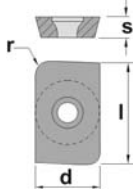
| APLX | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---|--------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| | | | | | | | | | | | | | | | |
|  | APLX 1504ZZR | 15,87 | 4,76 | 12,70 | 0,8 | ◦ | • | | | | | • | | | |



| APMT | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---|---------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| | | | | | | | | | | | | | | | |
|  | APMT 1604PDER | 16,00 | 4,76 | 9,52 | 0,8 | | • | • | | | • | • | | • | |
| | APMT 200408 | 20,00 | 4,76 | 12,70 | 0,8 | | | • | | | | • | • | | • |



| APMT-26 | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---|-----------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| | | | | | | | | | | | | | | | |
|  | APMT 160412E-26 | 16,66 | 4,76 | 9,52 | 1,2 | | | | | | • | • | | | |
| | APMT 160416E-26 | 16,66 | 4,76 | 9,52 | 1,6 | | | | | | • | • | | | |
| | APMT 160424E-26 | 16,66 | 4,76 | 9,52 | 2,4 | | | | | | • | • | | • | |
| | APMT 160432E-26 | 16,66 | 4,76 | 9,52 | 3,2 | | | | | | • | • | | | |
| | APMT 160440E-26 | 16,66 | 4,76 | 9,52 | 4,0 | | | | | | • | • | | | |
| | APMT 160448E-26 | 16,66 | 4,76 | 9,52 | 4,8 | | | | | | • | • | | | |
| | APMT 160464E-26 | 16,66 | 4,76 | 9,52 | 6,4 | | | | | | • | • | | | |



- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

• Normally available for immediate delivery ◦ Only available in a limited quantity

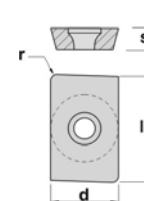
Inserts

Turning

APMW

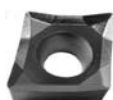


| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| APMW 200408E | 20,00 | 4,76 | 12,70 | 0,8 | | ● | | | | | ● | | ● | |
| APMW 200408F | 20,00 | 4,76 | 12,70 | 0,8 | ○ | | | | | | | | | |

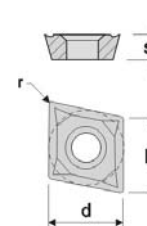


Automatic lathes

CCGT-AL



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|-----------------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| CCGT 060202-AL | 6,45 | 2,38 | 6,35 | 0,2 | ● | | | | | | | | | ○ |
| CCGT 060204-AL | 6,45 | 2,38 | 6,35 | 0,4 | ● | | | | | | | | | ○ |
| CCGT 09T302-AL | 9,65 | 3,97 | 9,52 | 0,2 | ● | | | | | | | | | ○ |
| CCGT 09T304-AL | 9,65 | 3,97 | 9,52 | 0,4 | ● | | | | | | | | | ○ |
| CCGT 09T308-AL | 9,65 | 3,97 | 9,52 | 0,8 | ● | | | | | | | | | ○ |
| CCGT 120402-AL | 12,90 | 4,76 | 12,70 | 0,2 | ● | | | | | | | | | ○ |
| CCGT 120404-AL | 12,90 | 4,76 | 12,70 | 0,4 | ● | | | | | | | | | ○ |
| CCGT 120408-AL | 12,90 | 4,76 | 12,70 | 0,8 | ● | | | | | | | | | ○ |



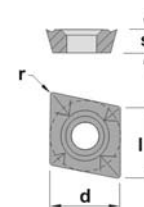
Ceramic tools

Parting & grooving

CCGT-AP



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-----------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| CCGT 060202-AP | 6,45 | 2,38 | 6,35 | 0,2 | ● | | | | | | | | | ○ |
| CCGT 060204-AP | 6,45 | 2,38 | 6,35 | 0,4 | ● | | | | | | | | | ○ |
| CCGT 09T302-AP | 9,65 | 3,97 | 9,52 | 0,2 | ● | | | | | | | | | ○ |
| CCGT 09T304-AP | 9,65 | 3,97 | 9,52 | 0,4 | ● | | | | | | | | | ○ |
| CCGT 09T308-AP | 9,65 | 3,97 | 9,52 | 0,8 | ● | | | | | | | | | ○ |
| CCGT 120402-AP | 12,90 | 4,76 | 12,70 | 0,2 | ● | | | | | | | | | ○ |
| CCGT 120404-AP | 12,90 | 4,76 | 12,70 | 0,4 | ● | | | | | | | | | ○ |
| CCGT 120408-AP | 12,90 | 4,76 | 12,70 | 0,8 | ● | | | | | | | | | ○ |



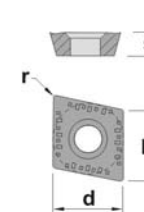
Threading

Drills

CCKT



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|--------------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| CCKT 060204 | 6,45 | 2,38 | 6,35 | 0,4 | | | | | | ● | ● | | | |
| CCKT 080308 | 8,05 | 3,18 | 7,94 | 0,8 | | | | | | ● | ● | | | |
| CCKT 09T308 | 9,65 | 4,00 | 9,52 | 0,8 | | | | | | ● | ● | | | |
| CCKT 120408 | 12,90 | 4,76 | 12,70 | 0,8 | | | | | | ● | ● | | | |



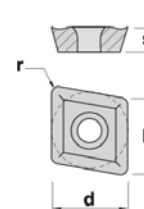
Cartridges

Brazed tools

CCMT-03



| REF. | l | s | d | r | KM15 | PM15 | PM40 | NC25 | TIN16 | TIN17 | TIN25 | TIN32 | TIN35 | ZR10 |
|-----------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| CCMT 060202-03 | 6,45 | 2,38 | 6,35 | 0,2 | | ● | | | ● | | | | | |
| CCMT 060204-03 | 6,45 | 2,38 | 6,35 | 0,4 | ● | ● | | ● | ● | | ● | ● | ● | |
| CCMT 080304-03 | 8,05 | 3,18 | 7,94 | 0,4 | ● | ● | | ● | ● | | ● | ● | ● | |
| CCMT 080308-03 | 8,05 | 3,18 | 7,94 | 0,8 | ● | ● | | ● | ● | | ● | ● | ● | |
| CCMT 09T304-03 | 9,65 | 3,97 | 9,52 | 0,4 | ● | ● | ○ | ● | ● | | ● | ● | ● | |
| CCMT 09T308-03 | 9,65 | 3,97 | 9,52 | 0,8 | ● | ● | ○ | ● | ● | | ● | ● | ● | |
| CCMT 120408-03 | 12,90 | 4,76 | 12,70 | 0,8 | ● | ● | | ● | ● | | ● | ● | ● | |



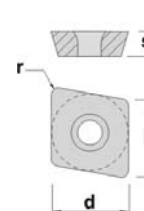
Milling cutters

Solid carbide

CCMW



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|--------------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| CCMW 060202 | 6,45 | 2,38 | 6,35 | 0,2 | | ● | | | | | | ○ | | |
| CCMW 060204 | 6,45 | 2,38 | 6,35 | 0,4 | | ● | | | | | | ○ | | |
| CCMW 080304 | 8,05 | 3,18 | 7,94 | 0,4 | | ● | | | | | | ○ | | |
| CCMW 09T304 | 9,65 | 3,97 | 9,52 | 0,4 | | ● | | | | | | ○ | | |
| CCMW 09T308 | 9,65 | 3,97 | 9,52 | 0,8 | | ● | | | | | | ○ | | |
| CCMW 120408 | 12,90 | 4,76 | 12,70 | 0,8 | | ● | | | | | | ○ | | |



Boring heads

Arbors & adaptors

| CNGP | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | | |
|------|--------------------|--------------------|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|--|--|
| | | CNGP 120404 | 12,90 | 4,76 | 12,70 | 0,4 | | | | | | ● | | | | | |
| | CNGP 120408 | 12,90 | 4,76 | 12,70 | 0,8 | | | | | | ● | | | | | | |

| CNMA | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | | |
|------|--------------------|--------------------|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|--|--|
| | | CNMA 120408 | 12,90 | 4,76 | 12,70 | 0,8 | ● | | | | | ● | | | | | |
| | CNMA 120412 | 12,90 | 4,76 | 12,70 | 1,2 | | | | | | ○ | | | | | | |

| CNMG-CF | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|---------|------|-----------------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|--|
| | | CNMG 120404-CF | 12,90 | 4,76 | 12,70 | 0,4 | | | | | ● | | | ● | | |

| CNMG-CFC | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|----------|------|------------------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|--|
| | | CNMG 120404-CFC | 12,90 | 4,76 | 12,70 | 0,4 | | | | | ● | | | | | |

| CNMG-CFM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|----------|------|------------------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|--|
| | | CNMG 120404-CFM | 12,90 | 4,76 | 12,70 | 0,4 | | | | | ● | | | | | |

| CNMG-CM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|---------|------|-----------------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|--|
| | | CNMG 120408-CM | 12,90 | 4,76 | 12,70 | 0,8 | | | | | ● | | | ● | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

● Normally available for immediate delivery

○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

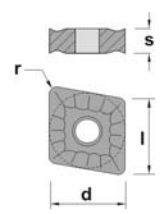
Boring heads

Arbors & adaptors

CNMG-CMC



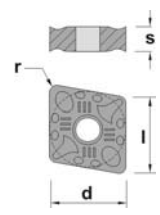
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|------------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| CNMG 120408-CMC | 12,90 | 4,76 | 12,70 | 0,8 | | | | | • | | | | | |



CNMG-CMF



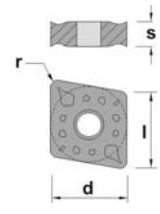
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|------------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| CNMG 120408-CMF | 12,90 | 4,76 | 12,70 | 0,8 | | | | | • | | | • | | |



CNMG-CMR



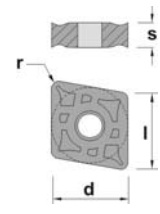
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|------------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| CNMG 090304-CMR | 9,65 | 3,18 | 9,52 | 0,4 | | | | | • | | | | | |
| CNMG 090308-CMR | 9,65 | 3,18 | 9,52 | 0,8 | | | | | | | | • | | |
| CNMG 120408-CMR | 12,90 | 4,76 | 12,70 | 0,8 | | • | | | • | | | • | • | |
| CNMG 120412-CMR | 12,90 | 4,76 | 12,70 | 1,2 | | | | | | | | • | | |



CNMG-CR



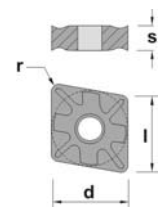
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-----------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| CNMG 120408-CR | 12,90 | 4,76 | 12,70 | 0,8 | | | | | | | | | • | |
| CNMG 120412-CR | 12,90 | 4,76 | 12,70 | 1,2 | | | | | | | | | • | |
| CNMG 160608-CR | 16,10 | 6,35 | 15,88 | 0,8 | | | | | | | | | ○ | |
| CNMG 160612-CR | 16,10 | 6,35 | 15,88 | 1,2 | | | | | | | | | ○ | |
| CNMG 190612-CR | 19,30 | 6,35 | 19,05 | 1,2 | | | | | | | | | ○ | |
| CNMG 190616-CR | 19,30 | 6,35 | 19,05 | 1,6 | | | | | | | | | ○ | |



CNMG-CS



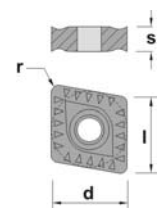
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-----------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| CNMG 090304-CS | 9,65 | 3,18 | 9,52 | 0,4 | | | | | | | | | | |
| CNMG 090308-CS | 9,65 | 3,18 | 9,52 | 0,8 | | | | | | | | | | |
| CNMG 120404-CS | 12,90 | 4,76 | 12,70 | 0,4 | | | | | | | | | | |
| CNMG 120408-CS | 12,90 | 4,76 | 12,70 | 0,8 | | | | | | | | | | • |


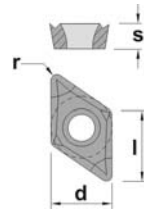



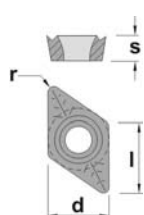
CNMM


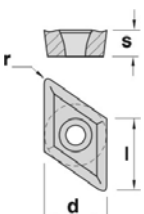



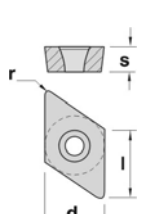
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|--------------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| CNMM 120408 | 12,90 | 4,76 | 4,76 | 0,8 | | | | | | | | | | ○ |
| CNMM 120412 | 12,90 | 4,76 | 4,76 | 1,2 | | | | | | | | | | ○ |
| CNMM 160612 | 16,10 | 6,35 | 6,35 | 1,2 | | | | | | | | | | ○ |
| CNMM 190608 | 19,30 | 6,35 | 6,35 | 0,8 | | | | | | | | | | ○ |
| CNMM 190612 | 19,30 | 6,35 | 6,35 | 1,2 | | | | | | | | | | ○ |


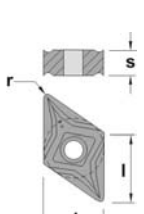



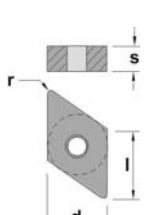
| DCGT-AL | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |   |
|---------|-----------------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | • | • | • | • | • | • | • | • | • | • | |
| | DCGT 070202-AL | 7,75 | 2,38 | 6,35 | 0,2 | • | | | | | | | | | • | |
| | DCGT 070204-AL | 7,75 | 2,38 | 6,35 | 0,4 | • | | | | | | | | | • | |
| | DCGT 11T302-AL | 11,60 | 3,97 | 9,52 | 0,2 | • | | | | | | | | | • | |
| | DCGT 11T304-AL | 11,60 | 3,97 | 9,52 | 0,4 | • | | | | | | | | | • | |
| | DCGT 11T308-AL | 11,60 | 3,97 | 9,52 | 0,8 | • | | | | | | | | | • | |

| DCGT-AP | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |   |
|---------|-----------------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | • | • | • | • | • | • | • | • | • | • | |
| | DCGT 070202-AP | 7,75 | 2,38 | 6,35 | 0,2 | • | | | | | | | | | • | |
| | DCGT 070204-AP | 7,75 | 2,38 | 6,35 | 0,4 | • | | | | | | | | | • | |
| | DCGT 11T302-AP | 11,60 | 3,97 | 9,52 | 0,2 | • | | | | | | | | | • | |
| | DCGT 11T304-AP | 11,60 | 3,97 | 9,52 | 0,4 | • | | | | | | | | | • | |
| | DCGT 11T308-AP | 11,60 | 3,97 | 9,52 | 0,8 | • | | | | | | | | | • | |

| DCMT-03 | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |   |
|---------|-----------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | ○ | • | • | • | • | • | • | • | • | • | |
| | DCMT 070204-03 | 7,75 | 2,38 | 6,35 | 0,4 | ○ | • | | | | | | | | • | |
| | DCMT 11T304-03 | 11,60 | 3,97 | 9,52 | 0,4 | ○ | • | | | | | | | | • | |
| | DCMT 11T308-03 | 11,60 | 3,97 | 9,52 | 0,8 | ○ | • | | | | | | | | • | |
| | DCMT 150408-03 | 15,50 | 4,76 | 12,70 | 0,8 | ○ | | | | ○ | | | | | | |

| DCMW | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |   |
|------|--------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | • | • | • | • | • | • | • | • | • | • | |
| | DCMW 11T304 | 11,60 | 3,97 | 9,52 | 0,4 | • | | | | | | | | | | |
| | DCMW 11T308 | 11,60 | 3,97 | 9,52 | 0,8 | • | | | | | | | | | | |
| | DCMW 150408 | 15,50 | 4,76 | 12,70 | 0,8 | • | | | | | | | | | | |

| DNGP | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |   |
|------|--------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | • | • | • | • | • | • | • | • | • | • | |
| | DNGP 150404 | 15,50 | 4,76 | 12,70 | 0,4 | • | | | | | | | | | | |
| | DNGP 150408 | 15,50 | 4,76 | 12,70 | 0,8 | • | | | | | • | | | | | |

| DNMA | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |   |
|------|--------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | • | • | • | • | • | • | • | • | • | • | |
| | DNMA 150608 | 15,50 | 6,35 | 12,70 | 0,8 | • | | | | | ○ | | | | | |
| | DNMA 150612 | 15,50 | 6,35 | 12,70 | 1,2 | • | | | | | ○ | | | | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

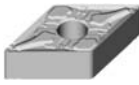
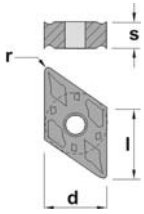
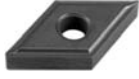
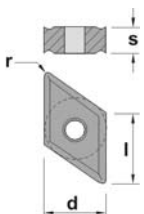
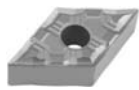
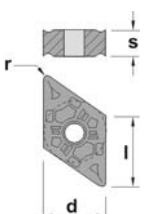

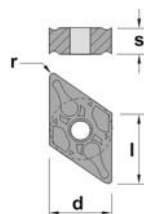
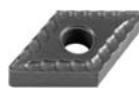
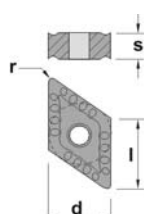

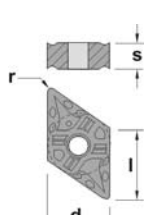
Solid carbide

Boring heads

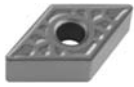
Arbors & adaptors

• Normally available for immediate delivery ○ Only available in a limited quantity

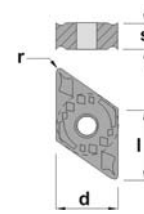
- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

| DNMG-CF | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|---|------------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
|  | DNMG 150604-CF | 15,50 | 6,35 | 12,70 | 0,4 | | | | | ● | | | ● | | |  |
| | | | | | | | | | | | | | | | | |
| DNMG-CFC | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | DNMG 150404-CFC | 15,50 | 4,76 | 12,70 | 0,4 | | | | ● | | | | | | |  |
| | | | | | | | | | | | | | | | | |
| DNMG-CFM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | DNMG 150404-CFM | 15,50 | 4,76 | 12,70 | 0,4 | | | | | ● | | | ● | | |  |
| | DNMG 150604-CFM | 15,50 | 6,35 | 12,70 | 0,4 | | | | | ● | | | | | | |
| | | | | | | | | | | | | | | | | |
| DNMG-CM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | DNMG 150608-CM | 15,50 | 6,35 | 12,70 | 0,8 | | | | | ● | | | ● | | |  |
| | | | | | | | | | | | | | | | | |
| DNMG-CMC | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | DNMG 150408-CMC | 15,50 | 4,76 | 12,70 | 0,8 | | | | ● | | | | | | |  |
| | | | | | | | | | | | | | | | | |
| DNMG-CMF | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | DNMG 150408-CMF | 15,50 | 4,76 | 12,70 | 0,8 | | | | | ● | | | ● | | |  |
| | | | | | | | | | | | | | | | | |

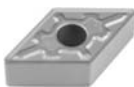
DNMG-CMR



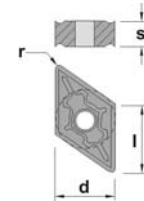
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|------------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| DNMG 110404-CMR | 11,60 | 4,76 | 9,52 | 0,4 | | | | | • | | | | | |
| DNMG 110408-CMR | 11,60 | 4,76 | 9,52 | 0,8 | | | | | | • | | | | |
| DNMG 150408-CMR | 15,50 | 4,76 | 12,70 | 0,8 | | | | | | | • | | | |
| DNMG 150608-CMR | 15,50 | 6,35 | 12,70 | 0,8 | | | | | | | | • | | |
| DNMG 150612-CMR | 15,50 | 6,35 | 12,70 | 1,2 | | | | | | | | | • | |
| DNMG 190608-CMR | 19,40 | 6,35 | 15,88 | 0,8 | | | | | | ○ | ○ | | | |
| DNMG 190612-CMR | 19,40 | 6,35 | 15,88 | 1,2 | | | | | | ○ | ○ | | | |



DNMG-CS



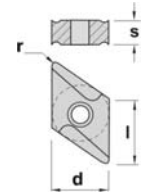
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-----------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| DNMG 110404-CS | 11,60 | 4,76 | 9,52 | 0,4 | | | | | | | | | • | |
| DNMG 110408-CS | 11,60 | 4,76 | 9,52 | 0,8 | | | | | | | | | • | |
| DNMG 150404-CS | 15,50 | 4,76 | 12,70 | 0,4 | | | | | | | | | • | |
| DNMG 150408-CS | 15,50 | 4,76 | 12,70 | 0,8 | | | | | | | | | • | |



DNMX



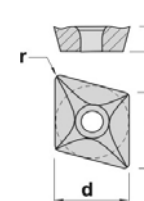
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|------------------------|------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| DNMX 150604R-22 | 6,57 | 2,38 | 6,35 | 0,4 | | | | | • | | | | • | |
| DNMX 150608R-22 | 8,20 | 3,18 | 7,93 | 0,4 | | | | | • | | | | • | |



ECMT



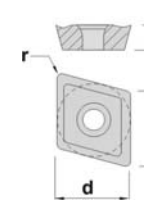
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|--------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| ECMT 060204 | 6,57 | 2,38 | 6,35 | 0,4 | | | | | • | | | | | |
| ECMT 080304 | 8,20 | 3,18 | 7,93 | 0,4 | | | | | • | | | | | |
| ECMT 120404 | 12,40 | 4,00 | 12,00 | 0,4 | | ○ | | | • | | | | | |
| ECMT 120408 | 12,40 | 4,00 | 12,00 | 0,8 | | ○ | | | • | | | | | |
| ECMT 120412 | 12,40 | 4,00 | 12,00 | 1,2 | | ○ | | | • | | | | | |



EPMT



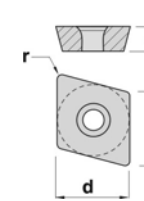
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-----------------------|------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| EPMT 080302-30 | 8,28 | 3,00 | 8,00 | 0,2 | | ○ | | | | | | | | |
| EPMT 080304-30 | 8,28 | 3,00 | 8,00 | 0,4 | | • | | | • | | | | | |
| EPMT 080308-30 | 8,28 | 3,00 | 8,00 | 0,8 | | • | | | • | | | | | |



EPMW



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|--------------------|------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| EPMW 040204 | 4,92 | 2,38 | 4,76 | 0,4 | | • | | | • | | | | | |
| EPMW 080304 | 8,28 | 3,00 | 8,00 | 0,4 | | ○ | | | | | | | | |
| EPMW 080308 | 8,28 | 3,00 | 8,00 | 0,8 | | ○ | | | | | | | | |



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

• Normally available for immediate delivery

○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters


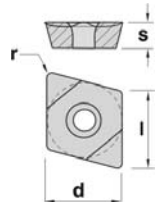
Solid carbide

Boring heads

Arbors & adaptors


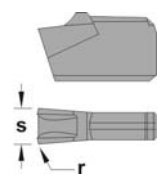
EPMX

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TIN16 | TIN17 | TIN21 | TIN25 | TIN32 | TIN35 | ZR10 |
|--------------------|------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|-------|------|
| EPMX 040204 | 4,92 | 2,38 | 4,76 | 0,4 | • | | | | | | | | | | |


