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# FreeTurn

The revolution in turning

# SPECIAL SELECTION

TEAM CUTTING TOOLS



KOMET



klenk

CERATIZIT is a high-tech engineering group specialised in tooling and hard material technologies.

**Tooling the Future**

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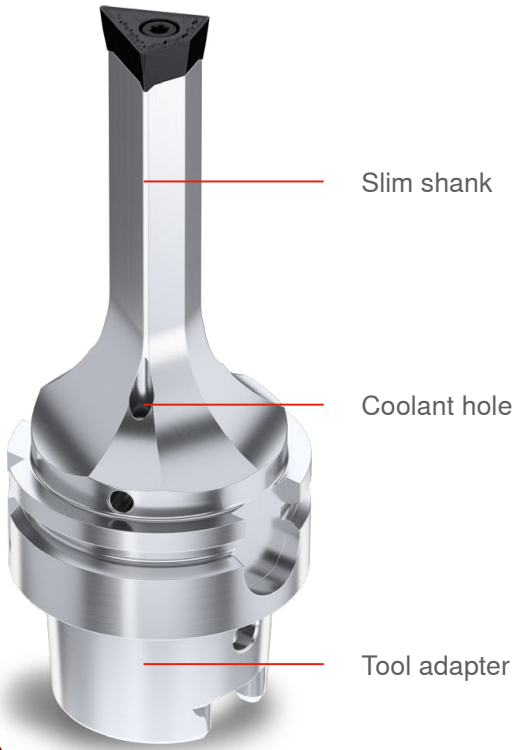
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The new Team Cutting Tools  
UP2DATE Catalogue

FreeTurn

The revolution in turning is  
now in full swing!



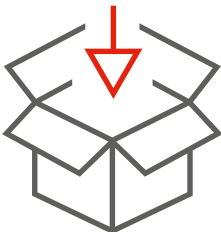
**Conventional production**  
Conventional production time for a single  
part with six different tools

= **3:32 minutes**

**Production with FreeTurn**  
Production time for a single part  
with the HDT

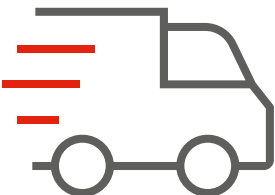
= **2:50 minutes**

**25 %**  
Time savings



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next day delivery, or €10 back\*

\* Orders over €50.00 are FREE delivery, for orders under €50 a delivery charge of €5 will be applied. If your order is not delivered by the guaranteed delivery time, then €10 will be credited to your account upon request. A small number of postcodes and heavy shipments over 70kgs are excluded. A possible surcharge may be applied for heavy shipments.





# TEAM CUTTING TOOLS

## YOUR FULL-RANGE FOR THE MACHINING INDUSTRY

The Cutting Tools team is creating a new, leading player in the field of machining technology. In the future, partners and customers will benefit from a highly attractive, holistic service promise: one of the largest ranges on the market. Enormously efficient logistics. Leading expertise in future technologies from digitization to nanotechnology. Deep industry expertise based on many years of experience. All under one roof.



### SPECIALIST FOR INDEXABLE INSERT TOOLS FOR TURNING, MILLING AND GROOVING

The product brand CERATIZIT stands for high-quality indexable insert tools. The products are characterized by their high quality and contain the DNA of many years of experience in the development and production of carbide tools.

#### Product range

- ▲ Turning Tools
- ▲ EcoCut Multifunction Tools
- ▲ Grooving Tools
- ▲ Milling Tools with Indexable Inserts
- ▲ Tools with high hardness grades

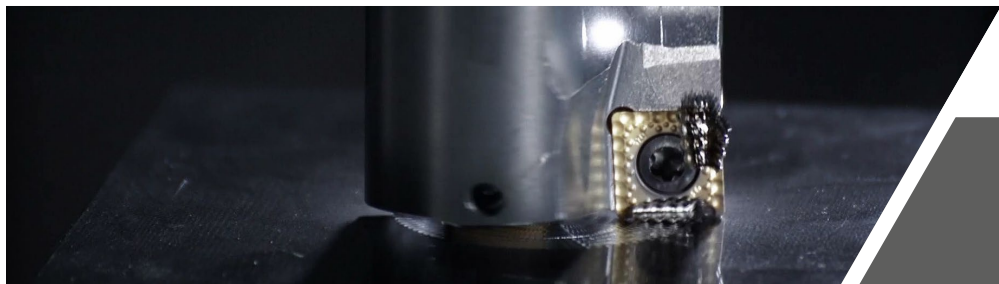


### EXPERTS FOR ROTATING TOOLS, TOOL HOLDERS AND CLAMPING SOLUTIONS

WNT is synonymous with product diversity: solid carbide and HSS rotating tools, tool holders and efficient workholding solutions are all part of this brand.

#### Product range

- ▲ HSS Drilling
- ▲ Solid Carbide Drilling
- ▲ Taps and Thread Formers
- ▲ Circular and Thread Milling
- ▲ Thread Turning
- ▲ Miniature Turning Tools
- ▲ HSS Milling Cutters
- ▲ Solid Carbide Milling Cutters
- ▲ Adapters
- ▲ Workpiece Clamping



### THE QUALITY LABEL FOR EFFICIENT BORE PRODUCTION

High-precision drilling, reaming, countersinking and boring is a matter of expertise: efficient tooling solutions for drilling and mechatronic tools are therefore part of the KOMET brand name.