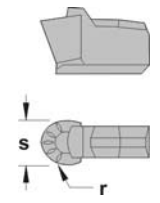
FRC

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|----------------|---|------|---|------|------|------|------|------|------|-------|-------|------|------|------|
| FRC 1.6 | - | 1,60 | - | 0,15 | | | | | | | • | | • | |
| FRC 2.2 | - | 2,20 | - | 0,20 | | | | | | | • | | • | |
| FRC 3.0 | - | 3,00 | - | 0,20 | | | | | | | • | | • | |
| FRC 4.0 | - | 4,00 | - | 0,20 | | | | | | | • | | • | |
| FRC 5.0 | - | 5,00 | - | 0,30 | | | | | | | • | | • | |
| FRC 6.0 | - | 6,00 | - | 0,30 | | | | | | | • | | • | |


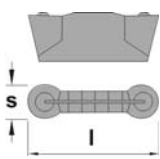
FRCR

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|-----------------|---|------|---|------|------|------|------|------|------|-------|-------|------|------|------|
| FRCR 3.0 | - | 3,00 | - | 1,50 | | | | | | | • | | • | |
| FRCR 4.0 | - | 4,00 | - | 2,00 | | | | | | | • | | • | |
| FRCR 5.0 | - | 5,00 | - | 2,50 | | | | | | | • | | • | |
| FRCR 6.0 | - | 6,00 | - | 3,00 | | | | | | | • | | • | |

GXGP-AL

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TIN16 | TIN17 | TIN21 | TIN25 | TIN32 | TIN35 | ZR10 |
|----------------------|---|------|-------|---|------|------|------|------|-------|-------|-------|-------|-------|-------|------|
| GXGP-253.0-AL | - | 3,18 | 8,00 | - | • | | | | | | | | | | ○ |
| GXGP-254.0-AL | - | 3,18 | 10,00 | - | • | | | | | | | | | | ○ |


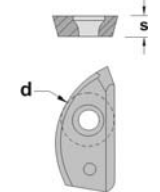
HPR

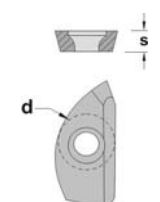
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------|---|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| HPR 10 | - | 2,40 | 10,00 | - | | | | | | | | • | | |
| HPR 12 | - | 2,50 | 12,00 | - | | | | | | | | • | | |
| HPR 16 | - | 3,00 | 16,00 | - | | | | | | | | • | | |
| HPR 20 | - | 3,00 | 20,00 | - | | | | | | | | • | | |
| HPR 25 | - | 4,00 | 25,00 | - | | | | | | | | • | | |
| HPR 32 | - | 5,00 | 32,00 | - | | | | | | | | • | | |

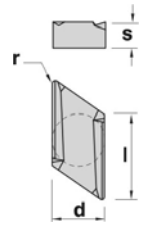


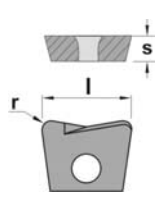

INT

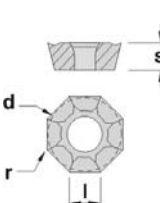
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------|---|-----|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| INT 25 | - | 4,5 | 12,50 | - | | | | | | • | | | | |
| INT 32 | - | 5,6 | 16,00 | - | | | | | | • | | | | |
| INT 40 | - | 5,6 | 20,00 | - | | | | | | • | | | | |
| INT 50 | - | 7,9 | 25,00 | - | | | | | | • | | | | |

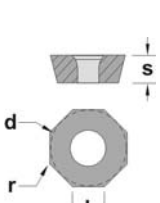



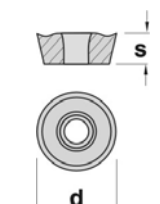
| INW | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |  |
|-----|--------|---|-----|-------|---|------|------|------|------|------|-------|-------|------|------|------|---|
| | | | | | | | | | | | | | | | | |
| | INW 25 | - | 4,5 | 12,50 | - | | | | | • | | | | | | |
| | INW 32 | - | 5,6 | 16,00 | - | | | | | • | | | | | | |
| | INW 40 | - | 5,6 | 20,00 | - | | | | | • | | | | | | |
| | INW 50 | - | 7,9 | 25,00 | - | | | | | • | | | | | | |

| KNUX | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|------|-----------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | | | | | | | | | | | |
| | KNUX 160405L-21 | 16,00 | 4,76 | 9,52 | 0,5 | • | | | | • | | | • | | | |
| | KNUX 160405L-32 | 16,00 | 4,76 | 9,52 | 0,5 | • | | | | • | | | • | | | |
| | KNUX 160405R-21 | 16,00 | 4,76 | 9,52 | 0,5 | • | | | | • | | | • | | | |
| | KNUX 160405R-32 | 16,00 | 4,76 | 9,52 | 0,5 | • | | | | • | | | • | | | |
| | KNUX 160410L-21 | 16,00 | 4,76 | 9,52 | 1,0 | • | | | | | | | • | | | |
| | KNUX 160410L-32 | 16,00 | 4,76 | 9,52 | 1,0 | • | | | | | | | • | | | |
| | KNUX 160410R-21 | 16,00 | 4,76 | 9,52 | 1,0 | • | | | | ○ | | | • | | | |
| | KNUX 160410R-32 | 16,00 | 4,76 | 9,52 | 1,0 | • | | | | | | | • | | | |

| MTK | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |  |
|-----|--------|-------|------|---|------|------|------|------|------|------|-------|-------|------|------|------|--|
| | | | | | | | | | | | | | | | | |
| | MTK 10 | 10,00 | 2,60 | - | 0,60 | | | | | | | | | | | • |
| | MTK 12 | 12,00 | 3,00 | - | 1,00 | | | | | | | | | | | • |
| | MTK 16 | 16,00 | 4,00 | - | 1,30 | | | | | | | | | | | • |
| | MTK 20 | 20,00 | 5,00 | - | 1,60 | | | | | | | | | | | • |
| | MTK 25 | 25,00 | 6,00 | - | 2,00 | | | | | | | | | | | • |

| ODMT | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |  |
|------|-------------|------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|---|
| | | | | | | | | | | | | | | | | |
| | ODMT 040408 | 4,00 | 4,76 | 12,70 | 0,8 | | | | | | • | • | | | | |
| | ODMT 060512 | 6,00 | 5,55 | 16,00 | 1,2 | | | | | | • | • | | | | |

| ODMW | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |  |
|------|-------------|------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|---|
| | | | | | | | | | | | | | | | | |
| | ODMW 040408 | 4,00 | 4,76 | 12,70 | 0,8 | | | | | | • | | | | | |
| | ODMW 060512 | 6,00 | 5,55 | 16,00 | 1,2 | | | | | | • | | | | | |

| RCGT-AL | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|---------|----------------|---|------|-------|---|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | | | | | | | | | | | |
| | RCGT 0803MO-AL | - | 3,18 | 8,00 | - | • | | | | | | | | | ○ | |
| | RCGT 1003MO-AL | - | 3,18 | 10,00 | - | • | | | | | | | | | ○ | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide


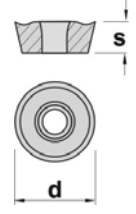

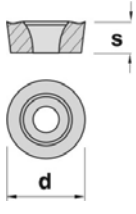

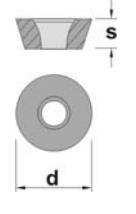

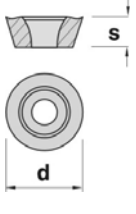

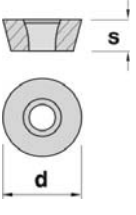

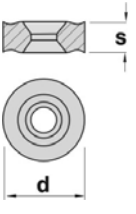
Boring heads

Arbors & adaptors

• Normally available for immediate delivery

○ Only available in a limited quantity

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

| RCGT-AP | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|---|--|-----------------------|---|------|-------|---|------|------|------|------|-------|-------|-------|-------|-------|------|---|
|  | | RCGT 0803MO-AP | - | 3,18 | 8,00 | - | • | | | | | | | | | |  |
| | | RCGT 1003MO-AP | - | 3,18 | 10,00 | - | • | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| RCMT | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | | RCMT 0602MO | - | 2,38 | 6,00 | - | | | | | • | | | | | |  |
| | | RCMT 0803MO | - | 3,18 | 8,00 | - | | | | | • | | | | | | |
| | | RCMT 1003MO | - | 3,18 | 10,00 | - | | | | | • | | | | | | |
| | | RCMT 10T3MO | - | 3,97 | 10,00 | - | | • | | | • | | | | | | |
| | | RCMT 1204MO | - | 4,76 | 12,00 | - | ○ | • | | | • | | | | | | |
| | | RCMT 1606MO-30 | - | 6,35 | 16,00 | - | | ○ | | | | | | | | | |
| | | RCMT 2006MO-30 | - | 6,35 | 20,00 | - | | ○ | | | | | | | | | |
| | | RCMT 2006MO-34 | - | 6,35 | 20,00 | - | | ○ | | | | | | | | | |
| RDHW | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 | |
|  | | RDHW 0702MO | - | 2,38 | 7,00 | - | | | | | | | | • | • | |  |
| | | RDHW 1003MO | - | 3,18 | 10,00 | - | | | | | | | | • | • | | |
| | | RDHW 12T3MO | - | 3,97 | 12,00 | - | | | | | | | | • | • | | |
| | | RDHW 1604MO | - | 4,76 | 16,00 | - | | | | | | | | • | • | | |
| | | RDHW 2006MO | - | 6,35 | 20,00 | - | | | | | | | | • | • | | |
| RDMT | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 | |
|  | | RDMT 10T3MO | - | 3,97 | 10,00 | - | | | | | | | | | | • |  |
| | | RDMT 1204MO | - | 4,76 | 12,00 | - | | • | | | | | • | | | | |
| | | RDMT 12T3MO | - | 3,97 | 12,00 | - | | | | | | | | | | • | |
| | | RDMT 1604MO | - | 4,76 | 16,00 | - | | | | | | | | | | • | |
| RDMW | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 | |
|  | | RDMW 0702MO | - | 2,38 | 7,00 | - | | | | | | | | • | • | |  |
| | | RDMW 1003MO | - | 3,18 | 10,00 | - | | | | | | | | • | • | | |
| | | RDMW 12T3MO | - | 3,97 | 12,00 | - | | | | | | | | • | • | | |
| | | RDMW 1204MO | - | 4,76 | 12,00 | - | | • | | | | | • | | | | |
| | | RDMW 1604MO | - | 4,76 | 16,00 | - | | | | | | | | • | • | | |
| | | RDMW 2006MO | - | 6,35 | 20,00 | - | | | | | | | | • | • | | |
| RNMG | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | | RNMG 090300 | - | 3,18 | 9,52 | - | | ○ | | | | | ○ | | | |  |
| | | RNMG 120400 | - | 4,76 | 12,70 | - | | ○ | | | | | ○ | | | | |
| | | RNMG 150600 | - | 6,35 | 15,88 | - | | | | | | | | ○ | | | |
| | | RNMG 190600 | - | 6,35 | 19,05 | - | | | | | | | | ○ | | | |
| | | RNMG 250900 | - | 9,52 | 25,40 | - | | | | | | | | ○ | | | |

| RPMT | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 | |
|------|----------------|---|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|--|
| | | | | | | | | | | | | | | | | |
| | RPMT 120400-39 | - | 4,76 | 12,70 | - | | • | | | | | • | | | | |
| | RPMT 1204MO | - | 4,76 | 12,70 | - | | • | | | | • | • | | • | | |

| RPMW | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 | |
|------|--------------|---|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|--|
| | | | | | | | | | | | | | | | | |
| | RPMW 0802MO | - | 2,38 | 8,00 | - | | • | | | | | • | | • | | |
| | RPMW 1003MO | - | 3,18 | 10,00 | - | | • | | | | | • | | • | | |
| | RPMW 1204MO | - | 4,76 | 12,00 | - | • | | | | | | • | | • | | |
| | RPMW 1204MOT | - | 4,76 | 12,00 | - | | • | | | | • | • | | • | | |

| RPR | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL10 | TL40 | ZR10 | |
|-----|--------|---|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|--|
| | | | | | | | | | | | | | | | | |
| | RPR 10 | - | 2,60 | 10,00 | - | | | | | | | | • | | | |
| | RPR 12 | - | 3,00 | 12,00 | - | | | | | | | | • | | | |
| | RPR 16 | - | 4,00 | 16,00 | - | | | | | | | | • | | | |
| | RPR 20 | - | 5,00 | 20,00 | - | | | | | | | | • | | | |
| | RPR 25 | - | 6,00 | 25,00 | - | | | | | | | | • | | | |
| | RPR 32 | - | 7,00 | 32,00 | - | | | | | | | | • | | | |

| SCGT-AL | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 | |
|---------|----------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|--|
| | | | | | | | | | | | | | | | | |
| | SCGT 09T304-AL | 9,52 | 3,97 | 9,52 | 0,4 | • | | | | | | | | | ○ | |
| | SCGT 09T308-AL | 9,52 | 3,97 | 9,52 | 0,8 | • | | | | | | | | | ○ | |
| | SCGT 120408-AL | 12,70 | 4,76 | 12,70 | 0,8 | • | | | | | | | | | ○ | |

| SCMT-03 | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|---------|----------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|--|
| | | | | | | | | | | | | | | | | |
| | SCMT 09T304-03 | 9,52 | 3,97 | 9,52 | 0,4 | ○ | • | | | ○ | | | | | | |
| | SCMT 09T308-03 | 9,52 | 3,97 | 9,52 | 0,8 | ○ | • | | | ○ | | | ○ | | | |
| | SCMT 120408-03 | 12,70 | 4,76 | 12,70 | 0,8 | | • | | | • | | | | | | |
| | SCMT 120412-03 | 12,70 | 4,76 | 12,70 | 1,2 | | • | | | ○ | | | | | | |

| SCMT-39 | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 | |
|---------|----------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|--|
| | | | | | | | | | | | | | | | | |
| | SCMT 09T304-39 | 9,52 | 3,97 | 9,52 | 0,4 | | • | | | | | | ○ | | | |
| | SCMT 09T308-39 | 9,52 | 3,97 | 9,52 | 0,8 | ○ | • | | | | | | • | | | |
| | SCMT 120404-39 | 12,70 | 4,76 | 12,70 | 0,4 | | • | | | | | | ○ | | | |
| | SCMT 120408-39 | 12,70 | 4,76 | 12,70 | 0,8 | ○ | • | | | | | | • | | | |
| | SCMT 120412-39 | 12,70 | 4,76 | 12,70 | 1,2 | | • | | | | | | ○ | | | |
| | SCMT 120612-39 | 12,70 | 6,35 | 12,70 | 1,2 | | • | | | | | | ○ | | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

• Normally available for immediate delivery

○ Only available in a limited quantity

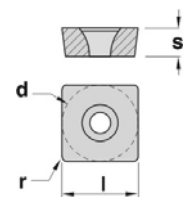
Inserts

Turning

SCMW



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|-------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| SCMW 09T308 | 9,52 | 3,97 | 9,52 | 0,8 | | ● | | | | | ○ | | | |
| SCMW 120408 | 12,70 | 4,76 | 12,70 | 0,8 | ○ | ○ | | | | | ○ | | | |
| SCMW 120412 | 12,70 | 4,76 | 12,70 | 1,2 | | ○ | | | | | ○ | | | |

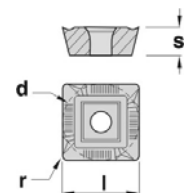


Automatic lathes

SDMT



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|-------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| SDMT 12T308 | 13,29 | 3,97 | 13,29 | 0,8 | | ● | | | | | ● | | ● | |



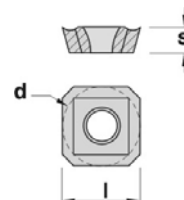
Ceramic tools

Parting & grooving

SEHT



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| SEHT 1204AF-N | 12,70 | 4,76 | 12,70 | - | | | | | | ● | ● | | | |



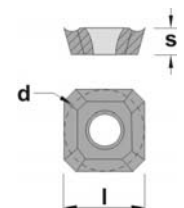
Threading

Drills

SEHT-AL



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|-----------------|-------|------|------|---|------|------|------|------|------|-------|-------|------|------|------|
| SEHT 1204AFF-AL | 12,70 | 3,18 | 6,35 | - | ● | | | | | | | | | ● |



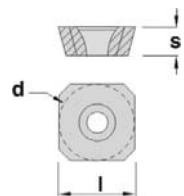
Cartridges

Brazed tools

SEHW



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| SEHW 1204AFEN001 | 12,70 | 4,76 | 12,70 | - | ● | | | | | | | | | |
| SEHW 1204AFSN151 | 12,70 | 4,76 | 12,70 | - | | ● | | | | ● | ● | | | |



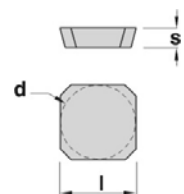
Milling cutters

Solid carbide

SEKN

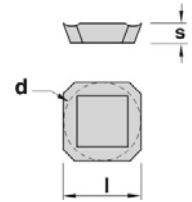


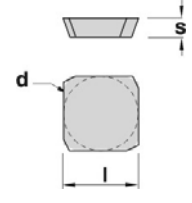
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| SEKN 1203AFEN-3A | 12,70 | 3,18 | 12,70 | - | ● | | | | | | | | | |
| SEKN 1203AFSN-3D | 12,70 | 3,18 | 12,70 | - | | ● | ● | | ● | ● | ● | | | |
| SEKN 1204AFEN-3A | 12,70 | 4,76 | 12,70 | - | | ○ | | | | | | | | |
| SEKN 1204AFSN-3D | 12,70 | 4,76 | 12,70 | - | | ● | | | | | ● | | ● | |
| SEKN 1504AFEN-4A | 15,88 | 4,76 | 15,88 | - | | ○ | | | | | | | | |
| SEKN 1504AFSN-4D | 15,88 | 4,76 | 15,88 | - | | ● | | | | | ● | | ● | |

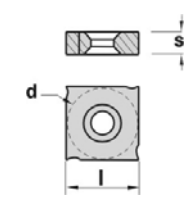


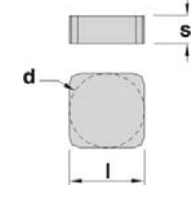
Boring heads

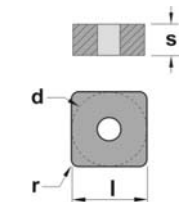
Arbors & adaptors

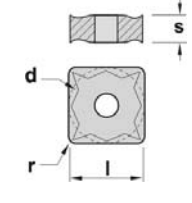
| SEKR | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |  |
|------|-------------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|---|
| | | | | | | | | | | | | | | | | |
| | SEKR 1203AFTN-94 | 12,70 | 3,18 | 12,70 | - | | | | | | • | • | | | | |

| SFAN | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |  |
|------|---------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|---|
| | | | | | | | | | | | | | | | | |
| | SFAN 1203EFL | 12,70 | 3,18 | 12,70 | - | ◦ | | | | | | | | | | |
| | SFAN 1203EFR | 12,70 | 3,18 | 12,70 | - | • | | | | | | | | | | |

| SNHX | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |  |
|------|---------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|--|
| | | | | | | | | | | | | | | | | |
| | SNHX 1102XX | 11,00 | 2,38 | 11,00 | - | | • | | | | | • | | • | | |
| | SNHX 1103XX | 11,00 | 2,70 | 11,00 | - | | • | | | | | • | | • | | |
| | SNHX 1203XX | 12,70 | 3,18 | 12,70 | - | | • | | | | | • | | • | | |
| | SNHX 12045XX | 12,70 | 4,50 | 12,70 | - | | • | | | | | • | | • | | |
| | SNHX 1205XX | 12,70 | 5,40 | 12,70 | - | | • | | | | | • | | • | | |
| | SNHX 1207XX | 12,70 | 7,00 | 12,70 | - | | • | | | | | • | | • | | |

| SNKN | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |  |
|------|---------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|---|
| | | | | | | | | | | | | | | | | |
| | SNKN 1204ENN | 12,70 | 4,76 | 12,70 | - | ◦ | • | | | | | | | | | |

| SNMA | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|------|--------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | | | | | | | | | | | |
| | SNMA 120404 | 12,70 | 4,76 | 12,70 | 0,4 | | | | | | ◦ | | | | | |
| | SNMA 120408 | 12,70 | 4,76 | 12,70 | 0,8 | | | | | | ◦ | | | | | |
| | SNMA 120412 | 12,70 | 4,76 | 12,70 | 1,2 | | | | | | ◦ | | | | | |
| | SNMA 120416 | 12,70 | 4,76 | 12,70 | 1,6 | | | | | | ◦ | | | | | |
| | SNMA 190612 | 19,05 | 6,35 | 19,05 | 1,2 | | | | | | ◦ | | | | | |
| | SNMA 190616 | 19,05 | 6,35 | 19,05 | 1,6 | | | | | | ◦ | | | | | |

| SNMG-CFM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|----------|------------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | | | | | | | | | | | |
| | SNMG 120404-CFM | 12,70 | 4,76 | 12,70 | 0,4 | | | | | • | | | | | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

• Normally available for immediate delivery

◦ Only available in a limited quantity

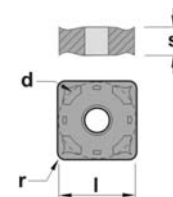
Inserts

Turning

SNMG-CMR



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|------------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| SNMG 120408-CMR | 12,70 | 4,76 | 12,70 | 0,4 | | ○ | | | | | ● | ● | | |



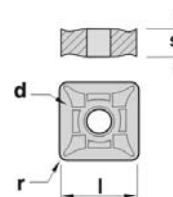
Automatic lathes

Ceramic tools

SNMG-CR



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-----------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| SNMG 120412-CR | 12,70 | 4,76 | 12,70 | 1,2 | | | | | | | | ● | | |
| SNMG 150612-CR | 15,88 | 6,35 | 15,88 | 1,2 | | | | | | | | ○ | | |
| SNMG 190616-CR | 19,05 | 6,35 | 19,05 | 1,6 | | | | | | | | ○ | | |
| SNMG 250724-CR | 25,40 | 7,94 | 25,40 | 2,4 | | | | | | | | ○ | | |

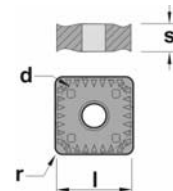


Parting & grooving

SNMM



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|--------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| SNMM 190612 | 19,05 | 6,35 | 19,05 | 1,2 | | | | | | | | ○ | | |
| SNMM 190616 | 19,05 | 6,35 | 19,05 | 1,6 | | | | | | | | ○ | | |
| SNMM 250724 | 25,40 | 7,94 | 25,40 | 2,4 | | | | | | | | ○ | | |



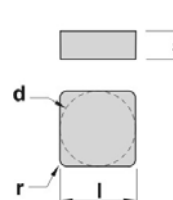
Threading

Drills

SNUN



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| SNUN 120408E | 12,70 | 4,76 | 12,70 | 0,8 | | ● | | | | | | | | |
| SNUN 120408F | 12,70 | 4,76 | 12,70 | 0,8 | ○ | | | | | | | | | |
| SNUN 120412E | 12,70 | 4,76 | 12,70 | 1,2 | | ● | | | | | | | | |



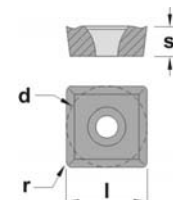
Cartridges

Brazed tools

SOMT



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|------------------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| SOMT 12M612SN-B | 12,70 | 6,00 | 12,70 | 1,2 | | ● | | | | | | | | |
| SOMT 15M612SN-B | 15,88 | 6,00 | 15,88 | 1,2 | | ● | | | | ● | | | | |



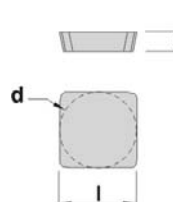
Milling cutters

Solid carbide

SPKN



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | TIC40 |
|-------------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|-------|
| SPKN 1203EDER-3A | 12,70 | 3,18 | 12,70 | - | ● | | | | | | | | | |
| SPKN 1203EDSR-3C | 12,70 | 3,18 | 12,70 | - | | ● | | | | ● | ● | ● | | |
| SPKN 1504EDSR-2F | 15,88 | 4,76 | 15,88 | - | | ● | | | | | ● | ● | | |


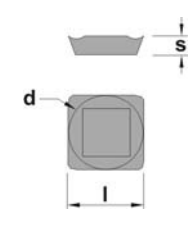


Boring heads

Arbors & adaptors


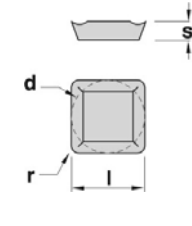
SPKR

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| SPKR 1203EDSR | 12,70 | 3,18 | 12,70 | - | | | | | | | • | | • | |


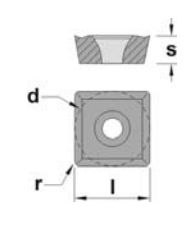
SPMR-33

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|----------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| SPMR 090304-33 | 9,52 | 3,18 | 9,52 | 0,4 | | | | | • | | | | | |
| SPMR 090308-33 | 9,52 | 3,18 | 9,52 | 0,8 | | | | | | | • | | | |
| SPMR 120304-33 | 12,70 | 3,18 | 12,70 | 0,4 | | | | | • | | | | | |
| SPMR 120308-33 | 12,70 | 3,18 | 12,70 | 0,8 | • | | | | | | • | | | |


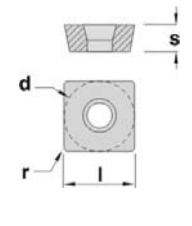
SPMT

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN25 | TIN32 | TIN35 | TL40 |
|-------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| SPMT 060304 | 6,35 | 3,18 | 6,35 | 0,4 | | | | | | | • | | | • |
| SPMT 070308 | 7,94 | 3,18 | 7,94 | 0,8 | | | | | | | • | • | | • |
| SPMT 090308 | 9,52 | 3,18 | 9,52 | 0,8 | | | | | | | • | • | | • |
| SPMT 120408 | 12,70 | 4,76 | 12,70 | 0,8 | | | | | | | • | • | | • |


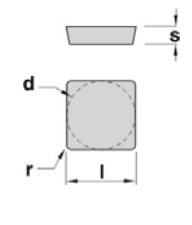
SPMW

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|-------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| SPMW 120408 | 12,70 | 4,76 | 12,70 | 0,8 | ○ | • | | | | | • | | • | |


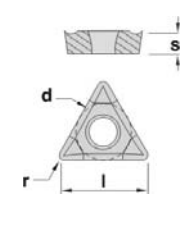
SPUN

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|--------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| SPUN 090304E | 9,52 | 3,18 | 9,52 | 0,4 | | ○ | | | | | ○ | | | |
| SPUN 090308E | 9,52 | 3,18 | 9,52 | 0,8 | | • | | | | | • | | | |
| SPUN 090308F | 9,52 | 3,18 | 9,52 | 0,8 | ○ | | | | | | | | | |
| SPUN 120304E | 12,70 | 3,18 | 12,70 | 0,4 | | • | | | | | • | | | |
| SPUN 120308E | 12,70 | 3,18 | 12,70 | 0,8 | | • | | | | | • | | | |
| SPUN 120308F | 12,70 | 3,18 | 12,70 | 0,8 | • | | | | | | | | | |
| SPUN 120312E | 12,70 | 3,18 | 12,70 | 1,2 | | • | | | | • | • | | | |
| SPUN 120408E | 12,70 | 4,76 | 12,70 | 0,8 | | ○ | | | | | | | | |
| SPUN 150408E | 15,88 | 4,76 | 15,88 | 0,8 | | ○ | | | | | | | | |
| SPUN 150412E | 15,88 | 4,76 | 15,88 | 1,2 | | ○ | | | | | | | | |
| SPUN 190412E | 19,05 | 4,76 | 19,05 | 1,2 | | ○ | | | | | | | | |

TCGT-AL

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|----------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| TCGT 110202-AL | 11,00 | 2,38 | 6,35 | 0,2 | • | | | | | | | | | ○ |
| TCGT 110204-AL | 11,00 | 2,38 | 6,35 | 0,4 | • | | | | | | | | | ○ |
| TCGT 16T302-AL | 16,50 | 3,97 | 9,52 | 0,2 | • | | | | | | | | | ○ |
| TCGT 16T304-AL | 16,50 | 3,97 | 9,52 | 0,4 | • | | | | | | | | | ○ |
| TCGT 16T308-AL | 16,50 | 3,97 | 9,52 | 0,8 | • | | | | | | | | | ○ |

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

• Normally available for immediate delivery ○ Only available in a limited quantity

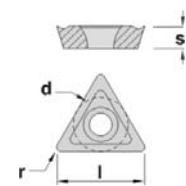
Inserts

Turning

TCMT-03



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN25 | TIN32 | TIN35 | ZR10 |
|-----------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| TCMT 090204-03 | 9,62 | 2,38 | 5,55 | 0,4 | ○ | | | | ● | | | | | |
| TCMT 110204-03 | 11,00 | 2,38 | 6,35 | 0,4 | ● | ● | | | ● | ● | ● | ● | | |
| TCMT 16T304-03 | 16,50 | 3,97 | 9,52 | 0,4 | ○ | ● | | | ● | | | ● | ● | |
| TCMT 16T308-03 | 16,50 | 3,97 | 9,52 | 0,8 | ○ | ● | | | ● | | | ● | ● | |
| TCMT 220408-03 | 22,00 | 4,76 | 12,70 | 0,8 | ○ | | | | | | | | | |
| TCMT 220412-03 | 22,00 | 4,76 | 12,70 | 1,2 | ○ | | | | | | | | | |

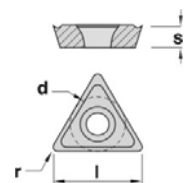


Automatic lathes

TCMT-39



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|-----------------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| TCMT 16T308-39 | 16,50 | 3,97 | 9,52 | 0,8 | | | ● | | | | ● | | ● | |
| TCMT 16T312-39 | 16,50 | 3,97 | 9,52 | 1,2 | | | ● | | | | ● | | | |

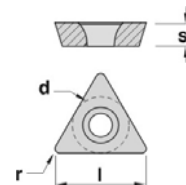


Ceramic tools

TCMW



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|--------------------|-------|------|------|-----|------|------|------|------|------|-------|-------|------|------|------|
| TCMW 110204 | 11,00 | 2,38 | 6,35 | 0,4 | ○ | ● | | | | | | | | ○ |
| TCMW 16T304 | 16,50 | 3,97 | 9,52 | 0,4 | ● | ● | | | | | | | | ○ |
| TCMW 16T308 | 16,50 | 3,97 | 9,52 | 0,8 | ● | ● | | | | | | | | ○ |



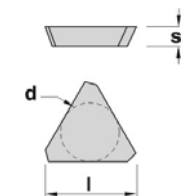
Threading

Drills

TEKN



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|----------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| TEKN 1603PETR | 16,50 | 3,18 | 9,52 | - | ○ | ● | | | | | ○ | | | |
| TEKN 2204PETR | 22,00 | 4,76 | 12,70 | - | ● | ● | | | | | ○ | | | |



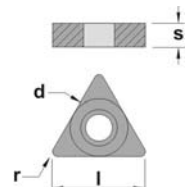
Cartridges

Brazed tools

TNMA



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|--------------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| TNMA 160404 | 16,50 | 4,76 | 9,52 | 0,4 | | | | | | | | | | |
| TNMA 160408 | 16,50 | 4,76 | 9,52 | 0,8 | | | | | | ○ | | | | |
| TNMA 160412 | 16,50 | 4,76 | 9,52 | 1,2 | | | | | | ○ | | | | |
| TNMA 220408 | 22,00 | 4,76 | 12,70 | 0,8 | | | | | | ○ | | | | |
| TNMA 220412 | 22,00 | 4,76 | 12,70 | 1,2 | | | | | | ○ | | | | |
| TNMA 220416 | 22,00 | 4,76 | 12,70 | 1,6 | | | | | | ○ | | | | |



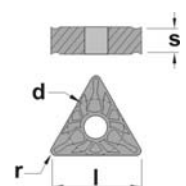
Milling cutters

Solid carbide

TNMG-CF

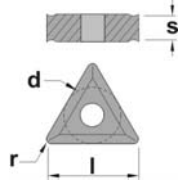

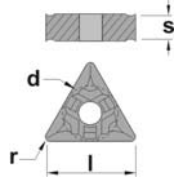

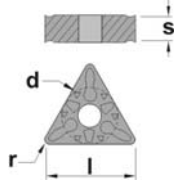

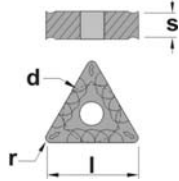

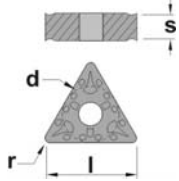

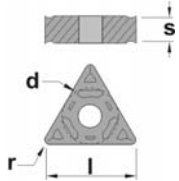



| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-----------------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| TNMG 160404-CF | 16,50 | 4,76 | 9,52 | 0,4 | | | | | | ● | | ● | | |



Boring heads

Arbors & adaptors

| TNMG-CFC | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|---|-----------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
|  | TNMG 160404-CFC | 16,50 | 4,76 | 9,52 | 0,4 | | | | • | | | | | | | |
| TNMG-CFM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|  | TNMG 160404-CFM | 16,50 | 4,76 | 9,52 | 0,4 | | | | | • | | | | | | |
| | TNMG 220404-CFM | 22,00 | 4,76 | 12,70 | 0,4 | | | | | • | | | | | | |
| TNMG-CM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|  | TNMG 160408-CM | 16,50 | 4,76 | 9,52 | 0,8 | | | | | • | | | • | | | |
| TNMG-CMC | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|  | TNMG 160408-CMC | 16,50 | 4,76 | 9,52 | 0,8 | | | | | • | | | | | | |
| TNMG-CMF | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|  | TNMG 160408-CMF | 16,50 | 4,76 | 9,52 | 0,8 | | | | | • | | | • | | | |
| | TNMG 220408-CMF | 22,00 | 4,76 | 12,70 | 0,8 | | | | | • | | | • | | | |
| TNMG-CMR | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |  |
|  | TNMG 160408-CMR | 16,50 | 4,76 | 9,52 | 0,8 | | • | | | | | | • | • | | |
| | TNMG 160412-CMR | 16,50 | 4,76 | 9,52 | 1,2 | | | | | | | | • | • | | |
| | TNMG 220408-CMR | 22,00 | 4,76 | 12,70 | 0,8 | | ○ | | | | | | • | • | | |
| | TNMG 220412-CMR | 22,00 | 4,76 | 12,70 | 1,2 | | | | | | | | • | • | | |

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

• Normally available for immediate delivery ○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

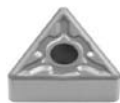
Milling cutters

Solid carbide

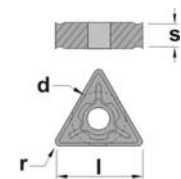
Boring heads

Arbors & adaptors

TNMG-CS



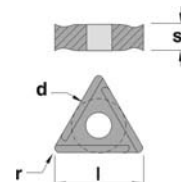
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|----------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| TNMG 160404-CS | 16,50 | 4,76 | 9,52 | 0,4 | | | | | | | | | • | |
| TNMG 160408-CS | 16,50 | 4,76 | 9,52 | 0,8 | | | | | | | | | • | |



TNMX



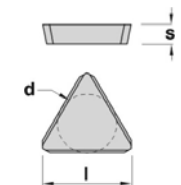
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|---------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| TNMX 160404 R | 16,50 | 4,76 | 9,52 | 0,4 | | | | | • | | | | | |
| TNMX 160408 R | 16,50 | 4,76 | 9,52 | 0,8 | | | | | • | | | | | |
| TNMX 160404 L | 16,50 | 4,76 | 9,52 | 0,4 | | | | | • | | | | | |
| TNMX 160408 L | 16,50 | 4,76 | 9,52 | 0,8 | | | | | • | | | | | |



TPKN



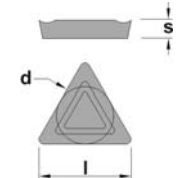
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|------------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| TPKN 1103PPSN-1C | 11,00 | 3,18 | 6,35 | - | | • | | | | | ○ | | | |
| TPKN 1603PDER-1A | 16,50 | 3,18 | 9,52 | - | • | | | | | | | | | |
| TPKN 1603PDSR-1C | 16,50 | 3,18 | 9,52 | - | | • | | | | | • | • | | |
| TPKN 2204PDER-1A | 22,00 | 4,76 | 12,70 | - | • | | | | | | • | | | |
| TPKN 2204PDSR-1F | 22,00 | 4,76 | 12,70 | - | | • | | | | | • | • | | |



TPKR



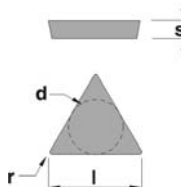
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---------------|-------|------|-------|---|------|------|------|------|------|-------|-------|------|------|------|
| TPKR 1603PPSR | 16,50 | 3,18 | 9,52 | - | | | | | | | • | | | |
| TPKR 2204PDSR | 22,00 | 4,76 | 12,70 | - | | | | | | | • | • | | |



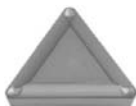
TPMN



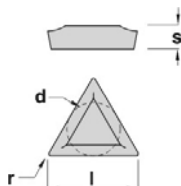
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| TPMN 160308 | 16,50 | 3,18 | 9,52 | 0,8 | | | | • | | | | | | |



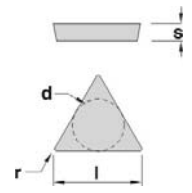
TPMR-33



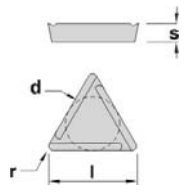
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|----------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| TPMR 090204-33 | 9,62 | 2,38 | 5,55 | 0,4 | | | | | • | | | | | |
| TPMR 110304-33 | 11,00 | 3,18 | 6,35 | 0,4 | | • | | | • | | | | | |
| TPMR 110308-33 | 11,00 | 3,18 | 6,35 | 0,8 | | • | | | • | | • | | | |
| TPMR 160304-33 | 16,50 | 3,18 | 9,52 | 0,4 | | • | | | • | | • | • | | |
| TPMR 160308-33 | 16,50 | 3,18 | 9,52 | 0,8 | | • | | | ○ | | • | • | | |



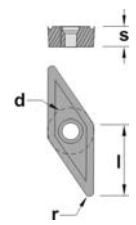
| TPUN | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN16 | TIN25 | TL20 | TL40 | ZR10 |
|------|--------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| | | | | | | | | | | | | | | | |
| | TPUN 110204E | 11,00 | 2,38 | 6,35 | 0,4 | | ● | | | | | ● | | | |
| | TPUN 110204F | 11,00 | 2,38 | 6,35 | 0,4 | ○ | | | | | | | | | |
| | TPUN 110208E | 11,00 | 2,38 | 6,35 | 0,8 | | ● | | | | | ● | | | |
| | TPUN 110304E | 11,00 | 3,18 | 6,35 | 0,4 | | ● | | | | | ● | | | |
| | TPUN 110308E | 11,00 | 3,18 | 6,35 | 0,8 | | ● | | | | | ● | | | |
| | TPUN 110308F | 11,00 | 3,18 | 6,35 | 0,8 | ○ | | | | | | | | | |
| | TPUN 160304E | 16,50 | 3,18 | 9,52 | 0,4 | | ● | | | | ○ | ● | | | |
| | TPUN 160304F | 16,50 | 3,18 | 9,52 | 0,4 | ● | | | | | | | | | |
| | TPUN 160308T | 16,50 | 3,18 | 9,52 | 0,8 | | ● | | | | | ● | | | |
| | TPUN 160308E | 16,50 | 3,18 | 9,52 | 0,8 | | ● | | | | ○ | | | | |
| | TPUN 160308F | 16,50 | 3,18 | 9,52 | 0,8 | ● | | | | | | | | | |
| | TPUN 160312E | 16,50 | 3,18 | 9,52 | 1,2 | | ● | | | | | ● | | | |
| | TPUN 160312F | 16,50 | 3,18 | 9,52 | 1,2 | ○ | | | | | | | | | |
| | TPUN 220408E | 22,00 | 4,76 | 12,70 | 0,8 | | ● | | | | | ● | | | |
| | TPUN 220408F | 22,00 | 4,76 | 12,70 | 0,8 | ● | | | | | | | | | |
| | TPUN 220412E | 22,00 | 4,76 | 12,70 | 1,2 | | ● | | | | | ● | | | |
| | TPUN 220412F | 22,00 | 4,76 | 12,70 | 1,2 | ● | | | | | | | | | |



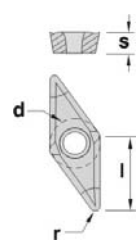
| TPUX | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|------|--------------|-------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| | | | | | | | | | | | | | | | |
| | TPUX 110304L | 11,00 | 3,18 | 6,35 | 0,4 | ○ | ● | | | | | ● | | | |
| | TPUX 110304R | 11,00 | 3,18 | 6,35 | 0,4 | ○ | ● | | | | | ● | | | |
| | TPUX 160304L | 16,50 | 3,18 | 9,52 | 0,4 | ○ | ● | | | | | ● | | | |
| | TPUX 160304R | 16,50 | 3,18 | 9,52 | 0,4 | ○ | ● | | | | | ● | | | |
| | TPUX 160308L | 16,50 | 3,18 | 9,52 | 0,8 | ○ | ● | | | | | ● | | | |
| | TPUX 160308R | 16,50 | 3,18 | 9,52 | 0,8 | ○ | ● | | | | | ● | | | |
| | TPUX 220408L | 22,00 | 4,76 | 12,70 | 0,8 | ○ | ○ | | | | | | | | |
| | TPUX 220408R | 22,00 | 4,76 | 12,70 | 0,8 | ○ | ○ | | | | | | | | |



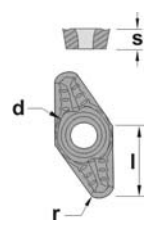
| VBMT | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|------|-------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| | | | | | | | | | | | | | | | |
| | VBMT 160404 | 16,50 | 4,76 | 9,52 | 0,4 | | | | | ● | | | | | |
| | VBMT 160408 | 16,50 | 4,76 | 9,52 | 0,8 | | | | | ● | | | | | |



| VCGT-AL | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|---------|----------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| | | | | | | | | | | | | | | | |
| | VCGT 160404-AL | 16,50 | 4,76 | 9,52 | 0,4 | ● | | | | | | | | | ○ |
| | VCGT 160408-AL | 16,50 | 4,76 | 9,52 | 0,8 | ● | | | | | | | | | ○ |
| | VCGT 160412-AL | 16,50 | 4,76 | 9,52 | 1,2 | ● | | | | | | | | | ○ |
| | VCGT 220530-AL | 22,10 | 5,56 | 12,70 | 3,0 | ● | | | | | | | | | ○ |



| VCGT-AP | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|---------|----------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| | | | | | | | | | | | | | | | |
| | VCGT 160404-AP | 16,50 | 4,76 | 9,52 | 0,4 | ● | | | | | | | | | ○ |
| | VCGT 160408-AP | 16,50 | 4,76 | 9,52 | 0,8 | ● | | | | | | | | | ○ |
| | VCGT 160412-AP | 16,50 | 4,76 | 9,52 | 1,2 | ● | | | | | | | | | ○ |
| | VCGT 220530-AP | 22,10 | 5,56 | 12,70 | 3,0 | ● | | | | | | | | | ○ |



- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

● Normally available for immediate delivery ○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters


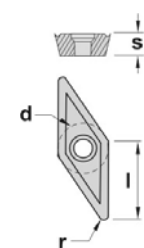
Solid carbide

Boring heads

Arbors & adaptors


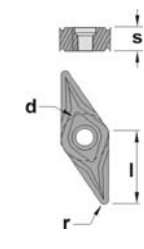
VCMT-03

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|----------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| VCMT 110304-03 | 11,00 | 3,18 | 6,35 | 0,4 | | | | | • | | | | | |
| VCMT 130304-03 | 13,00 | 3,18 | 8,00 | 0,4 | | | | | • | | | | | |
| VCMT 160404-03 | 16,50 | 4,76 | 9,52 | 0,4 | | | | | • | | | | | |
| VCMT 160408-03 | 16,50 | 4,76 | 9,52 | 0,8 | | | | | | • | | | • | |


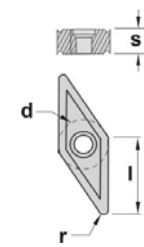
VNGP

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| VNGP 160404 | 16,50 | 4,76 | 9,52 | 0,4 | | | | | | • | | | | |
| VNGP 160408 | 16,50 | 4,76 | 9,52 | 0,8 | | | | | | • | | | | |


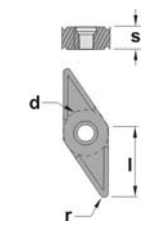
VNMG

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-------------|-------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| VNMG 160408 | 16,50 | 4,76 | 9,52 | 0,8 | | | | | • | | | | | |
| VNMG 220408 | 22,00 | 4,76 | 12,70 | 0,8 | | | | | | | • | | | |


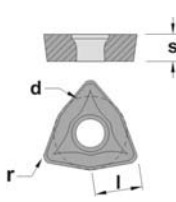
VNMG-CMC

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|-----------------|-------|------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|
| VNMG 160408-CMC | 16,50 | 4,76 | 9,52 | 0,4 | | | | | • | | | | | |
| VNMG 160408-CMC | 16,50 | 4,76 | 9,52 | 0,8 | | | | | • | | | | | |


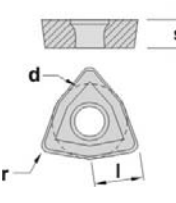
WCMT


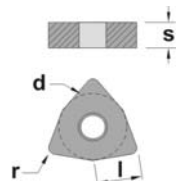

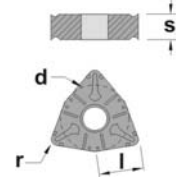
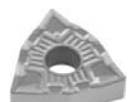
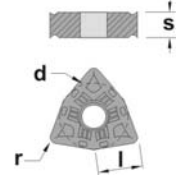

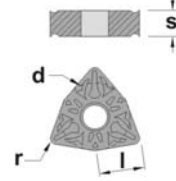

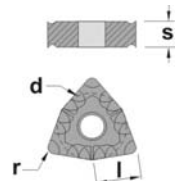

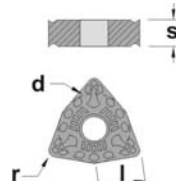
| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN32 | TL20 | TL40 | ZR10 |
|-------------|------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| WCMT 030208 | 3,46 | 2,38 | 5,56 | 0,8 | | | | | | | | | | |
| WCMT 040208 | 3,99 | 2,38 | 6,35 | 0,8 | | | | | | | • | | • | |
| WCMT 050308 | 5,07 | 3,18 | 7,94 | 0,8 | | | | | | | • | | • | |
| WCMT 06T308 | 6,14 | 3,97 | 9,52 | 0,8 | | | | | | | • | | • | |
| WCMT 080408 | 8,14 | 4,76 | 12,70 | 0,8 | | | | | | | • | | • | |

WCMX

| REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN32 | TL20 | TL40 | ZR10 |
|-------------|------|------|-------|-----|------|------|------|------|------|-------|-------|------|------|------|
| WCMX 030208 | 3,46 | 2,38 | 5,56 | 0,8 | | | | | | | | | | |
| WCMX 040208 | 3,99 | 2,38 | 6,35 | 0,8 | | | • | | | | • | | • | |
| WCMX 050308 | 5,07 | 3,18 | 7,94 | 0,8 | | | • | | | | • | | • | |
| WCMX 06T308 | 6,14 | 3,97 | 9,52 | 0,8 | | | • | | | | • | | • | |
| WCMX 080408 | 8,14 | 4,76 | 12,70 | 0,8 | | | • | | | | • | | • | |
| WCMX 080412 | 8,14 | 4,76 | 12,70 | 1,2 | | | • | | | | • | | • | |

| WNMA | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|---|-----------------|------|------|-------|-----|------|------|------|------|-------|-------|-------|-------|-------|------|---|
|  | WNMA 080408 | 8,14 | 4,76 | 12,70 | 0,8 | | | | | | ○ | | | | |  |
| | WNMA 080412 | 8,14 | 4,76 | 12,70 | 1,2 | | | | | | ○ | | | | | |
| WNMG-CF | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | WNMG 080404-CF | 8,14 | 4,76 | 12,70 | 0,4 | | | | | ● | | | ● | | |  |
| | | | | | | | | | | | | | | | | |
| WNMG-CFM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | WNMG 080404-CFM | 8,14 | 4,76 | 12,70 | 0,4 | | | | | ● | | | ● | | |  |
| | | | | | | | | | | | | | | | | |
| WNMG-CM | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | WNMG 080408-CM | 8,14 | 4,76 | 12,70 | 0,8 | | | | | ● | | | ● | | |  |
| | | | | | | | | | | | | | | | | |
| WNMG-CMC | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | WNMG 080408-CMC | 8,14 | 4,76 | 12,70 | 0,8 | | | | | ● | | | | | |  |
| | | | | | | | | | | | | | | | | |
| WNMG-CMF | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 | |
|  | WNMG 080408-CMF | 8,14 | 4,76 | 12,70 | 0,8 | | | | | ● | | | | | |  |
| | | | | | | | | | | | | | | | | |

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

● Normally available for immediate delivery ○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges


Brazed tools

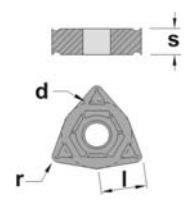
Milling cutters


Solid carbide

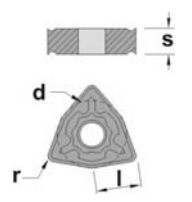
Boring heads


Arbors & adaptors

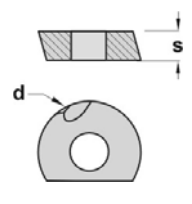
| WNMG-CMR | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|---|-----------------|------|------|-------|-----|---|------|------|------|------|-------|-------|-------|-------|-------|------|
|  | WNMG 060404-CMR | 6,45 | 4,76 | 9,52 | 0,4 | | | | | | • | | | | | |
| | WNMG 060408-CMR | 6,45 | 4,76 | 9,52 | 0,8 | | | | | | | • | | | | |
| | WNMG 080408-CMR | 8,14 | 4,76 | 12,70 | 0,8 | | | | | | | | • | • | | |
| | WNMG 080412-CMR | 8,14 | 4,76 | 12,70 | 1,2 | | | | | | | | | • | • | |




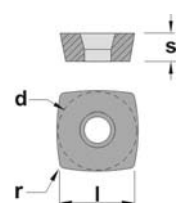
| WNMG-CS | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC25 | TIN16 | TIN17 | TIN22 | TIN32 | TIN35 | ZR10 |
|---|----------------|------|------|-------|-----|---|------|------|------|------|-------|-------|-------|-------|-------|------|
|  | WNMG 060404-CS | 6,45 | 4,76 | 9,52 | 0,4 | | | | | | | | | | • | |
| | WNMG 060408-CS | 6,45 | 4,76 | 9,52 | 0,8 | | | | | | | | | | • | |
| | WNMG 080408-CS | 8,14 | 4,76 | 12,70 | 0,8 | | | | | | | | | | • | |
| | WNMG 080412-CS | 8,14 | 4,76 | 12,70 | 1,2 | | | | | | | | | | • | |




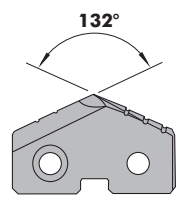
| WPR | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---|--------|------|------|----|---|---|------|------|------|------|------|-------|-------|------|------|------|
|  | WPR 10 | - | 2,50 | 10 | - | | | | | | | | | • | • | |
| | WPR 12 | - | 2,50 | 12 | - | | | | | | | | | • | • | |
| | WPR 16 | - | 3,00 | 16 | - | | | | | | | | | • | • | |
| | WPR 20 | - | 3,00 | 20 | - | | | | | | | | | • | • | |
| | WPR 25 | - | 4,00 | 25 | - | | | | | | | | | • | • | |
| | WPR 32 | - | 5,00 | 32 | - | | | | | | | | | • | • | |


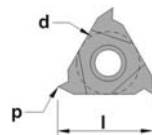



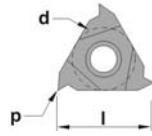
| XDKW | | REF. | l | s | d | r | KM15 | PM25 | PM40 | NC40 | TC30 | TIN21 | TIN25 | TL20 | TL40 | ZR10 |
|---|-------------|-------|------|-------|-----|---|------|------|------|------|------|-------|-------|------|------|------|
|  | XDKW 090430 | 9,00 | 3,97 | 9,00 | 0,8 | | | | | | | • | | | | |
| | XDKW 120430 | 12,50 | 4,76 | 12,50 | 0,8 | | | | | | | • | | | | |


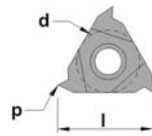



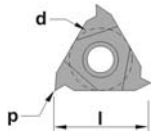
| XPMT | | REF. | Metric | Diameter | Inch | s | HS15 | TL40 |
|---|---------|-------|--------|----------|------|-----|------|------|
|  | XPMT095 | 9,50 | | 3/8 | | 2,4 | ○ | ○ |
| | XPMT098 | 9,80 | | - | | 2,4 | ● | ● |
| | XPMT099 | 9,92 | | 25/64 | | 2,4 | ○ | ○ |
| | XPMT100 | 10,00 | | - | | 2,4 | ● | ● |
| | XPMT102 | 10,20 | | - | | 2,4 | ● | ● |
| | XPMT103 | 10,32 | | 13/32 | | 2,4 | ○ | ○ |
| | XPMT105 | 10,50 | | - | | 2,4 | ● | ● |
| | XPMT107 | 10,72 | | 27/64 | | 2,4 | ○ | ○ |
| | XPMT108 | 10,80 | | - | | 2,4 | ● | ● |
| | XPMT110 | 11,00 | | - | | 2,4 | ● | ● |
| | XPMT111 | 11,11 | | 7/16 | | 2,4 | ○ | ○ |
| | XPMT115 | 11,50 | | 29/64 | | 2,4 | ○ | ○ |
| | XPMT119 | 11,91 | | 15/32 | | 2,4 | ○ | ○ |
| | XPMT120 | 12,00 | | - | | 2,4 | ● | ● |
| | XPMT123 | 12,30 | | 31/64 | | 2,4 | ○ | ○ |
| | XPMT125 | 12,50 | | - | | 2,4 | ● | ● |
| | XPMT127 | 12,70 | | 1/2 | | 2,4 | ○ | ○ |
| | XPMT130 | 13,00 | | - | | 3,2 | ● | ● |
| | XPMT131 | 13,10 | | 33/64 | | 3,2 | ○ | ○ |
| | XPMT135 | 13,50 | | 17/32 | | 3,2 | ○ | ○ |
| | XPMT138 | 13,89 | | 35/64 | | 3,2 | ○ | ○ |
| | XPMT140 | 14,00 | | - | | 3,2 | ● | ● |
| | XPMT142 | 14,29 | | 9/16 | | 3,2 | ○ | ○ |
| | XPMT145 | 14,50 | | - | | 3,2 | ● | ● |
| | XPMT146 | 14,68 | | 37/64 | | 3,2 | ○ | ○ |
| | XPMT150 | 15,00 | | - | | 3,2 | ● | ● |
| | XPMT155 | 15,50 | | 39/64 | | 3,2 | ○ | ○ |
| | XPMT158 | 15,88 | | 5/8 | | 3,2 | ○ | ○ |
| | XPMT160 | 16,00 | | - | | 3,2 | ● | ● |
| | XPMT162 | 16,27 | | 41/64 | | 3,2 | ○ | ○ |
| XPMT165 | 16,50 | | - | | 3,2 | ● | ● | |
| XPMT166 | 16,67 | | 21/32 | | 3,2 | ○ | ○ | |
| XPMT170 | 17,00 | | - | | 3,2 | ● | ● | |
| XPMT174 | 17,46 | | 11/16 | | 3,2 | ○ | ○ | |
| XPMT175 | 17,50 | | - | | 3,2 | ● | ● | |


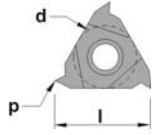



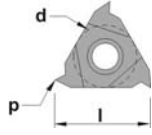
| ER-60° | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |  |
|--------|-----------|-------|-------|-----|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | 11ER-A60 | 11,00 | 6,35 | 60° | | | ○ | | | |
| | 16ER-A60 | 16,00 | 9,52 | 60° | | | ○ | | | |
| | 16ER-AG60 | 16,00 | 9,52 | 60° | | ● | ● | ○ | | |
| | 16ER-G60 | 16,00 | 9,52 | 60° | | | ● | ○ | | |
| | 22ER-N60 | 22,00 | 12,70 | 60° | | | ● | ○ | | |
| | 27ER-S60 | 27,00 | 15,87 | 60° | | | ○ | | | |

| EL-60° | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |  |
|--------|-----------|-------|-------|-----|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | 11EL-A60 | 11,00 | 6,35 | 60° | | | ○ | | | |
| | 16EL-A60 | 16,00 | 9,52 | 60° | | | ○ | | | |
| | 16EL-AG60 | 16,00 | 9,52 | 60° | | | ○ | | | |
| | 16EL-G60 | 16,00 | 9,52 | 60° | | | ○ | | | |
| | 22EL-N60 | 22,00 | 12,70 | 60° | | | ○ | | | |
| | 27EL-S60 | 27,00 | 15,87 | 60° | | | ○ | | | |

| ER-55° | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |  |
|--------|-----------|-------|-------|-----|------|------|-------|------|--|--|
| | | | | | | | | | | |
| | 11ER-A55 | 11,00 | 6,35 | 55° | | | ○ | | | |
| | 16ER-A55 | 16,00 | 9,52 | 55° | | | ○ | | | |
| | 16ER-AG55 | 16,00 | 9,52 | 55° | | ● | ● | ○ | | |
| | 16ER-G55 | 16,00 | 9,52 | 55° | | | ○ | | | |
| | 22ER-N55 | 22,00 | 12,70 | 55° | | | ○ | | | |
| | 27ER-S55 | 27,00 | 15,87 | 55° | | | ○ | | | |

| EL-55° | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |  |
|--------|-----------|-------|-------|-----|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | 11EL-A55 | 11,00 | 6,35 | 55° | | | ○ | | | |
| | 16EL-A55 | 16,00 | 9,52 | 55° | | | ○ | | | |
| | 16EL-AG55 | 16,00 | 9,52 | 55° | | | ○ | | | |
| | 16EL-G55 | 16,00 | 9,52 | 55° | | | ○ | | | |
| | 22EL-N55 | 22,00 | 12,70 | 55° | | | ○ | | | |
| | 27EL-S55 | 27,00 | 15,87 | 55° | | | ○ | | | |

| ER-60° TD | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |  |
|-----------|--------------|-------|------|-----|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | 16ER-A60 TD | 16,00 | 9,52 | 60° | | | ○ | | | |
| | 16ER-AG60 TD | 16,00 | 9,52 | 60° | | | ● | ○ | | |
| | 16ER-G60 TD | 16,00 | 9,52 | 60° | | | ○ | | | |

| ER-55° TD | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |  |
|-----------|--------------|-------|------|-----|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | 16ER-A55 TD | 16,00 | 9,52 | 55° | | | ○ | | | |
| | 16ER-AG55 TD | 16,00 | 9,52 | 55° | | | ● | ○ | | |
| | 16ER-G55 TD | 16,00 | 9,52 | 55° | | | ○ | | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

● Normally available for immediate delivery

○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

| NR-60° | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---------------|--|------------------|-------|-------|-----|------|------|-------|------|
| | | 06NR-A60 | 6,00 | 3,96 | 60° | | | ○ | |
| | | 08NR-A60 | 8,00 | 4,76 | 60° | | | ○ | |
| | | 11NR-A60 | 11,00 | 6,35 | 60° | | | ● | ○ |
| | | 16NR-A60 | 16,00 | 9,52 | 60° | | | ○ | |
| | | 16NR-AG60 | 16,00 | 9,52 | 60° | | ● | ● | ○ |
| | | 16NR-G60 | 16,00 | 9,52 | 60° | | | ● | |
| | | 22NR-N60 | 22,00 | 12,70 | 60° | | | ● | ○ |
| | | 27NR-S60 | 27,00 | 15,87 | 60° | | | ○ | |

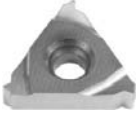
| NL-60° | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---------------|--|------------------|-------|-------|-----|------|------|-------|------|
| | | 06NL-A60 | 6,00 | 3,96 | 60° | | | ○ | |
| | | 08NL-A60 | 8,00 | 4,76 | 60° | | | ○ | |
| | | 11NL-A60 | 11,00 | 6,35 | 60° | | | ○ | |
| | | 16NL-A60 | 16,00 | 9,52 | 60° | | | ○ | |
| | | 16NL-AG60 | 16,00 | 9,52 | 60° | | | ○ | |
| | | 16NL-G60 | 16,00 | 9,52 | 60° | | | ○ | |
| | | 22NL-N60 | 22,00 | 12,70 | 60° | | | ○ | |
| | | 27NL-S60 | 27,00 | 15,87 | 60° | | | ○ | |

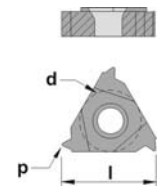
| NR-55° | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---------------|--|------------------|-------|-------|-----|------|------|-------|------|
| | | 06NR-A55 | 6,00 | 3,96 | 55° | | | ○ | |
| | | 08NR-A55 | 8,00 | 4,76 | 55° | | | ○ | |
| | | 11NR-A55 | 11,00 | 6,35 | 55° | | | ○ | |
| | | 16NR-A55 | 16,00 | 9,52 | 55° | | | ○ | |
| | | 16NR-AG55 | 16,00 | 9,52 | 55° | | | ● | ○ |
| | | 16NR-G55 | 16,00 | 9,52 | 55° | | | ● | |
| | | 22NR-N55 | 22,00 | 12,70 | 55° | | | ● | |
| | | 27NR-S55 | 27,00 | 15,87 | 55° | | | ○ | |


| NL-55° | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---------------|--|------------------|-------|-------|-----|------|------|-------|------|
| | | 06NL-A55 | 6,00 | 3,96 | 55° | | | ○ | |
| | | 08NL-A55 | 8,00 | 4,76 | 55° | | | ○ | |
| | | 11NL-A55 | 11,00 | 6,35 | 55° | | | ○ | |
| | | 16NL-A55 | 16,00 | 9,52 | 55° | | | ○ | |
| | | 16NL-AG55 | 16,00 | 9,52 | 55° | | | ○ | |
| | | 16NL-G55 | 16,00 | 9,52 | 55° | | | ○ | |
| | | 22NL-N55 | 22,00 | 12,70 | 55° | | | ○ | |
| | | 27NL-S55 | 27,00 | 15,87 | 55° | | | ○ | |

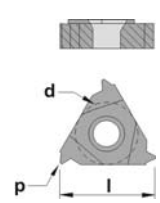
| NR-60° TD | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|------------------|--|---------------------|-------|------|-----|------|------|-------|------|
| | | 16NR-A60 TD | 16,00 | 9,52 | 60° | | | ○ | |
| | | 16NR-AG60 TD | 16,00 | 9,52 | 60° | | | ● | ○ |
| | | 16NR-G60 TD | 16,00 | 9,52 | 60° | | | ○ | |

| NR-55° TD | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|------------------|--|---------------------|-------|------|-----|------|------|-------|------|
| | | 16NR-A55 TD | 16,00 | 9,52 | 55° | | | ○ | |
| | | 16NR-AG55 TD | 16,00 | 9,52 | 55° | | | ● | ○ |
| | | 16NR-G55 TD | 16,00 | 9,52 | 55° | | | ○ | |

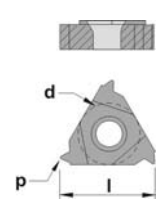
| ER-ISO | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---|-------------|-------|-------|------|------|------|-------|------|
|  | 11ER-030ISO | 11,00 | 6,35 | 0,30 | | | o | |
| | 11ER-040ISO | 11,00 | 6,35 | 0,40 | | | o | |
| | 11ER-045ISO | 11,00 | 6,35 | 0,45 | | | o | |
| | 11ER-050ISO | 11,00 | 6,35 | 0,50 | | | o | |
| | 11ER-060ISO | 11,00 | 6,35 | 0,60 | | | o | |
| | 11ER-070ISO | 11,00 | 6,35 | 0,70 | | | o | |
| | 11ER-075ISO | 11,00 | 6,35 | 0,75 | | | o | |
| | 11ER-080ISO | 11,00 | 6,35 | 0,80 | | | o | |
| | 11ER-100ISO | 11,00 | 6,35 | 1,00 | | | o | |
| | 11ER-125ISO | 11,00 | 6,35 | 1,25 | | | o | |
| | 11ER-150ISO | 11,00 | 6,35 | 1,50 | | | o | |
| | 11ER-175ISO | 11,00 | 6,35 | 1,75 | | | o | |
| | 16ER-075ISO | 16,00 | 9,52 | 0,75 | | | o | |
| | 16ER-100ISO | 16,00 | 9,52 | 1,00 | | | o | |
| | 16ER-125ISO | 16,00 | 9,52 | 1,25 | | | o | |
| | 16ER-150ISO | 16,00 | 9,52 | 1,50 | | | o | |
| | 16ER-175ISO | 16,00 | 9,52 | 1,75 | | | o | |
| | 16ER-200ISO | 16,00 | 9,52 | 2,00 | | | o | |
| | 16ER-250ISO | 16,00 | 9,52 | 2,50 | | | o | |
| | 16ER-300ISO | 16,00 | 9,52 | 3,00 | | | o | |
| | 22ER-350ISO | 22,00 | 12,70 | 3,50 | | | o | |
| | 22ER-400ISO | 22,00 | 12,70 | 4,00 | | | o | |
| | 22ER-450ISO | 22,00 | 12,70 | 4,50 | | | o | |
| | 22ER-500ISO | 22,00 | 12,70 | 5,00 | | | o | |
| | 27ER-500ISO | 27,00 | 15,87 | 5,00 | | | o | |
| | 27ER-550ISO | 27,00 | 15,87 | 5,50 | | | o | |
| | 27ER-600ISO | 27,00 | 15,87 | 6,00 | | | o | |
| | 27ER-800ISO | 27,00 | 15,87 | 8,00 | | | o | |




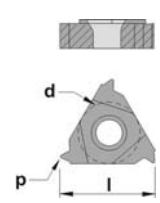
| EL-ISO | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---|-------------|-------|-------|------|------|------|-------|------|
|  | 16EL-100ISO | 16,00 | 9,52 | 1,00 | | | o | |
| | 16EL-125ISO | 16,00 | 9,52 | 1,25 | | | o | |
| | 16EL-150ISO | 16,00 | 9,52 | 1,50 | | | o | |
| | 16EL-175ISO | 16,00 | 9,52 | 1,75 | | | o | |
| | 16EL-200ISO | 16,00 | 9,52 | 2,00 | | | o | |
| | 16EL-250ISO | 16,00 | 9,52 | 2,50 | | | o | |
| | 16EL-300ISO | 16,00 | 9,52 | 3,00 | | | o | |
| | 22EL-400ISO | 22,00 | 12,70 | 4,00 | | | o | |



| ER-ISO TD | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---|----------------|-------|------|------|------|------|-------|------|
|  | 16ER-100ISO TD | 16,50 | 9,52 | 1,00 | | | o | |
| | 16ER-125ISO TD | 16,50 | 9,52 | 1,25 | | | o | |
| | 16ER-150ISO TD | 16,50 | 9,52 | 1,50 | | | o | |
| | 16ER-175ISO TD | 16,50 | 9,52 | 1,75 | | | o | |
| | 16ER-200ISO TD | 16,50 | 9,52 | 2,00 | | | o | |
| | 16ER-250ISO TD | 16,50 | 9,52 | 2,50 | | | o | |
| | 16ER-300ISO TD | 16,50 | 9,52 | 3,00 | | | o | |



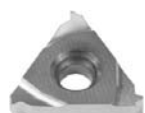
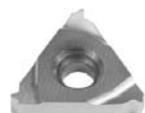

| EL-ISO TD | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---|----------------|-------|------|------|------|------|-------|------|
|  | 16EL-100ISO TD | 16,50 | 9,52 | 1,00 | | | o | |
| | 16EL-125ISO TD | 16,50 | 9,52 | 1,25 | | | o | |
| | 16EL-150ISO TD | 16,50 | 9,52 | 1,50 | | | o | |
| | 16EL-175ISO TD | 16,50 | 9,52 | 1,75 | | | o | |
| | 16EL-200ISO TD | 16,50 | 9,52 | 2,00 | | | o | |
| | 16EL-250ISO TD | 16,50 | 9,52 | 2,50 | | | o | |
| | 16EL-300ISO TD | 16,50 | 9,52 | 3,00 | | | o | |

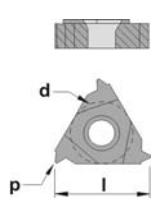
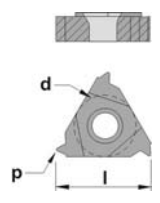
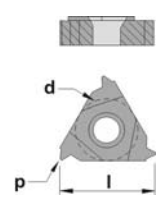


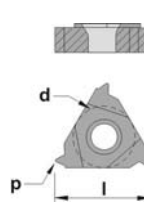
- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

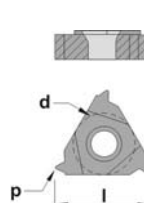
● Normally available for immediate delivery ○ Only available in a limited quantity

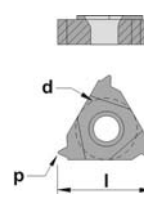
- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

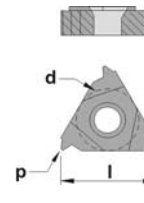
| NR-ISO | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|---|----------------|----------------|-------|-------|------|------|------|-------|------|
|  | | 06NR-050ISO | 6,00 | 3,96 | 0,50 | | | ○ | |
| | | 06NR-075ISO | 6,00 | 3,96 | 0,75 | | | ○ | |
| | | 06NR-100ISO | 6,00 | 3,96 | 1,00 | | | ○ | |
| | | 06NR-125ISO | 6,00 | 3,96 | 1,25 | | | ○ | |
| | | 08NR-050ISO | 8,00 | 4,76 | 0,50 | | | ○ | |
| | | 08NR-075ISO | 8,00 | 4,76 | 0,75 | | | ○ | |
| | | 08NR-100ISO | 8,00 | 4,76 | 1,00 | | | ○ | |
| | | 08NR-125ISO | 8,00 | 4,76 | 1,25 | | | ○ | |
| | | 08NR-150ISO | 8,00 | 4,76 | 1,50 | | | ○ | |
| | | 08NR-175ISO | 8,00 | 4,76 | 1,75 | | | ○ | |
| | | 11NR-035ISO | 11,00 | 6,35 | 0,35 | | | ○ | |
| | | 11NR-040ISO | 11,00 | 6,35 | 0,40 | | | ○ | |
| | | 11NR-045ISO | 11,00 | 6,35 | 0,45 | | | ○ | |
| | | 11NR-050ISO | 11,00 | 6,35 | 0,50 | | | ○ | |
| | | 11NR-060ISO | 11,00 | 6,35 | 0,60 | | | ○ | |
| | | 11NR-070ISO | 11,00 | 6,35 | 0,70 | | | ○ | |
| | | 11NR-075ISO | 11,00 | 6,35 | 0,75 | | | ○ | |
| | | 11NR-080ISO | 11,00 | 6,35 | 0,80 | | | ○ | |
| | | 11NR-100ISO | 11,00 | 6,35 | 1,00 | | | ○ | |
| | | 11NR-125ISO | 11,00 | 6,35 | 1,25 | | | ○ | |
| | | 11NR-150ISO | 11,00 | 6,35 | 1,50 | | | ○ | |
| | | 11NR-175ISO | 11,00 | 6,35 | 1,75 | | | ○ | |
| | | 11NR-200ISO | 11,00 | 6,35 | 2,00 | | | ○ | |
| | | 11NR-250ISO | 11,00 | 6,35 | 2,50 | | | ○ | |
| | | 16NR-075ISO | 16,00 | 9,52 | 0,75 | | | ○ | |
| | | 16NR-100ISO | 16,00 | 9,52 | 1,00 | | | ○ | |
| | | 16NR-125ISO | 16,00 | 9,52 | 1,25 | | | ○ | |
| | | 16NR-150ISO | 16,00 | 9,52 | 1,50 | | | ○ | |
| | | 16NR-175ISO | 16,00 | 9,52 | 1,75 | | | ○ | |
| | | 16NR-200ISO | 16,00 | 9,52 | 2,00 | | | ○ | |
| | 16NR-250ISO | 16,00 | 9,52 | 2,50 | | | ○ | | |
| | 16NR-300ISO | 16,00 | 9,52 | 3,00 | | | ○ | | |
| | 22NR-350ISO | 22,00 | 12,70 | 3,50 | | | ○ | | |
| | 22NR-400ISO | 22,00 | 12,70 | 4,00 | | | ○ | | |
| | 22NR-450ISO | 22,00 | 12,70 | 4,50 | | | ○ | | |
| | 22NR-500ISO | 22,00 | 12,70 | 5,00 | | | ○ | | |
| | 27NR-500ISO | 27,00 | 15,87 | 5,00 | | | ○ | | |
| | 27NR-550ISO | 27,00 | 15,87 | 5,50 | | | ○ | | |
| | 27NR-600ISO | 27,00 | 15,87 | 6,00 | | | ○ | | |
| | 27NR-800ISO | 27,00 | 15,87 | 8,00 | | | ○ | | |
| NL-ISO | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|  | | 06NL-050ISO | 6,00 | 3,96 | 0,50 | | | | |
| | | 06NL-075ISO | 6,00 | 3,96 | 0,75 | | | | |
| | | 06NL-100ISO | 6,00 | 3,96 | 1,00 | | | | |
| | | 06NL-125ISO | 6,00 | 3,96 | 1,25 | | | | |
| | | 08NL-050ISO | 8,00 | 4,76 | 0,50 | | | | |
| | | 08NL-075ISO | 8,00 | 4,76 | 0,75 | | | | |
| | | 08NL-100ISO | 8,00 | 4,76 | 1,00 | | | | |
| | | 08NL-125ISO | 8,00 | 4,76 | 1,25 | | | | |
| | | 08NL-150ISO | 8,00 | 4,76 | 1,50 | | | | |
| | | 08NL-175ISO | 8,00 | 4,76 | 1,75 | | | | |
| | | 11NL-100ISO | 11,00 | 6,35 | 1,00 | | | ○ | |
| | | 11NL-150ISO | 11,00 | 6,35 | 1,50 | | | ○ | |
| | | 16NL-100ISO | 16,00 | 9,52 | 1,00 | | | ○ | |
| | | 16NL-125ISO | 16,00 | 9,52 | 1,25 | | | ○ | |
| | | 16NL-150ISO | 16,00 | 9,52 | 1,50 | | | ○ | |
| | | 16NL-175ISO | 16,00 | 9,52 | 1,75 | | | ○ | |
| | | 16NL-200ISO | 16,00 | 9,52 | 2,00 | | | ○ | |
| | | 16NL-250ISO | 16,00 | 9,52 | 2,50 | | | ○ | |
| | | 16NL-300ISO | 16,00 | 9,52 | 3,00 | | | ○ | |
| | | 22NL-400ISO | 22,00 | 12,70 | 4,00 | | | ○ | |
| NR-ISO TD | | REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|  | | 16NR-100ISO TD | 16,50 | 9,52 | 1,00 | | | ● | |
| | | 16NR-125ISO TD | 16,50 | 9,52 | 1,25 | | | ● | |
| | | 16NR-150ISO TD | 16,50 | 9,52 | 1,50 | | | ● | |
| | | 16NR-175ISO TD | 16,50 | 9,52 | 1,75 | | | ● | |
| | | 16NR-200ISO TD | 16,50 | 9,52 | 2,00 | | | ● | |
| | | 16NR-250ISO TD | 16,50 | 9,52 | 2,50 | | | ● | |
| | 16NR-300ISO TD | 16,50 | 9,52 | 3,00 | | | ● | | |



| ER-UN | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |
|-------|-----------|-------|------|------|------|------|-------|------|---|
| | | | | | | | | | |
| | 16ER-11UN | 16,00 | 9,52 | 11,0 | | | ○ | | |
| | 16ER-14UN | 16,00 | 9,52 | 14,0 | | | ○ | | |
| | 16ER-18UN | 16,00 | 9,52 | 18,0 | | | ○ | | |

| NR-UN | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |
|-------|-----------|-------|------|------|------|------|-------|------|---|
| | | | | | | | | | |
| | 16NR-20UN | 16,00 | 9,52 | 20,0 | | | ○ | | |
| | 16NR-24UN | 16,00 | 9,52 | 24,0 | | | ○ | | |

| ER-W | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |
|------|-----------|-------|-------|------|------|------|-------|------|---|
| | | | | | | | | | |
| | 11ER-14W | 11,00 | 6,35 | 14,0 | | | ○ | | |
| | 11ER-16W | 11,00 | 6,35 | 16,0 | | | ○ | | |
| | 11ER-18W | 11,00 | 6,35 | 18,0 | | | ○ | | |
| | 11ER-19W | 11,00 | 6,35 | 19,0 | | | ○ | | |
| | 11ER-22W | 11,00 | 6,35 | 22,0 | | | ○ | | |
| | 11ER-24W | 11,00 | 6,35 | 24,0 | | | ○ | | |
| | 11ER-26W | 11,00 | 6,35 | 26,0 | | | ○ | | |
| | 11ER-28W | 11,00 | 6,35 | 28,0 | | | ○ | | |
| | 11ER-40W | 11,00 | 6,35 | 40,0 | | | ○ | | |
| | 11ER-50W | 11,00 | 6,35 | 50,0 | | | ○ | | |
| | 11ER-56W | 11,00 | 6,35 | 56,0 | | | ○ | | |
| | 16ER-8W | 16,00 | 9,52 | 8,0 | | | ○ | | |
| | 16ER-9W | 16,00 | 9,52 | 9,0 | | | ○ | | |
| | 16ER-10W | 16,00 | 9,52 | 10,0 | | | ○ | | |
| | 16ER-11W | 16,00 | 9,52 | 11,0 | | | ○ | | |
| | 16ER-12W | 16,00 | 9,52 | 12,0 | | | ○ | | |
| | 16ER-14W | 16,00 | 9,52 | 14,0 | | | ○ | | |
| | 16ER-16W | 16,00 | 9,52 | 16,0 | | | ○ | | |
| | 16ER-18W | 16,00 | 9,52 | 18,0 | | | ○ | | |
| | 16ER-19W | 16,00 | 9,52 | 19,0 | | | ○ | | |
| | 16ER-20W | 16,00 | 9,52 | 20,0 | | | ○ | | |
| | 16ER-22W | 16,00 | 9,52 | 22,0 | | | ○ | | |
| | 16ER-24W | 16,00 | 9,52 | 24,0 | | | ○ | | |
| | 16ER-26W | 16,00 | 9,52 | 26,0 | | | ○ | | |
| | 16ER-28W | 16,00 | 9,52 | 28,0 | | | ○ | | |
| | 22ER-4W | 22,00 | 12,70 | 4,0 | | | ○ | | |
| | 22ER-4.5W | 22,00 | 12,70 | 4,5 | | | ○ | | |
| | 22ER-5W | 22,00 | 12,70 | 5,0 | | | ○ | | |
| | 22ER-6W | 22,00 | 12,70 | 6,0 | | | ○ | | |
| | 22ER-7W | 22,00 | 12,70 | 7,0 | | | ○ | | |
| | 22ER-8W | 22,00 | 12,70 | 8,0 | | | ○ | | |
| | 27ER-4W | 27,00 | 15,87 | 4,0 | | | ○ | | |
| | 27ER-4.5W | 27,00 | 15,87 | 4,5 | | | ○ | | |

| EL-W | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |
|------|----------|-------|------|------|------|------|-------|------|---|
| | | | | | | | | | |
| | 16EL-11W | 16,00 | 9,52 | 11,0 | | | ○ | | |
| | 16EL-14W | 16,00 | 9,52 | 14,0 | | | ○ | | |
| | 16EL-20W | 16,00 | 9,52 | 20,0 | | | ○ | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

● Normally available for immediate delivery

○ Only available in a limited quantity

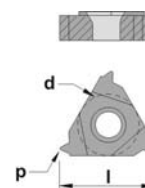
Inserts

Turning

ER-W TD



| REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|-------------|-------|------|------|------|------|-------|------|
| 16ER-11W TD | 16,50 | 9,52 | 11,0 | | | o | |
| 16ER-14W TD | 16,50 | 9,52 | 14,0 | | | o | |
| 16ER-16W TD | 16,50 | 9,52 | 16,0 | | | o | |



Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

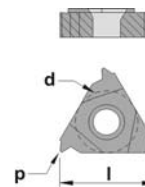
Brazed tools

Milling cutters

NR-W



| REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|-----------|-------|-------|------|------|------|-------|------|
| 06NR-18W | 6,00 | 3,96 | 18,0 | | | o | |
| 06NR-19W | 6,00 | 3,96 | 19,0 | | | o | |
| 06NR-20W | 6,00 | 3,96 | 20,0 | | | o | |
| 06NR-22W | 6,00 | 3,96 | 22,0 | | | o | |
| 06NR-26W | 6,00 | 3,96 | 26,0 | | | o | |
| 08NR-16W | 8,00 | 4,76 | 16,0 | | | o | |
| 08NR-18W | 8,00 | 4,76 | 18,0 | | | o | |
| 08NR-19W | 8,00 | 4,76 | 19,0 | | | o | |
| 08NR-20W | 8,00 | 4,76 | 20,0 | | | o | |
| 08NR-24W | 8,00 | 4,76 | 24,0 | | | o | |
| 08NR-28W | 8,00 | 4,76 | 28,0 | | | o | |
| 11NR-11W | 11,00 | 6,35 | 11,0 | | | o | |
| 11NR-12W | 11,00 | 6,35 | 12,0 | | | o | |
| 11NR-14W | 11,00 | 6,35 | 14,0 | | | o | |
| 11NR-16W | 11,00 | 6,35 | 16,0 | | | o | |
| 11NR-18W | 11,00 | 6,35 | 18,0 | | | o | |
| 11NR-19W | 11,00 | 6,35 | 19,0 | | | o | |
| 11NR-20W | 11,00 | 6,35 | 20,0 | | | o | |
| 11NR-22W | 11,00 | 6,35 | 22,0 | | | o | |
| 11NR-24W | 11,00 | 6,35 | 24,0 | | | o | |
| 11NR-26W | 11,00 | 6,35 | 26,0 | | | o | |
| 11NR-28W | 11,00 | 6,35 | 28,0 | | | o | |
| 11NR-32W | 11,00 | 6,35 | 32,0 | | | o | |
| 11NR-36W | 11,00 | 6,35 | 36,0 | | | o | |
| 11NR-40W | 11,00 | 6,35 | 40,0 | | | o | |
| 11NR-48W | 11,00 | 6,35 | 48,0 | | | o | |
| 16NR-8W | 16,00 | 9,52 | 8,0 | | | o | |
| 16NR-9W | 16,00 | 9,52 | 9,0 | | | o | |
| 16NR-10W | 16,00 | 9,52 | 10,0 | | | o | |
| 16NR-11W | 16,00 | 9,52 | 11,0 | | | o | |
| 16NR-12W | 16,00 | 9,52 | 12,0 | | | o | |
| 16NR-14W | 16,00 | 9,52 | 14,0 | | | o | |
| 16NR-16W | 16,00 | 9,52 | 16,0 | | | o | |
| 16NR-18W | 16,00 | 9,52 | 18,0 | | | o | |
| 16NR-19W | 16,00 | 9,52 | 19,0 | | | o | |
| 16NR-20W | 16,00 | 9,52 | 20,0 | | | o | |
| 16NR-22W | 16,00 | 9,52 | 22,0 | | | o | |
| 16NR-24W | 16,00 | 9,52 | 24,0 | | | o | |
| 16NR-26W | 16,00 | 9,52 | 26,0 | | | o | |
| 16NR-28W | 16,00 | 9,52 | 28,0 | | | o | |
| 22NR-4W | 22,00 | 12,70 | 4,0 | | | o | |
| 22NR-4.5W | 22,00 | 12,70 | 4,5 | | | o | |
| 22NR-5W | 22,00 | 12,70 | 5,0 | | | o | |
| 22NR-6W | 22,00 | 12,70 | 6,0 | | | o | |
| 22NR-7W | 22,00 | 12,70 | 7,0 | | | o | |



Solid carbide

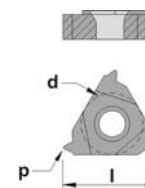
Boring heads

Arbors & adaptors

NL-W




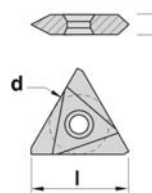
| REF. | l | d | p | KM15 | PM25 | TIN25 | TL20 |
|----------|-------|------|------|------|------|-------|------|
| 06NL-18W | 6,00 | 3,96 | 18,0 | | | o | |
| 06NL-20W | 6,00 | 3,96 | 20,0 | | | o | |
| 06NL-22W | 6,00 | 3,96 | 22,0 | | | o | |
| 06NL-26W | 6,00 | 3,96 | 26,0 | | | o | |
| 08NL-16W | 8,00 | 4,76 | 16,0 | | | o | |
| 08NL-18W | 8,00 | 4,76 | 18,0 | | | o | |
| 08NL-19W | 8,00 | 4,76 | 19,0 | | | o | |
| 08NL-20W | 8,00 | 4,76 | 20,0 | | | o | |
| 08NL-24W | 8,00 | 4,76 | 24,0 | | | o | |
| 08NL-28W | 8,00 | 4,76 | 28,0 | | | o | |
| 16NL-11W | 16,00 | 9,52 | 11,0 | | | o | |
| 16NL-14W | 16,00 | 9,52 | 14,0 | | | o | |
| 16NL-16W | 16,00 | 9,52 | 16,0 | | | o | |
| 16NL-20W | 16,00 | 9,52 | 20,0 | | | o | |

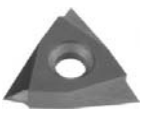
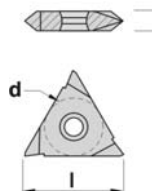



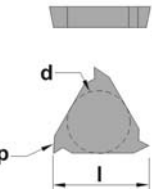
| NR-W TD | REF. | l | d | p | KM15 | PM25 | TiN25 | TL20 |  |  |
|---------|-------------|-------|------|------|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | 16NR-8W TD | 16,50 | 9,52 | 8,0 | | | ○ | | | |
| | 16NR-9W TD | 16,50 | 9,52 | 9,0 | | | ○ | | | |
| | 16NR-10W TD | 16,50 | 9,52 | 10,0 | | | ○ | | | |
| | 16NR-11W TD | 16,50 | 9,52 | 11,0 | | | ● | ○ | | |
| | 16NR-12W TD | 16,50 | 9,52 | 12,0 | | | ○ | | | |
| | 16NR-14W TD | 16,50 | 9,52 | 14,0 | | | ● | ○ | | |
| | 16NR-16W TD | 16,50 | 9,52 | 16,0 | | | ○ | | | |
| | 16NR-18W TD | 16,50 | 9,52 | 18,0 | | | ○ | | | |
| | 16NR-19W TD | 16,50 | 9,52 | 19,0 | | | ○ | | | |

| ER-LG | REF. | l | d | W | KM15 | PM25 | TiN25 | TL20 |  |  |
|-------|------------|-------|------|------|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | 16ER-100LG | 16,00 | 9,52 | 1,15 | | | | ● | | |
| | 16ER-120LG | 16,00 | 9,52 | 1,35 | | | | ● | | |
| | 16ER-150LG | 16,00 | 9,52 | 1,65 | | | | ● | | |
| | 16ER-175LG | 16,00 | 9,52 | 1,90 | | | | ● | | |
| | 16ER-200LG | 16,00 | 9,52 | 2,15 | | | | ● | | |

| EL-LG | REF. | l | d | W | KM15 | PM25 | TiN25 | TL20 |  |  |
|-------|------------|-------|------|------|------|------|-------|------|--|--|
| | | | | | | | | | | |
| | 16EL-100LG | 16,00 | 9,52 | 1,15 | | | | ● | | |
| | 16EL-120LG | 16,00 | 9,52 | 1,35 | | | | ● | | |
| | 16EL-150LG | 16,00 | 9,52 | 1,65 | | | | ● | | |
| | 16EL-175LG | 16,00 | 9,52 | 1,90 | | | | ● | | |
| | 16EL-200LG | 16,00 | 9,52 | 2,15 | | | | ● | | |

| TNMC | REF. | l | s | d | KM15 | PM25 | TiN16 | TL20 |  |  |
|------|-------------|-------|------|-------|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | TNMC 1603XX | 16,50 | 3,18 | 9,52 | | ○ | ○ | | | |
| | TNMC 2204XX | 22,00 | 4,76 | 12,70 | | ● | ○ | | | |

| TPMC | REF. | l | s | d | KM15 | PM25 | TiN16 | TL20 |  |  |
|------|-------------|-------|------|-------|------|------|-------|------|---|---|
| | | | | | | | | | | |
| | TPMC 1603XX | 16,50 | 3,18 | 9,52 | | ○ | ○ | | | |
| | TPMC 2204XX | 22,00 | 4,76 | 12,70 | | ○ | ○ | | | |

| L166G-ISO | REF. | l | s | d | p | KM15 | PM25 | TiN25 | TL20 |  |  |
|-----------|--------------|-------|------|------|------|------|------|-------|------|---|---|
| | | | | | | | | | | | |
| | L166G-3BA075 | 16,50 | 3,18 | 9,52 | 0,75 | | ○ | | | | |
| | L166G-3BA100 | 16,50 | 3,18 | 9,52 | 1,00 | | ○ | | | | |
| | L166G-3BA125 | 16,50 | 3,18 | 9,52 | 1,25 | | ○ | | | | |
| | L166G-3BA150 | 16,50 | 3,18 | 9,52 | 1,50 | | ○ | | | | |
| | L166G-3BA175 | 16,50 | 3,18 | 9,52 | 1,75 | | ○ | | | | |
| | L166G-3BA200 | 16,50 | 3,18 | 9,52 | 2,00 | | ○ | | | | |
| | L166G-3BA250 | 16,50 | 3,18 | 9,52 | 2,50 | | ○ | | | | |
| | L166G-3BA300 | 16,50 | 3,18 | 9,52 | 3,00 | | ○ | | | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

● Normally available for immediate delivery

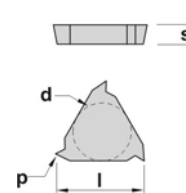
○ Only available in a limited quantity

Inserts

R166G-ISO



| REF. | l | s | d | p | KM15 | PM25 | TIN25 | TL20 |
|---------------------|-------|------|------|------|------|------|-------|------|
| R166G-3BA075 | 16,50 | 3,18 | 9,52 | 0,75 | | ○ | | |
| R166G-3BA100 | 16,50 | 3,18 | 9,52 | 1,00 | | ○ | | |
| R166G-3BA125 | 16,50 | 3,18 | 9,52 | 1,25 | | ○ | | |
| R166G-3BA150 | 16,50 | 3,18 | 9,52 | 1,50 | | ○ | | |
| R166G-3BA175 | 16,50 | 3,18 | 9,52 | 1,75 | | ○ | | |
| R166G-3BA200 | 16,50 | 3,18 | 9,52 | 2,00 | | ○ | | |
| R166G-3BA250 | 16,50 | 3,18 | 9,52 | 2,50 | | ○ | | |
| R166G-3BA300 | 16,50 | 3,18 | 9,52 | 3,00 | | ○ | | |



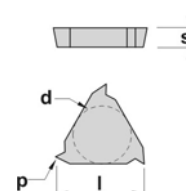
Turning

Automatic lathes

R166G-B



| REF. | l | s | d | p | KM15 | PM25 | TIN25 | TL20 |
|---------------------|-------|------|------|----|------|------|-------|------|
| R166G-3BK080 | 16,50 | 3,18 | 9,52 | 08 | | ○ | | |
| R166G-3BK160 | 16,50 | 3,18 | 9,52 | 16 | | ○ | | |
| R166G-3BL110 | 16,50 | 3,18 | 9,52 | 11 | | ○ | | |
| R166G-3BL160 | 16,50 | 3,18 | 9,52 | 16 | | ○ | | |



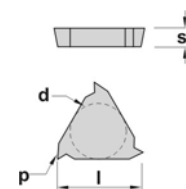
Ceramic tools

Parting & grooving

L166L-ISO



| REF. | l | s | d | p | KM15 | PM25 | TIN25 | TL20 |
|---------------------|-------|------|------|------|------|------|-------|------|
| L166L-3BA150 | 16,50 | 3,18 | 9,52 | 1,50 | | ○ | | |
| L166L-3BA175 | 16,50 | 3,18 | 9,52 | 1,75 | | ○ | | |
| L166L-3BA200 | 16,50 | 3,18 | 9,52 | 2,00 | | ○ | | |
| L166L-3BA250 | 16,50 | 3,18 | 9,52 | 2,50 | | ○ | | |
| L166L-3BA300 | 16,50 | 3,18 | 9,52 | 3,00 | | ○ | | |



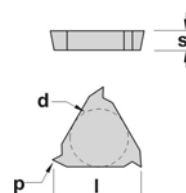
Threading

Drills

R166L-ISO



| REF. | l | s | d | p | KM15 | PM25 | TIN25 | TL20 |
|---------------------|-------|------|------|------|------|------|-------|------|
| R166L-2BA100 | 11,00 | 3,18 | 6,35 | 1,00 | | ○ | | |
| R166L-2BA150 | 11,00 | 3,18 | 6,35 | 1,50 | | ○ | | |
| R166L-3BA150 | 16,50 | 3,18 | 9,52 | 1,50 | | ○ | | |
| R166L-3BA175 | 16,50 | 3,18 | 9,52 | 1,75 | | ○ | | |
| R166L-3BA200 | 16,50 | 3,18 | 9,52 | 2,00 | | ○ | | |
| R166L-3BA250 | 16,50 | 3,18 | 9,52 | 2,50 | | ○ | | |
| R166L-3BA300 | 16,50 | 3,18 | 9,52 | 3,00 | | ○ | | |
| R166L-3BK080 | 16,50 | 3,18 | 9,52 | 08 | | ○ | | |



Cartridges


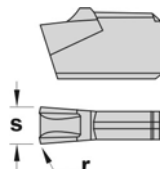
Brazed tools


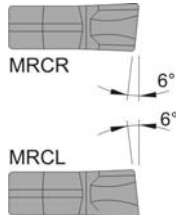
Milling cutters


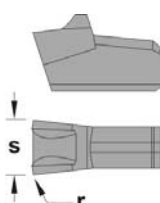
Solid carbide

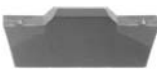
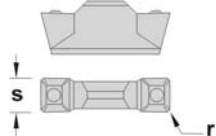
Boring heads


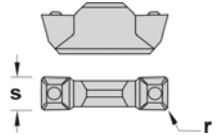
Arbors & adaptors


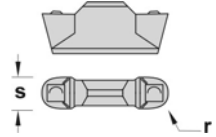
| MRCN | REF. | s | r | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 | TL40 |   |
|------|----------|-----|------|------|------|------|-------|-------|-------|-------|------|------|--|
| | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | MRCN 1.6 | 1,6 | 0,15 | ○ | ○ | | | | | ● | | ○ | |
| | MRCN 2.2 | 2,2 | 0,20 | ○ | ● | | | | | ● | | ○ | |
| | MRCN 3.0 | 3,0 | 0,20 | ○ | ● | | | | | ● | | ○ | |
| | MRCN 4.0 | 4,0 | 0,20 | ○ | ● | | | | | ● | | ○ | |
| | MRCN 5.0 | 5,0 | 0,30 | ○ | ○ | | | | | ● | | ○ | |
| | MRCN 6.0 | 6,0 | 0,40 | ○ | ○ | | | | | ● | | ○ | |

| MRCR/L | REF. | s | r | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 | TL40 |   |
|--------|----------|-----|------|------|------|------|-------|-------|-------|-------|------|------|--|
| | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | MRCR 3.0 | 3,0 | 0,20 | | | | | | | | | ○ | |
| | MRCR 4.0 | 4,0 | 0,20 | | | | | | | | | ○ | |
| | MRCL 3.0 | 3,0 | 0,20 | | | | | | | | | ○ | |
| | MRCL 4.0 | 4,0 | 0,20 | | | | | | | | | ○ | |

| MTE | REF. | s | r | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 | TL40 |   |
|-----|---------|-----|------|------|------|------|-------|-------|-------|-------|------|------|--|
| | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | MTE 3.0 | 3,0 | 0,20 | | | | | | | ● | | ○ | |
| | MTE 4.0 | 4,0 | 0,20 | | | | | | | ● | | ○ | |

| MTC | REF. | s | r | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 |   |
|-----|---------|-----|------|------|------|------|-------|-------|-------|-------|------|--|
| | | | | ● | ● | ○ | ○ | ○ | ○ | ○ | | |
| | MTC 3.0 | 3,0 | 0,15 | ● | ● | | | | | ○ | | |
| | MTC 4.0 | 4,0 | 0,20 | ● | ● | | | | | ● | | |

| MTCJ | REF. | s | r | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 |   |
|------|----------|-----|------|------|------|------|-------|-------|-------|-------|------|--|
| | | | | ● | ● | ○ | ○ | ○ | ○ | ○ | | |
| | MTCJ 3.0 | 3,0 | 0,15 | ● | ● | | | | | ○ | | |
| | MTCJ 4.0 | 4,0 | 0,20 | ● | ● | | | | | ● | | |

| MTR | REF. | s | r | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 |   |
|-----|---------|-----|------|------|------|------|-------|-------|-------|-------|------|--|
| | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| | MTR 3.0 | 3,0 | 1,50 | ○ | ○ | | | | | ○ | | |
| | MTR 3.8 | 3,8 | 1,90 | ○ | ○ | | | | | ○ | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

● Normally available for immediate delivery

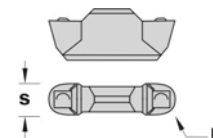
○ Only available in a limited quantity

Inserts

MTRJ



| REF. | s | r | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 |
|----------|-----|------|------|------|------|-------|-------|-------|-------|------|
| MTRJ 3.0 | 3,0 | 1,50 | ○ | ○ | | | | | ○ | |
| MTRJ 3.8 | 3,8 | 1,90 | ○ | ○ | | | | | ○ | |



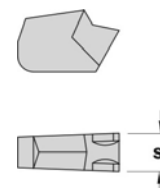
Turning

Automatic lathes

PTNT



| REF. | s | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 |
|---------|------|------|------|------|-------|-------|-------|-------|------|
| PTNT 02 | 2,10 | | ● | ● | | | | ● | |
| PTNT 03 | 3,10 | ○ | ● | ● | | | | ● | |
| PTNT 04 | 4,10 | | ● | ● | | | | ● | |
| PTNT 05 | 5,10 | ○ | ○ | | | | | ○ | |
| PTNT 06 | 6,10 | ○ | ○ | | | | | ○ | |
| PTNT 08 | 8,10 | | | | | | | | |
| PTNT 09 | 9,10 | | ○ | | | | | | |



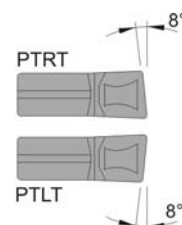
Ceramic tools

Parting & grooving

PTR/LT



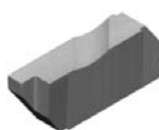
| REF. | s | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 |
|----------|-----|------|------|------|-------|-------|-------|-------|------|
| PTRT 3.0 | 3,0 | | | | | | | ○ | |
| PTRT 4.0 | 4,0 | | | | | | | ○ | |
| PTRT 3.0 | 3,0 | | | | | | | ○ | |
| PTRT 4.0 | 4,0 | | | | | | | ○ | |



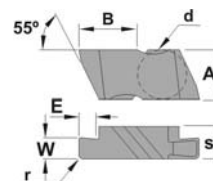
Threading

Drills

NG



| REF. | d | A | B | E | r | s | W | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 |
|------------|------|-------|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|------|
| NG-2031R/L | 4,76 | 5,56 | 6,86 | 1,27 | 0,05 | 3,81 | 0,79 | | | | ○ | | | | |
| NG-210R/L | 4,76 | 5,56 | 6,86 | 1,27 | 0,05 | 3,81 | 0,99 | | | | ○ | | | | |
| NG2041R/L | 4,76 | 5,56 | 6,86 | 1,27 | 0,05 | 3,81 | 1,04 | | | | ○ | | | | |
| NG2047R/L | 4,76 | 5,56 | 6,86 | 1,27 | 0,05 | 3,81 | 1,19 | | | | ○ | | | | |
| NG2058R/L | 4,76 | 5,56 | 6,86 | 1,27 | 0,05 | 3,81 | 1,47 | | | | ○ | | | | |
| NG2062R/L | 4,76 | 5,56 | 6,86 | 2,79 | 0,05 | 3,81 | 1,57 | | | | ○ | | | | |
| NG220R/L | 4,76 | 5,56 | 6,86 | 2,79 | 0,05 | 3,81 | 2,01 | | | | ○ | | | | |
| NG2094R/L | 4,76 | 5,56 | 6,86 | 2,79 | 0,05 | 3,81 | 2,39 | | | | ○ | | | | |
| NG230R/L | 4,76 | 5,56 | 6,86 | 2,79 | 0,05 | 3,81 | 3,00 | | | | ○ | | | | |
| NG2125R/L | 4,76 | 5,56 | 6,86 | 2,79 | 0,05 | 3,81 | 3,18 | | | | ○ | | | | |
| NG3031R/L | 9,53 | 8,74 | 10,29 | 1,27 | 0,05 | 4,95 | 0,79 | | | | ○ | | | | |
| NG310R/L | 9,53 | 8,74 | 10,29 | 1,27 | 0,05 | 4,95 | 0,99 | | | | ○ | | | | |
| NG3047R/L | 9,53 | 8,74 | 10,29 | 1,91 | 0,05 | 4,95 | 1,19 | | | | ○ | | | | |
| NG3062R/L | 9,53 | 8,74 | 10,29 | 3,05 | 0,13 | 4,95 | 1,57 | | | | ○ | | | | |
| NG3072R/L | 9,53 | 8,74 | 10,29 | 3,05 | 0,13 | 4,95 | 1,83 | | | | ○ | | | | |
| NG3078R/L | 9,53 | 8,74 | 10,29 | 3,05 | 0,13 | 4,95 | 1,98 | | | | ○ | | | | |
| NG320R/L | 9,53 | 8,74 | 10,29 | 3,05 | 0,13 | 4,95 | 2,01 | | | | ○ | | | | |
| NG3088R/L | 9,53 | 8,74 | 10,29 | 3,05 | 0,13 | 4,95 | 2,24 | | | | ○ | | | | |
| NG3094R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 2,39 | | | | ○ | | | | |
| NG3105R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 2,67 | | | | ○ | | | | |
| NG3110R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 2,79 | | | | ○ | | | | |
| NG330R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 3,10 | | | | ○ | | | | |
| NG3122R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 3,10 | | | | ○ | | | | |
| NG3125R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 3,18 | | | | ○ | | | | |
| NG3142R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 3,61 | | | | ○ | | | | |
| NG3156R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 3,96 | | | | ○ | | | | |
| NG340R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 4,01 | | | | ○ | | | | |
| NG3178R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,13 | 4,95 | 4,52 | | | | ○ | | | | |
| NG3185R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,51 | 4,95 | 4,70 | | | | ○ | | | | |
| NG3189R/L | 9,53 | 8,74 | 10,29 | 4,57 | 0,51 | 4,95 | 4,80 | | | | ○ | | | | |
| NG4125R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,13 | 6,48 | 3,18 | | | | ○ | | | | |
| NG4189R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,51 | 6,48 | 4,80 | | | | ○ | | | | |
| NG450R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,25 | 6,48 | 5,00 | | | | ○ | | | | |
| NG4213R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,13 | 6,48 | 5,41 | | | | ○ | | | | |
| NG4219R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,51 | 6,48 | 5,56 | | | | ○ | | | | |
| NG4250R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,51 | 6,48 | 6,35 | | | | ○ | | | | |
| NG4312R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,76 | 6,48 | 7,92 | | | | ○ | | | | |
| NG6281R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,76 | 9,73 | 7,14 | | | | ○ | | | | |
| NG6312R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,76 | 9,73 | 7,92 | | | | ○ | | | | |
| NG6375R/L | 9,53 | 11,51 | 16,15 | 6,35 | 0,76 | 9,73 | 9,53 | | | | ○ | | | | |



Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

| NR | REF. | d | A | B | E | r | s | W | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 | |
|----|-----------|------|-------|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|------|--|
| | | | | | | | | | | | | | | | | | |
| | NR2031R/L | 4,76 | 5,56 | 6,81 | 2,79 | 0,79 | 3,81 | 1,57 | | | | o | | | | | |
| | NR2047R/L | 4,76 | 5,56 | 6,79 | 2,79 | 1,19 | 3,81 | 2,39 | | | | o | | | | | |
| | NR2062R/L | 4,76 | 5,56 | 6,77 | 2,79 | 1,57 | 3,81 | 3,18 | | | | o | | | | | |
| | NR3031R/L | 9,53 | 8,74 | 10,24 | 3,81 | 0,79 | 4,95 | 1,57 | | | | o | | | | | |
| | NR3047R/L | 9,53 | 8,74 | 10,22 | 3,81 | 1,19 | 4,95 | 2,39 | | | | o | | | | | |
| | NR3062R/L | 9,53 | 8,74 | 10,20 | 3,81 | 1,57 | 4,95 | 3,18 | | | | o | | | | | |
| | NR3078R/L | 9,53 | 8,74 | 10,18 | 3,81 | 1,98 | 4,95 | 3,96 | | | | o | | | | | |
| | NR3094R/L | 9,53 | 8,74 | 10,16 | 3,81 | 2,39 | 4,95 | 4,78 | | | | o | | | | | |
| | NR4062R/L | 9,53 | 11,51 | 16,07 | 6,35 | 1,57 | 6,48 | 3,18 | | | | o | | | | | |
| | NR4094R/L | 9,53 | 11,51 | 10,03 | 6,35 | 2,39 | 6,48 | 4,78 | | | | o | | | | | |
| | NR4125R/L | 9,53 | 11,51 | 15,98 | 6,35 | 3,18 | 6,48 | 6,35 | | | | o | | | | | |

| NT | REF. | d | A | B | E | r | s | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN32 | ZR10 | |
|----|--------|------|-------|-------|------|------|------|------|------|------|-------|-------|-------|-------|------|--|
| | | | | | | | | | | | | | | | | |
| | NT2R/L | 4,76 | 5,56 | 6,76 | 1,91 | 0,08 | 3,81 | | | | o | | | | | |
| | NT3R/L | 9,53 | 8,74 | 10,16 | 2,49 | 0,13 | 4,95 | | | | o | | | | | |
| | NT4R/L | 9,53 | 11,51 | 15,98 | 3,25 | 0,13 | 6,48 | | | | o | | | | | |

| ER-LG | REF. | l | d | W | KM15 | PM25 | TIN25 | TL20 | |
|-------|------------|-------|------|------|------|------|-------|------|--|
| | | | | | | | | | |
| | 16ER-100LG | 16,00 | 9,52 | 1,15 | | | | • | |
| | 16ER-120LG | 16,00 | 9,52 | 1,35 | | | | • | |
| | 16ER-150LG | 16,00 | 9,52 | 1,65 | | | | • | |
| | 16ER-175LG | 16,00 | 9,52 | 1,90 | | | | • | |
| | 16ER-200LG | 16,00 | 9,52 | 2,15 | | | | • | |

| EL-LG | REF. | l | d | W | KM15 | PM25 | TIN25 | TL20 | |
|-------|------------|-------|------|------|------|------|-------|------|--|
| | | | | | | | | | |
| | 16EL-100LG | 16,00 | 9,52 | 1,15 | | | | • | |
| | 16EL-120LG | 16,00 | 9,52 | 1,35 | | | | • | |
| | 16EL-150LG | 16,00 | 9,52 | 1,65 | | | | • | |
| | 16EL-175LG | 16,00 | 9,52 | 1,90 | | | | • | |
| | 16EL-200LG | 16,00 | 9,52 | 2,15 | | | | • | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

• Normally available for immediate delivery

o Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters


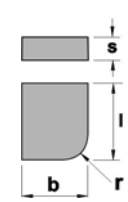
Solid carbide

Boring heads

Arbors & adaptors


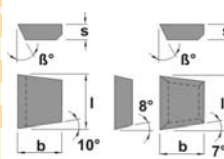
AB

| REF. | l | s | b | r | β° | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN25 | TIN32 | ZR10 |
|-------------|------|------|------|------|---------------|------|------|------|-------|-------|-------|-------|-------|------|
| AB 6 | 6,00 | 2,50 | 4,00 | 2,00 | - | • | | | | | | | | |
| AB 8 | 8,00 | 3,00 | 5,00 | 3,00 | - | • | | | | | | | | |

ABC

| REF. | l | s | b | r | β° | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN25 | TIN32 | ZR10 |
|---------------|-------|------|-------|---|---------------|------|------|------|-------|-------|-------|-------|-------|------|
| ABC 10 | 11,00 | 4,00 | 6,00 | - | 16° | • | • | | | | | | | |
| ABC 12 | 13,00 | 5,00 | 8,00 | - | 18° | • | • | | | | | | | |
| ABC 16 | 17,00 | 6,00 | 10,00 | - | 18° | • | • | | | | | | | |
| ABC 20 | 21,00 | 7,00 | 12,00 | - | 16° | • | • | | | | | | | |
| ABC 25 | 26,00 | 8,00 | 14,00 | - | 16° | • | • | | | | | | | |

Only for:
-ABC 10
-ABC 20
-ABC 25

Only for:
-ABC 12
-ABC 16

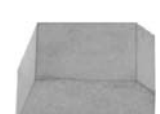
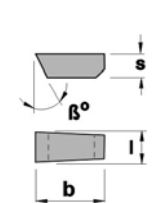
C

| REF. | l | s | b | r | β° | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN25 | TIN32 | ZR10 |
|-------------|-------|------|-------|---|---------------|------|------|------|-------|-------|-------|-------|-------|------|
| C 7 | 7,00 | 2,50 | 5,00 | - | 0° | • | • | | | | | | | |
| C 8 | 8,00 | 3,25 | 5,00 | - | 0° | • | • | | | | | | | |
| C 10 | 10,00 | 4,00 | 6,00 | - | 18° | • | • | | | | | | | |
| C 12 | 12,00 | 5,00 | 8,00 | - | 18° | • | • | | | | | | | |
| C 16 | 16,00 | 6,00 | 10,00 | - | 18° | • | • | | | | | | | |
| C 20 | 20,00 | 7,00 | 12,00 | - | 18° | • | • | | | | | | | |
| C 25 | 25,00 | 8,00 | 14,00 | - | 18° | • | • | | | | | | | |




D

| REF. | l | s | b | r | β° | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN25 | TIN32 | ZR10 |
|-------------|-------|-------|-------|---|---------------|------|------|------|-------|-------|-------|-------|-------|------|
| D 3 | 3,00 | 3,00 | 8,00 | - | 0° | • | • | | | | | | | |
| D 4 | 4,00 | 4,00 | 10,00 | - | 14° | • | • | | | | | | | |
| D 5 | 5,00 | 5,00 | 12,00 | - | 14° | • | • | | | | | | | |
| D 6 | 6,00 | 6,00 | 14,00 | - | 14° | • | • | | | | | | | |
| D 8 | 8,00 | 8,00 | 16,00 | - | 14° | • | • | | | | | | | |
| D 10 | 10,00 | 10,00 | 18,00 | - | 14° | • | • | | | | | | | |


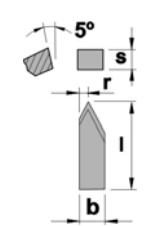
E

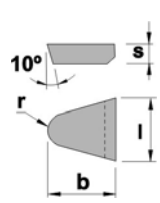
| REF. | l | s | b | r | β° | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN25 | TIN32 | ZR10 |
|-------------|-------|------|-------|---|---------------|------|------|------|-------|-------|-------|-------|-------|------|
| E 5 | 5,00 | 3,00 | 12,00 | - | 9° | • | • | | | | | | | |
| E 6 | 6,00 | 4,00 | 14,00 | - | 9° | • | • | | | | | | | |
| E 8 | 8,00 | 4,00 | 16,00 | - | 9° | • | • | | | | | | | |
| E 10 | 10,00 | 5,00 | 18,00 | - | 9° | • | • | | | | | | | |
| E 12 | 12,00 | 6,00 | 20,00 | - | 9° | • | • | | | | | | | |

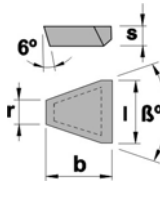



FIL

| REF. | l | s | b | r | β° | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN25 | TIN32 | ZR10 |
|----------------|-------|------|------|------|---------------|------|------|------|-------|-------|-------|-------|-------|------|
| FIL 3,5 | 12,00 | 3,50 | 3,50 | 1,00 | 5° | • | • | | | | | | | |
| FIL 4 | 14,00 | 4,00 | 4,00 | 1,20 | 5° | • | • | | | | | | | |
| FIL 5 | 16,00 | 5,00 | 5,00 | 1,50 | 5° | • | • | | | | | | | |
| FIL 6 | 18,00 | 6,00 | 6,00 | 1,80 | 5° | • | • | | | | | | | |

| PR | REF. | l | s | b | r | β° | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN25 | TIN32 | ZR10 |  |
|----|--------------|-------|------|-------|------|---------------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | | • | • | | | | | | | | |
| | PR 8 | 8,00 | 4,00 | 12,00 | 1,00 | 30° | • | • | | | | | | | | |
| | PR 10 | 10,00 | 4,00 | 14,00 | 1,50 | 30° | • | • | | | | | | | | |
| | PR 12 | 12,00 | 5,00 | 17,00 | 2,50 | 30° | • | • | | | | | | | | |

| TR | REF. | l | s | b | r | β° | KM15 | PM25 | PM40 | TIN16 | TIN17 | TIN22 | TIN25 | TIN32 | ZR10 |  |
|----|-----------------|-------|------|-------|------|---------------|------|------|------|-------|-------|-------|-------|-------|------|---|
| | | | | | | | • | • | | | | | | | | |
| | TR 16-32 | 16,00 | 6,00 | 21,00 | 5,00 | 32° | • | | | | | | | | | |
| | TR 16-36 | 16,00 | 6,00 | 21,00 | 4,00 | 36° | • | | | | | | | | | |
| | TR 20-32 | 20,00 | 6,00 | 25,00 | 7,50 | 32° | • | | | | | | | | | |
| | TR 20-36 | 20,00 | 6,00 | 25,00 | 5,80 | 36° | • | | | | | | | | | |

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

• Normally available for immediate delivery

◦ Only available in a limited quantity

Inserts

| GISG | REF. | l | s | H | T | w | KM15 | PM25 | TIN25 | TL20 | |
|------|-------------------|-------|------|------|------|------|------|------|-------|------|--|
| | | | | | | | | | | | |
| | GISG05R-L | 17,00 | 2,00 | 7,00 | 2,54 | 0,50 | | | ● | | |
| | GISG07R-L | 17,00 | 2,00 | 7,00 | 2,54 | 0,70 | | | ● | | |
| | GISG08R-L | 17,00 | 2,00 | 7,00 | 2,54 | 0,80 | | | ● | | |
| | GISG08R-L | 17,00 | 2,00 | 7,00 | 2,54 | 0,90 | | | ● | | |
| | GISG11R-L | 17,00 | 2,00 | 7,00 | 6,00 | 1,10 | | | ● | | |
| | GISG13R-L | 17,00 | 2,00 | 7,00 | 6,00 | 1,30 | | | ● | | |
| | GISG16R-L | 17,00 | 2,00 | 7,00 | 6,00 | 1,60 | | | ● | | |
| | GISG185R-L | 17,00 | 2,00 | 7,00 | 6,00 | 1,85 | | | ● | | |

Turning

Automatic lathes

| GIGP | REF. | l | s | H | T | w | KM15 | PM25 | TIN25 | TL20 | |
|------|-----------------|-------|------|------|------|------|------|------|-------|------|--|
| | | | | | | | | | | | |
| | GIGP10RN | 17,00 | 2,00 | 7,00 | 6,00 | 1,00 | | | ● | | |
| | GIGP10RR | 17,00 | 2,00 | 7,00 | 6,00 | 1,00 | | | ● | | |
| | GIGP10LN | 17,00 | 2,00 | 7,00 | 6,00 | 1,00 | | | ● | | |
| | GIGP10LL | 17,00 | 2,00 | 7,00 | 6,00 | 1,00 | | | ● | | |
| | GIGP15RN | 17,00 | 2,00 | 7,00 | 6,00 | 1,50 | | | ● | | |
| | GIGP15RR | 17,00 | 2,00 | 7,00 | 6,00 | 1,50 | | | ● | | |
| | GIGP15LN | 17,00 | 2,00 | 7,00 | 6,00 | 1,50 | | | ● | | |
| | GIGP15LL | 17,00 | 2,00 | 7,00 | 6,00 | 1,50 | | | ● | | |
| | GIGP20RN | 17,00 | 2,00 | 7,00 | 6,00 | 2,00 | | | ● | | |
| | GIGP20RR | 17,00 | 2,00 | 7,00 | 6,00 | 2,00 | | | ● | | |
| | GIGP20LN | 17,00 | 2,00 | 7,00 | 6,00 | 2,00 | | | ● | | |
| | GIGP20LL | 17,00 | 2,00 | 7,00 | 6,00 | 2,00 | | | ● | | |

Ceramic tools

Parting & grooving

| GIGR | REF. | l | s | H | T | w | KM15 | PM25 | TIN25 | TL20 | |
|------|------------------|-------|------|------|------|------|------|------|-------|------|--|
| | | | | | | | | | | | |
| | GIGR10R-L | 17,00 | 2,00 | 7,00 | 6,00 | 1,00 | | | ● | | |
| | GIGR15R-L | 17,00 | 2,00 | 7,00 | 6,00 | 1,50 | | | ● | | |
| | GIGR20R-L | 17,00 | 2,00 | 7,00 | 6,00 | 2,00 | | | ● | | |

Threading

Drills

| GIGW | REF. | l | s | H | R | A° | KM15 | PM25 | TIN25 | TL20 | |
|------|------------------|-------|------|------|------|-----|------|------|-------|------|--|
| | | | | | | | | | | | |
| | GIGW55R-L | 17,00 | 2,00 | 7,00 | 0,10 | 55° | | | ● | | |
| | GIGW60R-L | 17,00 | 2,00 | 7,00 | 0,10 | 60° | | | ● | | |

Cartridges

Brazed tools

| GIST | REF. | l | s | H | T | w | KM15 | PM25 | TIN25 | TL20 | |
|------|-----------------|-------|------|------|------|---|------|------|-------|------|--|
| | | | | | | | | | | | |
| | GIST3R-L | 17,00 | 3,17 | 7,00 | 6,00 | - | | | ● | | |

Milling cutters


Solid carbide

| GISC | REF. | l | s | H | T | w | KM15 | PM25 | TIN25 | TL20 | |
|------|-----------------|-------|------|------|------|---|------|------|-------|------|--|
| | | | | | | | | | | | |
| | GISC3R-L | 17,00 | 3,17 | 7,00 | 6,00 | - | | | ● | | |

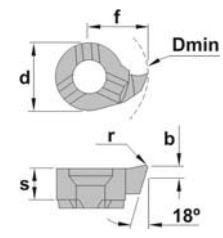
Boring heads

Arbors & adaptors


L



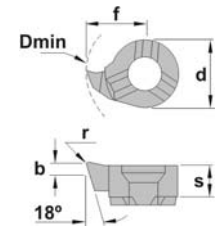
| REF. | Dmin | b | f | s | d | r | KM15 | PM25 | TIN25 | TL20 |
|--------------|------|-----|------|-----|------|-----|------|------|-------|------|
| LS08.1846.02 | 7,8 | 3,3 | 4,65 | 3,5 | 6,0 | 0,2 | | | | • |
| LS11.1855.02 | 9,8 | 3,9 | 5,50 | 4,2 | 8,0 | 0,2 | | | | • |
| LS11.1867.02 | 11,0 | 3,9 | 6,70 | 4,2 | 8,0 | 0,2 | | | | • |
| LS14.1867.02 | 13,8 | 5,0 | 8,70 | 5,1 | 9,0 | 0,2 | | | | • |
| LS16.1897.02 | 15,5 | 5,0 | 9,70 | 5,4 | 11,0 | 0,2 | | | | • |




R



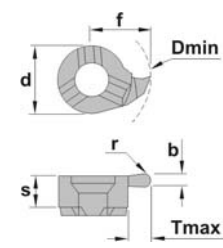
| REF. | Dmin | b | f | s | d | r | KM15 | PM25 | TIN25 | TL20 |
|--------------|------|-----|------|-----|------|-----|------|------|-------|------|
| RS08.1846.02 | 7,8 | 3,3 | 4,65 | 3,5 | 6,0 | 0,2 | | | | • |
| RS11.1855.02 | 9,8 | 3,9 | 5,50 | 4,2 | 8,0 | 0,2 | | | | • |
| RS11.1867.02 | 11,0 | 3,9 | 6,70 | 4,2 | 8,0 | 0,2 | | | | • |
| RS14.1867.02 | 13,8 | 5,0 | 8,70 | 5,1 | 9,0 | 0,2 | | | | • |
| RS16.1897.02 | 15,5 | 5,0 | 9,70 | 5,4 | 11,0 | 0,2 | | | | • |




L



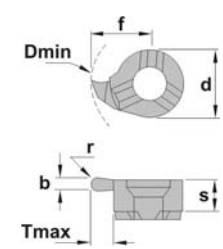
| REF. | Dmin | b | r | f | s | d | tmax | KM15 | PM25 | TIN25 | TL20 |
|-------------|------|-----|-----|------|-----|------|------|------|------|-------|------|
| LS08.008R04 | 8,0 | 0,8 | 0,4 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| LS08.012R06 | 8,0 | 1,2 | 0,6 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| LS08.018R09 | 8,0 | 1,8 | 0,9 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| LS11.008R04 | 11,0 | 0,8 | 0,4 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| LS11.012R06 | 11,0 | 1,2 | 0,6 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| LS11.018R09 | 11,0 | 1,8 | 0,9 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| LS11.020R10 | 11,0 | 2,0 | 1,0 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| LS11.030R15 | 11,0 | 3,0 | 1,5 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| LS14.012R06 | 14,0 | 1,2 | 0,6 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| LS14.018R09 | 14,0 | 1,8 | 0,9 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| LS14.020R10 | 14,0 | 2,0 | 1,0 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| LS14.022R11 | 14,0 | 2,2 | 1,1 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| LS14.030R15 | 14,0 | 3,0 | 1,5 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| LS16.018R09 | 16,0 | 1,8 | 0,9 | 11,0 | 5,4 | 11,0 | 4,3 | | | | • |
| LS16.022R11 | 16,0 | 2,2 | 1,1 | 11,0 | 5,4 | 11,0 | 4,3 | | | | • |
| LS16.030R15 | 16,0 | 3,0 | 1,5 | 11,0 | 5,4 | 11,0 | 4,3 | | | | • |
| LS16.040R20 | 16,0 | 4,0 | 2,0 | 11,0 | 5,4 | 11,0 | 4,3 | | | | • |



R



| REF. | Dmin | b | r | f | s | d | tmax | KM15 | PM25 | TIN25 | TL20 |
|-------------|------|-----|-----|------|-----|------|------|------|------|-------|------|
| RS08.008R04 | 8,0 | 0,8 | 0,4 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS08.012R06 | 8,0 | 1,2 | 0,6 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS08.018R09 | 8,0 | 1,8 | 0,9 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS11.008R04 | 11,0 | 0,8 | 0,4 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS11.012R06 | 11,0 | 1,2 | 0,6 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS11.018R09 | 11,0 | 1,8 | 0,9 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS11.020R10 | 11,0 | 2,0 | 1,0 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS11.030R15 | 11,0 | 3,0 | 1,5 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS14.012R06 | 14,0 | 1,2 | 0,6 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| RS14.018R09 | 14,0 | 1,8 | 0,9 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| RS14.020R10 | 14,0 | 2,0 | 1,0 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| RS14.022R11 | 14,0 | 2,2 | 1,1 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| RS14.030R15 | 14,0 | 3,0 | 1,5 | 9,0 | 4,0 | 9,0 | 4,0 | | | | • |
| RS16.018R09 | 16,0 | 1,8 | 0,9 | 11,0 | 5,4 | 11,0 | 4,3 | | | | • |
| RS16.022R11 | 16,0 | 2,2 | 1,1 | 11,0 | 5,4 | 11,0 | 4,3 | | | | • |
| RS16.030R15 | 16,0 | 3,0 | 1,5 | 11,0 | 5,4 | 11,0 | 4,3 | | | | • |
| RS16.040R20 | 16,0 | 4,0 | 2,0 | 11,0 | 5,4 | 11,0 | 4,3 | | | | • |



- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

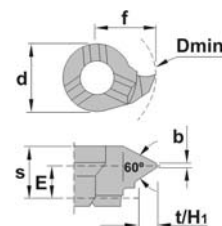
Solid carbide

Boring heads

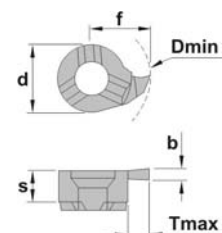
Arbors & adaptors



| L | REF. | Dmin | pitch. | t/H1 | f | E | s | b | d | KM15 | PM25 | TIN25 | TL20 |
|---|--------------|------|----------|------|------|-----|-----|------|------|------|------|-------|------|
| | LS08.0815.01 | 8,0 | 1,5/1,75 | 0,95 | 4,8 | 2,5 | 3,5 | 0,18 | 6,0 | | | | • |
| | LS11.1020.01 | 11,0 | 2,0 | 1,08 | 6,7 | 3,0 | 4,3 | 0,25 | 8,0 | | | | • |
| | LS11.1325.01 | 11,0 | 2,5 | 1,35 | 6,7 | 3,0 | 4,3 | 0,31 | 8,0 | | | | • |
| | LS14.1020.01 | 14,0 | 2,0 | 1,08 | 9,0 | 4,2 | 5,4 | 0,25 | 9,0 | | | | • |
| | LS14.1325.01 | 14,0 | 2,5 | 1,35 | 9,0 | 4,7 | 5,4 | 0,31 | 9,0 | | | | • |
| | LS16.1325.01 | 16,0 | 2,5 | 1,35 | 10,2 | 4,2 | 5,5 | 0,31 | 11,0 | | | | • |
| | LS08.0205.01 | 8,0 | 0,5/0,75 | 0,43 | 4,8 | 2,7 | 3,5 | 0,06 | 6,0 | | | | • |
| | LS08.0510.01 | 8,0 | 1,0/1,25 | 0,70 | 4,8 | 2,7 | 3,5 | 0,12 | 6,0 | | | | • |
| | LS11.0205.01 | 11,0 | 0,5/0,75 | 0,75 | 6,7 | 3,5 | 4,3 | 0,06 | 8,0 | | | | • |
| | LS11.0510.01 | 11,0 | 1,0 | 0,55 | 6,7 | 3,5 | 4,3 | 0,12 | 8,0 | | | | • |
| | LS11.0815.01 | 11,0 | 1,5 | 0,81 | 6,7 | 3,5 | 4,3 | 0,18 | 8,0 | | | | • |
| | LS14.0510.01 | 14,0 | 1,0 | 0,55 | 9,0 | 4,7 | 5,4 | 0,12 | 9,0 | | | | • |
| | LS14.0815.01 | 14,0 | 1,5 | 0,81 | 9,0 | 4,5 | 5,4 | 0,18 | 9,0 | | | | • |
| | LS16.0510.01 | 16,0 | 1,0 | 0,55 | 10,2 | 4,7 | 5,5 | 0,12 | 11,0 | | | | • |
| | LS16.0815.01 | 16,0 | 1,5 | 0,81 | 10,2 | 4,5 | 5,5 | 0,18 | 11,0 | | | | • |
| | LS16.1020.01 | 16,0 | 2,0 | 1,08 | 10,2 | 4,2 | 5,5 | 0,25 | 11,0 | | | | • |



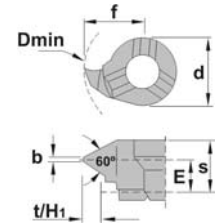
| L | REF. | Dmin | b | f | s | d | tmax | KM15 | PM25 | TIN25 | TL20 |
|---|------------|------|------|------|-----|------|------|------|------|-------|------|
| | LS008.0070 | 8,0 | 0,73 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS008.0080 | 8,0 | 0,83 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS008.0090 | 8,0 | 0,93 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS008.0110 | 8,0 | 1,20 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS008.0130 | 8,0 | 1,40 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS008.0160 | 8,0 | 1,70 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS008.0100 | 8,0 | 1,00 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS008.0150 | 8,0 | 1,50 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS008.0200 | 8,0 | 2,00 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| | LS011.0070 | 11,0 | 0,73 | 6,7 | 4,2 | 8,0 | 1,2 | | | | • |
| | LS011.0080 | 11,0 | 0,83 | 6,7 | 4,2 | 8,0 | 1,3 | | | | • |
| | LS011.0090 | 11,0 | 0,93 | 6,7 | 4,2 | 8,0 | 1,5 | | | | • |
| | LS011.0110 | 11,0 | 1,20 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| | LS011.0130 | 11,0 | 1,40 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| | LS011.0160 | 11,0 | 1,70 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| | LS011.0100 | 11,0 | 1,00 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| | LS011.0150 | 11,0 | 1,50 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| | LS011.0200 | 11,0 | 2,00 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| | LS011.0250 | 11,0 | 2,50 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| | LS011.0300 | 11,0 | 3,00 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| | LS014.0070 | 14,0 | 0,73 | 9,0 | 5,3 | 9,0 | 1,2 | | | | • |
| | LS014.0080 | 14,0 | 0,83 | 9,0 | 5,3 | 9,0 | 1,3 | | | | • |
| | LS014.0090 | 14,0 | 0,93 | 9,0 | 5,3 | 9,0 | 1,5 | | | | • |
| | LS014.0110 | 14,0 | 1,20 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| | LS014.0130 | 14,0 | 1,40 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| | LS014.0160 | 14,0 | 1,70 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| | LS014.0150 | 14,0 | 1,50 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| | LS014.0200 | 14,0 | 2,00 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| | LS014.0250 | 14,0 | 2,50 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| | LS014.0300 | 14,0 | 3,00 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| | LS016.0070 | 16,0 | 0,73 | 10,2 | 5,4 | 11,0 | 1,2 | | | | • |
| | LS016.0080 | 16,0 | 0,83 | 10,2 | 5,4 | 11,0 | 1,3 | | | | • |
| | LS016.0090 | 16,0 | 0,93 | 10,2 | 5,4 | 11,0 | 1,5 | | | | • |
| | LS016.0110 | 16,0 | 1,20 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| | LS016.0130 | 16,0 | 1,40 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| | LS016.0160 | 16,0 | 1,70 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| | LS016.0150 | 16,0 | 1,50 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| | LS016.0200 | 16,0 | 2,00 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| | LS016.0250 | 16,0 | 2,50 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| | LS016.0300 | 16,0 | 3,00 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| | LS016.0350 | 16,0 | 3,50 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| | LS016.0400 | 16,0 | 4,00 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |



R



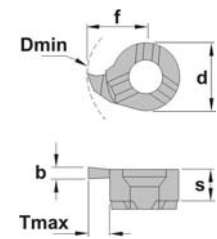
| REF. | Dmin | pitch. | t/H1 | f | E | s | b | d | KM15 | PM25 | TIN25 | TL20 |
|--------------|------|----------|------|------|-----|-----|------|------|------|------|-------|------|
| RS08.0815.01 | 8,0 | 1,5/1,75 | 0,95 | 4,8 | 2,5 | 3,5 | 0,18 | 6,0 | | | | • |
| RS11.1020.01 | 11,0 | 2,0 | 1,08 | 6,7 | 3,0 | 4,3 | 0,25 | 8,0 | | | | • |
| RS11.1325.01 | 11,0 | 2,5 | 1,35 | 6,7 | 3,0 | 4,3 | 0,31 | 8,0 | | | | • |
| RS14.1020.01 | 14,0 | 2,0 | 1,08 | 9,0 | 4,2 | 5,4 | 0,25 | 9,0 | | | | • |
| RS14.1325.01 | 14,0 | 2,5 | 1,35 | 9,0 | 4,7 | 5,4 | 0,31 | 9,0 | | | | • |
| RS16.1325.01 | 16,0 | 2,5 | 1,35 | 10,2 | 4,2 | 5,5 | 0,31 | 11,0 | | | | • |
| RS08.0205.01 | 8,0 | 0,5/0,75 | 0,43 | 4,8 | 2,7 | 3,5 | 0,06 | 6,0 | | | | • |
| RS08.0510.01 | 8,0 | 1,0/1,25 | 0,70 | 4,8 | 2,7 | 3,5 | 0,12 | 6,0 | | | | • |
| RS11.0205.01 | 11,0 | 0,5/0,75 | 0,75 | 6,7 | 3,5 | 4,3 | 0,06 | 8,0 | | | | • |
| RS11.0510.01 | 11,0 | 1,0 | 0,55 | 6,7 | 3,5 | 4,3 | 0,12 | 8,0 | | | | • |
| RS11.0815.01 | 11,0 | 1,5 | 0,81 | 6,7 | 3,5 | 4,3 | 0,18 | 8,0 | | | | • |
| RS14.0510.01 | 14,0 | 1,0 | 0,55 | 9,0 | 4,7 | 5,4 | 0,12 | 9,0 | | | | • |
| RS14.0815.01 | 14,0 | 1,5 | 0,81 | 9,0 | 4,5 | 5,4 | 0,18 | 9,0 | | | | • |
| RS16.0510.01 | 16,0 | 1,0 | 0,55 | 10,2 | 4,7 | 5,5 | 0,12 | 11,0 | | | | • |
| RS16.0815.01 | 16,0 | 1,5 | 0,81 | 10,2 | 4,5 | 5,5 | 0,18 | 11,0 | | | | • |
| RS16.1020.01 | 16,0 | 2,0 | 1,08 | 10,2 | 4,2 | 5,5 | 0,25 | 11,0 | | | | • |



R



| REF. | Dmin | b | f | s | d | tmax | KM15 | PM25 | TIN25 | TL20 |
|------------|------|------|------|-----|------|------|------|------|-------|------|
| RS008.0070 | 8,0 | 0,73 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS008.0080 | 8,0 | 0,83 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS008.0090 | 8,0 | 0,93 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS008.0110 | 8,0 | 1,20 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS008.0130 | 8,0 | 1,40 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS008.0160 | 8,0 | 1,70 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS008.0100 | 8,0 | 1,00 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS008.0150 | 8,0 | 1,50 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS008.0200 | 8,0 | 2,00 | 4,8 | 3,3 | 6,0 | 1,0 | | | | • |
| RS011.0070 | 11,0 | 0,73 | 6,7 | 4,2 | 8,0 | 1,2 | | | | • |
| RS011.0080 | 11,0 | 0,83 | 6,7 | 4,2 | 8,0 | 1,3 | | | | • |
| RS011.0090 | 11,0 | 0,93 | 6,7 | 4,2 | 8,0 | 1,5 | | | | • |
| RS011.0110 | 11,0 | 1,20 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS011.0130 | 11,0 | 1,40 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS011.0160 | 11,0 | 1,70 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS011.0100 | 11,0 | 1,00 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS011.0150 | 11,0 | 1,50 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS011.0200 | 11,0 | 2,00 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS011.0250 | 11,0 | 2,50 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS011.0300 | 11,0 | 3,00 | 6,7 | 4,2 | 8,0 | 2,3 | | | | • |
| RS014.0070 | 14,0 | 0,73 | 9,0 | 5,3 | 9,0 | 1,2 | | | | • |
| RS014.0080 | 14,0 | 0,83 | 9,0 | 5,3 | 9,0 | 1,3 | | | | • |
| RS014.0090 | 14,0 | 0,93 | 9,0 | 5,3 | 9,0 | 1,5 | | | | • |
| RS014.0110 | 14,0 | 1,20 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| RS014.0130 | 14,0 | 1,40 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| RS014.0160 | 14,0 | 1,70 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| RS014.0150 | 14,0 | 1,50 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| RS014.0200 | 14,0 | 2,00 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| RS014.0250 | 14,0 | 2,50 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| RS014.0300 | 14,0 | 3,00 | 9,0 | 5,3 | 9,0 | 4,0 | | | | • |
| RS016.0070 | 16,0 | 0,73 | 10,2 | 5,4 | 11,0 | 1,2 | | | | • |
| RS016.0080 | 16,0 | 0,83 | 10,2 | 5,4 | 11,0 | 1,3 | | | | • |
| RS016.0090 | 16,0 | 0,93 | 10,2 | 5,4 | 11,0 | 1,5 | | | | • |
| RS016.0110 | 16,0 | 1,20 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| RS016.0130 | 16,0 | 1,40 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| RS016.0160 | 16,0 | 1,70 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| RS016.0150 | 16,0 | 1,50 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| RS016.0200 | 16,0 | 2,00 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| RS016.0250 | 16,0 | 2,50 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| RS016.0300 | 16,0 | 3,00 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| RS016.0350 | 16,0 | 3,50 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |
| RS016.0400 | 16,0 | 4,00 | 10,2 | 5,4 | 11,0 | 4,3 | | | | • |



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

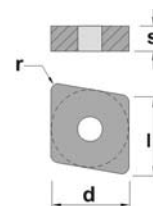
Boring heads

Arbors & adaptors

CNGA



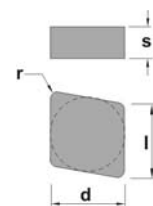
| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|--------------------|-------|------|-------|-----|-----|-----|-----|-----|
| CNGA 120404 | 12,90 | 4,76 | 12,70 | 0,4 | | | • | • |
| CNGA 120408 | 12,90 | 4,76 | 12,70 | 0,8 | • | | • | • |
| CNGA 120412 | 12,90 | 4,76 | 12,70 | 1,2 | • | | • | • |
| CNGA 120416 | 12,90 | 4,76 | 12,70 | 1,6 | | | | |
| CNGA 160616 | 16,10 | 6,35 | 15,87 | 1,6 | | | | |



CNGN



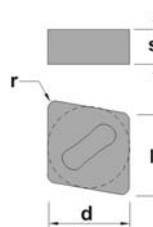
| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|--------------------|-------|------|-------|-----|-----|-----|-----|-----|
| CNGN 120404 | 12,90 | 4,76 | 12,70 | 0,4 | | | | |
| CNGN 120408 | 12,90 | 4,76 | 12,70 | 0,8 | • | | • | |
| CNGN 120412 | 12,90 | 4,76 | 12,70 | 1,2 | • | | • | |
| CNGN 120416 | 12,90 | 4,76 | 12,70 | 1,6 | • | | | |
| CNGN 120420 | 12,90 | 4,76 | 12,70 | 2,0 | | | | |
| CNGN 120704 | 12,90 | 7,94 | 12,70 | 0,4 | | | | |
| CNGN 120708 | 12,90 | 7,94 | 12,70 | 0,8 | • | | • | |
| CNGN 120712 | 12,90 | 7,94 | 12,70 | 1,2 | • | | • | |
| CNGN 120716 | 12,90 | 7,94 | 12,70 | 1,6 | • | | | |
| CNGN 120720 | 12,90 | 7,94 | 12,70 | 2,0 | | | | |
| CNGN 160708 | 16,10 | 7,94 | 15,87 | 0,8 | | | | |
| CNGN 160712 | 16,10 | 7,94 | 15,87 | 1,2 | | | | |
| CNGN 160716 | 16,10 | 7,94 | 15,87 | 1,6 | | | | |
| CNGN 160720 | 16,10 | 7,94 | 15,87 | 2,0 | | | | |



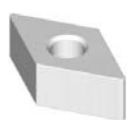
CNGX



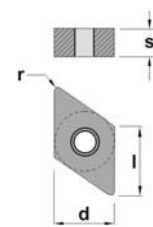
| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|--------------------|-------|------|-------|-----|-----|-----|-----|-----|
| CNGX 120708 | 12,90 | 7,94 | 12,70 | 0,8 | • | | | |
| CNGX 120712 | 12,90 | 7,94 | 12,70 | 1,2 | • | | | |
| CNGX 120716 | 12,90 | 7,94 | 12,70 | 1,6 | ○ | | | |
| CNGX 160708 | 16,10 | 7,94 | 15,87 | 0,8 | ○ | | | |
| CNGX 160712 | 16,10 | 7,94 | 15,87 | 1,2 | ○ | | | |
| CNGX 160716 | 16,10 | 7,94 | 15,87 | 1,6 | ○ | | | |



DNGA



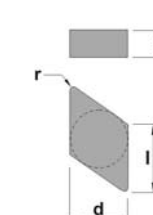
| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|--------------------|-------|------|-------|-----|-----|-----|-----|-----|
| DNGA 150404 | 12,90 | 4,76 | 12,70 | 0,4 | | | | |
| DNGA 150408 | 12,90 | 4,76 | 12,70 | 0,8 | | • | | • |
| DNGA 150412 | 12,90 | 4,76 | 12,70 | 1,2 | | • | • | • |
| DNGA 150416 | 12,90 | 4,76 | 12,70 | 1,6 | | | | |



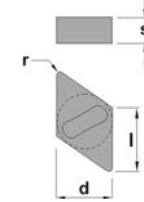
DNGN



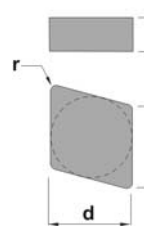
| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|--------------------|-------|------|-------|-----|-----|-----|-----|-----|
| DNGN 150404 | 12,90 | 4,76 | 12,70 | 0,4 | | | | |
| DNGN 150408 | 12,90 | 4,76 | 12,70 | 0,8 | | | | |
| DNGN 150412 | 12,90 | 4,76 | 12,70 | 1,2 | | | | |
| DNGN 150416 | 12,90 | 4,76 | 12,70 | 1,6 | | | | |
| DNGN 150704 | 15,50 | 7,94 | 12,70 | 0,4 | | | | |
| DNGN 150708 | 15,50 | 7,94 | 12,70 | 0,8 | | | • | |
| DNGN 150712 | 15,50 | 7,94 | 12,70 | 1,2 | | | • | |
| DNGN 150716 | 15,50 | 7,94 | 12,70 | 1,6 | | | • | |
| DNGN 150720 | 15,50 | 7,94 | 12,70 | 2,0 | | | | |



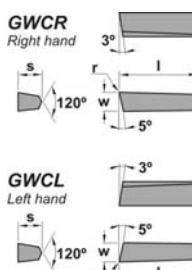
| DNGX | REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|------|-------------|-------|------|-------|-----|-----|-----|-----|-----|
| | DNGX 120708 | 12,90 | 7,94 | 10,70 | 0,8 | ○ | | | |
| | DNGX 120712 | 12,90 | 7,94 | 10,70 | 1,2 | ○ | | | |
| | DNGX 120716 | 12,90 | 7,94 | 10,70 | 1,6 | ○ | | | |
| | DNGX 150708 | 15,50 | 7,94 | 12,70 | 0,8 | ● | | | |
| | DNGX 150712 | 15,50 | 7,94 | 12,70 | 1,2 | ● | | | |
| | DNGX 150716 | 15,50 | 7,94 | 12,70 | 1,6 | ○ | | | |



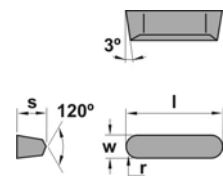
| ENGN | REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|------|-------------|-------|------|-------|-----|-----|-----|-----|-----|
| | ENGN 130404 | 13,15 | 4,76 | 12,70 | 0,4 | | | | |
| | ENGN 130408 | 13,15 | 4,76 | 12,70 | 0,8 | | | | |
| | ENGN 130412 | 13,15 | 4,76 | 12,70 | 1,2 | | | | |
| | ENGN 130416 | 13,15 | 4,76 | 12,70 | 1,6 | | | | |
| | ENGN 130420 | 13,15 | 4,76 | 12,70 | 2,0 | | | | |
| | ENGN 130704 | 13,15 | 7,94 | 12,70 | 0,4 | | | | |
| | ENGN 130708 | 13,15 | 7,94 | 12,70 | 0,8 | | | ● | |
| | ENGN 130712 | 13,15 | 7,94 | 12,70 | 1,2 | | | ● | |
| | ENGN 130716 | 13,15 | 7,94 | 12,70 | 1,6 | | | ● | |
| | ENGN 130720 | 13,15 | 7,94 | 12,70 | 2,0 | | | ● | |



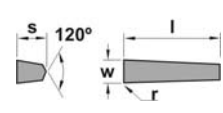
| GWC R/L | REF. | l | s | w | r | CX1 | CC1 | CC2 | CC4 |
|---------|---------|-------|------|------|-----|-----|-----|-----|-----|
| | GWC 06R | 15,00 | 7,50 | 6,00 | 0,6 | | ○ | | |
| | GWC 08R | 15,00 | 7,50 | 8,00 | 0,6 | | ○ | | |
| | GWC 06L | 15,00 | 7,50 | 6,00 | 0,6 | | ○ | | |
| | GWC 08L | 15,00 | 7,50 | 8,00 | 0,6 | | ○ | | |



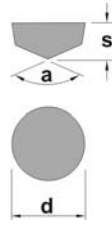
| GWF | REF. | l | s | w | r | CX1 | CC1 | CC2 | CC4 |
|-----|----------|-------|------|-------|-----|-----|-----|-----|-----|
| | GWF 04 M | 12,00 | 5,00 | 4,00 | 2,0 | | ○ | | |
| | GWF 05 M | 12,00 | 5,00 | 5,00 | 2,5 | | ○ | | |
| | GWF 06 M | 15,00 | 7,50 | 6,00 | 3,0 | | ○ | | |
| | GWF 07 | 15,00 | 7,50 | 7,00 | 3,5 | | ○ | | |
| | GWF 08 | 15,00 | 7,50 | 8,00 | 4,0 | | ○ | | |
| | GWF 10 | 15,00 | 7,50 | 10,00 | 5,0 | | ○ | | |



| GWG | REF. | l | s | w | r | CX1 | CC1 | CC2 | CC4 |
|-----|----------|-------|------|-------|-----|-----|-----|-----|-----|
| | GWG 04 M | 12,00 | 5,00 | 4,00 | 0,5 | | ○ | | |
| | GWG 05 M | 12,00 | 5,00 | 5,00 | 0,8 | | ○ | | |
| | GWG 06 M | 15,00 | 7,50 | 6,00 | 0,8 | | ○ | | |
| | GWG 07 | 15,00 | 7,50 | 7,00 | 0,8 | | ○ | | |
| | GWG 08 | 15,00 | 7,50 | 8,00 | 0,8 | | ○ | | |
| | GWG 10 | 15,00 | 7,50 | 10,00 | 0,8 | | ○ | | |



| RCGX | REF. | s | d | a | CX1 | CC1 | CC2 | CC4 |
|-------------|-------------|-------|-------|------|-----|-----|-----|-----|
| | RCGX 060400 | 4,76 | 6,35 | 120° | | | | |
| | RCGX 060600 | 6,35 | 6,35 | 120° | | | | |
| | RCGX 060700 | 7,94 | 6,35 | 120° | | | | |
| | RCGX 090700 | 7,94 | 9,52 | 120° | | | | |
| | RCGX 120700 | 7,94 | 12,70 | 120° | | | | |
| | RCGX 151000 | 10,00 | 15,87 | 120° | | | | |
| | RCGX 191000 | 10,00 | 19,05 | 120° | | | | |
| RCGX 251200 | 12,00 | 25,40 | 140° | | | | | |



- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

● Normally available for immediate delivery

○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

RNGN

| REF. | s | d | CX1 | CC1 | CC2 | CC4 |
|-------------|------|-------|-----|-----|-----|-----|
| RNGN 120400 | 4,76 | 12,70 | • | | • | |
| RNGN 120700 | 7,94 | 12,70 | | | • | |

SNGA

| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|-------------|-------|------|-------|-----|-----|-----|-----|-----|
| SNGA 120408 | 12,70 | 4,76 | 12,70 | 0,8 | • | | | |
| SNGA 120412 | 12,70 | 4,76 | 12,70 | 1,2 | • | | | |
| SNGA 120416 | 12,70 | 4,76 | 12,70 | 1,6 | • | | | |

SNGN

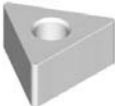
| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|-------------|-------|------|-------|-----|-----|-----|-----|-----|
| SNGN 120404 | 12,70 | 4,76 | 12,70 | 0,4 | | | • | |
| SNGN 120408 | 12,70 | 4,76 | 12,70 | 0,8 | • | | • | |
| SNGN 120412 | 12,70 | 4,76 | 12,70 | 1,2 | • | | • | |
| SNGN 120416 | 12,70 | 4,76 | 12,70 | 1,6 | • | | • | |
| SNGN 120420 | 12,70 | 4,76 | 12,70 | 2,0 | • | | • | |
| SNGN 120424 | 12,70 | 4,76 | 12,70 | 2,4 | • | | • | |
| SNGN 120432 | 12,70 | 4,76 | 12,70 | 3,2 | | | | |
| SNGN 120708 | 12,70 | 7,94 | 12,70 | 0,8 | | | • | |
| SNGN 120712 | 12,70 | 7,94 | 12,70 | 1,2 | | | ○ | |
| SNGN 120716 | 12,70 | 7,94 | 12,70 | 1,6 | | | • | |
| SNGN 120720 | 12,70 | 7,94 | 12,70 | 2,0 | | | • | |
| SNGN 120724 | 12,70 | 7,94 | 12,70 | 2,4 | | | | |
| SNGN 120732 | 12,70 | 7,94 | 12,70 | 3,2 | | | | |
| SNGN 150708 | 15,87 | 7,94 | 15,87 | 0,8 | | | | |
| SNGN 150712 | 15,87 | 7,94 | 15,87 | 1,2 | | | | |
| SNGN 150716 | 15,87 | 7,94 | 15,87 | 1,6 | | | | |
| SNGN 150720 | 15,87 | 7,94 | 15,87 | 2,0 | | | | |

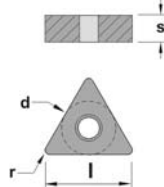
SNGX


| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|-------------|-------|------|-------|-----|-----|-----|-----|-----|
| SNGX 120708 | 12,70 | 7,94 | 12,70 | 0,8 | • | | | |
| SNGX 120712 | 12,70 | 7,94 | 12,70 | 1,2 | • | | | |
| SNGX 120716 | 12,70 | 7,94 | 12,70 | 1,6 | ○ | | | |
| SNGX 150708 | 15,87 | 7,94 | 15,87 | 0,8 | ○ | | | |
| SNGX 150712 | 15,87 | 7,94 | 15,87 | 1,2 | ○ | | | |
| SNGX 150716 | 15,87 | 7,94 | 15,87 | 1,6 | ○ | | | |

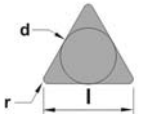
SNKN


| REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|-------------|-------|------|-------|---|-----|-----|-----|-----|
| SNKN 1204EN | 12,70 | 4,76 | 12,70 | - | | | | |
| SNKN 1504EN | 15,87 | 4,76 | 15,87 | - | | | | |

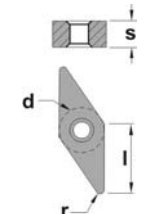
| TNGA | REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|---|-------------|------|------|------|-----|-----|-----|-----|-----|
|  | TNGA 160404 | 9,52 | 4,76 | 9,52 | 0,4 | | | | • |
| | TNGA 160408 | 9,52 | 4,76 | 9,52 | 0,8 | • | | • | • |
| | TNGA 160412 | 9,52 | 4,76 | 9,52 | 1,2 | • | | • | |
| | TNGA 160416 | 9,52 | 4,76 | 9,52 | 1,6 | | | | |




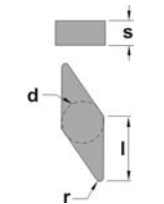
| TNGN | REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|---|-------------|------|------|------|-----|-----|-----|-----|-----|
|  | TNGN 160404 | 9,52 | 4,76 | 9,52 | 0,4 | | | | |
| | TNGN 160408 | 9,52 | 4,76 | 9,52 | 0,8 | • | | • | |
| | TNGN 160412 | 9,52 | 4,76 | 9,52 | 1,2 | • | | • | |
| | TNGN 160416 | 9,52 | 4,76 | 9,52 | 1,6 | • | | • | |
| | TNGN 160704 | 9,52 | 7,94 | 9,52 | 0,4 | | | | |
| | TNGN 160708 | 9,52 | 7,94 | 9,52 | 0,8 | | | • | |
| | TNGN 160712 | 9,52 | 7,94 | 9,52 | 1,2 | | | • | |
| | TNGN 160716 | 9,52 | 7,94 | 9,52 | 1,6 | | | • | |
| | TNGN 160720 | 9,52 | 7,94 | 9,52 | 2,0 | | | | |
| | TNGN 160724 | 9,52 | 7,94 | 9,52 | 2,4 | | | • | |

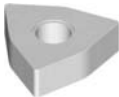


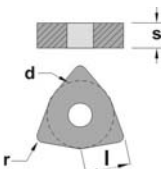
| VNGA | REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|--|-------------|-------|------|------|-----|-----|-----|-----|-----|
|  | VNGA 160404 | 16,50 | 4,76 | 9,52 | 0,4 | | | • | |
| | VNGA 160408 | 16,50 | 4,76 | 9,52 | 0,8 | | | • | |
| | VNGA 160412 | 16,50 | 4,76 | 9,52 | 1,2 | | | • | |




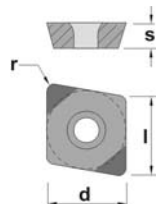
| VNGN | REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|---|-------------|-------|------|------|-----|-----|-----|-----|-----|
|  | VNGN 160404 | 16,50 | 4,76 | 9,52 | 0,4 | | | | |
| | VNGN 160408 | 16,50 | 4,76 | 9,52 | 0,8 | | | | |
| | VNGN 160412 | 16,50 | 4,76 | 9,52 | 1,2 | | | | |



| WNGA | REF. | l | s | d | r | CX1 | CC1 | CC2 | CC4 |
|---|-------------|------|------|-------|-----|-----|-----|-----|-----|
|  | WNGA 080404 | 8,14 | 4,76 | 12,70 | 0,4 | | | | |
| | WNGA 080408 | 8,14 | 4,76 | 12,70 | 0,8 | • | | | |
| | WNGA 080412 | 8,14 | 4,76 | 12,70 | 1,2 | • | | | |



| CCMW | REF. | l | s | d | r | PCBN | PCD |
|---|-------------|------|------|------|-----|------|-----|
|  | CCMW 060202 | 6,50 | 2,38 | 6,35 | 0,2 | • | • |
| | CCMW 060204 | 6,50 | 2,38 | 6,35 | 0,4 | • | • |
| | CCMW 09T304 | 9,70 | 3,97 | 9,52 | 0,4 | • | • |
| | CCMW 09T308 | 9,70 | 3,97 | 9,52 | 0,8 | • | • |



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

• Normally available for immediate delivery

◦ Only available in a limited quantity

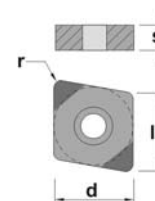
Inserts

Turning

CNGA



| REF. | l | s | d | r | PCBN | PCD |
|--------------------|-------|------|-------|-----|------|-----|
| CNGA 120404 | 12,90 | 4,76 | 12,70 | 0,4 | ● | |
| CNGA 120408 | 12,90 | 4,76 | 12,70 | 0,8 | ● | |
| CNGA 120412 | 12,90 | 4,76 | 12,70 | 1,2 | ○ | |

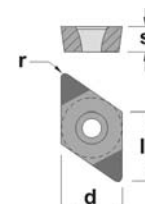


Automatic lathes

DCMW



| REF. | l | s | d | r | PCBN | PCD |
|--------------------|-------|------|------|-----|------|-----|
| DCMW 070202 | 7,80 | 2,38 | 6,35 | 0,2 | ○ | ○ |
| DCMW 070204 | 7,80 | 2,38 | 6,35 | 0,4 | ● | ○ |
| DCMW 11T302 | 11,60 | 3,97 | 9,52 | 0,2 | ○ | ○ |
| DCMW 11T304 | 11,60 | 3,97 | 9,52 | 0,4 | ● | ○ |
| DCMW 11T308 | 11,60 | 3,97 | 9,52 | 0,8 | ● | ○ |



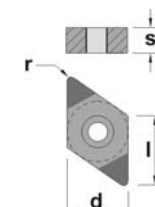
Ceramic tools

Parting & grooving

DNGA



| REF. | l | s | d | r | PCBN | PCD |
|--------------------|-------|------|-------|-----|------|-----|
| DNGA 150404 | 15,50 | 4,76 | 12,70 | 0,4 | ● | |
| DNGA 150408 | 15,50 | 4,76 | 12,70 | 0,8 | ● | |
| DNGA 150412 | 15,50 | 4,76 | 12,70 | 1,2 | ○ | |



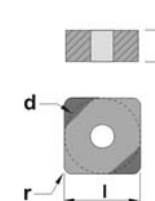
Threading

Drills

SNGA



| REF. | l | s | d | r | PCBN | PCD |
|--------------------|-------|------|-------|-----|------|-----|
| SNGA 120404 | 12,70 | 4,76 | 12,70 | 0,4 | ○ | |
| SNGA 120408 | 12,70 | 4,76 | 12,70 | 0,8 | ○ | |
| SNGA 120412 | 12,70 | 4,76 | 12,70 | 1,2 | ○ | |



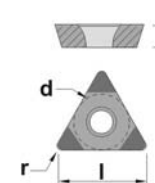
Cartridges

Brazed tools

TCMW



| REF. | l | s | d | r | PCBN | PCD |
|--------------------|-------|------|------|-----|------|-----|
| TCMW 090204 | 9,00 | 2,38 | 5,56 | 0,4 | | ○ |
| TCMW 110204 | 11,00 | 2,38 | 6,35 | 0,4 | ● | ○ |
| TCMW 16T304 | 16,50 | 3,97 | 9,52 | 0,4 | ● | ○ |
| TCMW 16T308 | 16,50 | 3,97 | 9,52 | 0,8 | ○ | ○ |



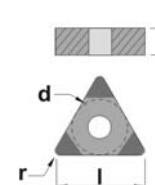
Milling cutters

Solid carbide

TNGA




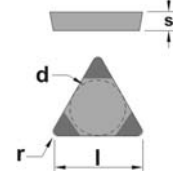
| REF. | l | s | d | r | PCBN | PCD |
|--------------------|-------|------|------|-----|------|-----|
| TNGA 160404 | 16,50 | 4,76 | 9,52 | 0,4 | ● | |
| TNGA 160408 | 16,50 | 4,76 | 9,52 | 0,8 | ● | |
| TNGA 160412 | 16,50 | 4,76 | 9,52 | 1,2 | ○ | |



Boring heads

Arbors & adaptors

| TPMN | REF. | l | s | d | r | PCBN | PCD |
|---|-------------|-------|------|------|-----|------|-----|
|  | TPMN 110304 | 11,00 | 3,18 | 6,35 | 0,4 | • | |
| | TPMN 110308 | 11,00 | 3,18 | 6,35 | 0,8 | • | |
| | TPMN 160304 | 16,50 | 3,18 | 9,52 | 0,4 | • | |
| | TPMN 160308 | 16,50 | 3,18 | 9,52 | 0,8 | • | |
| | TPMN 160312 | 16,50 | 3,18 | 9,52 | 1,2 | • | |



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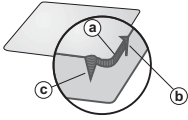
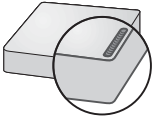
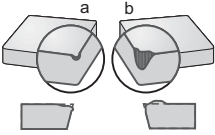
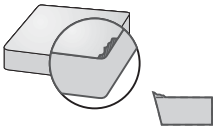
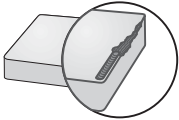
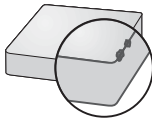
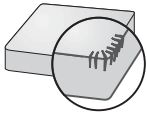
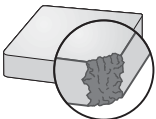
Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

Turning insert wear and tool life

| | Problem | Cause and Remedy |
|--|---|---|
| <p>Flank and notch wear</p>  | <ul style="list-style-type: none"> ★ Rapid flank wear causing poor surface finish or out of tolerance (a). ★ Notch wear causing poor surface finish and risk of | <ul style="list-style-type: none"> ☆ A too high cutting speed or insufficient wear resistance (a). ☆ Oxidation or excessive attrition wear caused by a hard surface (b,c) <p>Reduce the cutting speed. Select a more wear resistant grade. Select an Al₂O₃ coated grade for steel machining.</p> |
| <p>Crater wear</p>  | <ul style="list-style-type: none"> ★ Excessive crater wear causing a weakened edge. Cutting edge break through on the trailing edge causes poor surface finish. | <ul style="list-style-type: none"> ☆ Diffusion wear due to too high cutting temperatures on the rake face. <p>Select an Al₂O₃ coated grade Select a positive insert geometry.</p> |
| <p>Plastic deformation</p>  | <ul style="list-style-type: none"> ★ Plastic deformation (edge depression (a) or flank impression (b)) leading to poor chip control and poor surface finish. Risk of excessive flank wear leading. | <ul style="list-style-type: none"> ☆ A too high cutting temperature in combination with a high pressure. <p>Select a harder grade with better resistance to plastic deformation. (a) Reduce cutting speed.</p> |
| <p>Built-up edge</p>  | <ul style="list-style-type: none"> ★ Built-up edge (B.U.E.) causing poor surface finish and cutting edge chattering when the B.U.E. is torn away. | <ul style="list-style-type: none"> ☆ Workpiece material is welded to the insert due to: <ul style="list-style-type: none"> -low cutting speed. -relative cutting geometry. -"sticky" material, e.g. certain stainless steels and pure aluminium. <p>Increase cutting speed. Select a positive geometry. Increase cutting speed drastically. If tool life turns out to be short, apply.</p> |
| <p>Chip hammering</p>  | <ul style="list-style-type: none"> ★ The part of the cutting edge not in cut is damaged through chip hammering. Both the top side and the support for the insert, can be damaged. | <ul style="list-style-type: none"> ☆ The chips are of an excessive length and are deflected against the cutting edge. <p>Change the feed slightly. Select an alternative insert geometry.</p> |
| <p>Frittering</p>  | <ul style="list-style-type: none"> ★ Small cutting edge fractures (frittling) causing poor surface finish and excessive flank wear. | <ul style="list-style-type: none"> ☆ Grade too brittle. ☆ Insert geometry too weak. ☆ Built-up edge. <p>Select a tougher grade. Select an insert with a stronger geometry. Increase cutting speed or select a positive geometry.</p> |
| <p>Thermal cracks</p>  | <ul style="list-style-type: none"> ★ Small cracks perpendicular to the cutting edge causing frittling and poor surface finish. | <ul style="list-style-type: none"> ☆ Thermal cracks due to temperature variations caused by: <ul style="list-style-type: none"> -Intermittent machining. -Varying coolant supply. <p>Select a tougher grade with better resistant to thermal shocks.</p> |
| <p>Insert breakage</p>  | <ul style="list-style-type: none"> ★ Insert breakage that damages not only the insert but also the shim and workpiece. | <ul style="list-style-type: none"> ☆ Grade too brittle. ☆ Excessive load on the insert. ☆ Insert geometry too weak. ☆ Insert size is too small. <p>Select a tougher grade. Reduce the feed and/or the depth of the cut. Select a stronger geometry, preferably a single sided insert. Select a thicker/larger insert.</p> |



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