#### Product range

- ▲ Indexable Insert Drilling
- ▲ Reaming and Countersinking
- ▲ Spindle Tooling
- ▲ Actuating Tools



### CUTTING TOOLS FOR THE AEROSPACE INDUSTRY

Solid carbide drills specially developed for the aerospace industry bear the product name KLENK. The highly specialized products are specifically designed for machining lightweight materials.

#### Product range

- ▲ Solid Carbide Drilling for the Aerospace Industry

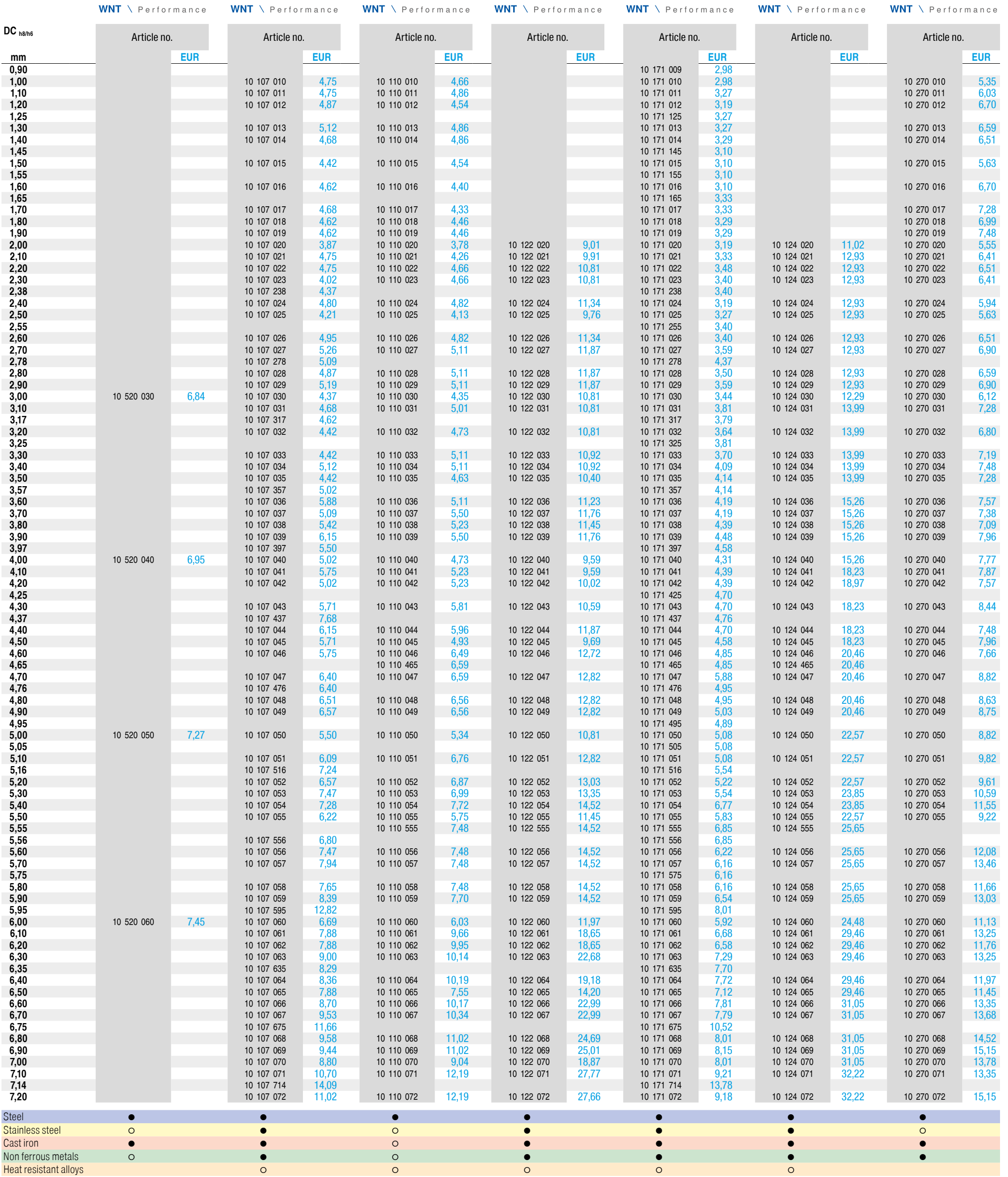
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Speed  
Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
 $D$  = Diameter



NC spot drills, factory standard and high-performance twist drills

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |       |             |       |             |       |             |        |             |       |             |       |             |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|-------------|-------|-------------|-------|-------------|--------|-------------|-------|-------------|-------|-------------|-------|
| <div><div>NC-A</div><div><div></div><div></div><div></div></div></div> <div><div>UNI</div><div>TiN</div><div>≤ 3xD</div><div>DIN 1897</div></div> <div><div></div><div></div><div></div></div> <div><div>WT</div><div>TiN</div><div>≤ 3xD</div><div>DIN 1897</div></div> <div><div></div><div></div><div></div></div> <div><div>VX</div><div>TiN</div><div>≤ 3xD</div><div>≈DIN 1897</div></div> <div><div></div><div></div><div></div></div> <div><div>UNI</div><div>TiN</div><div>≤ 5xD</div><div>DIN 338</div></div> <div><div></div><div></div><div></div></div> <div><div>VX</div><div>TiN</div><div>≤ 5xD</div><div>≈DIN 338</div></div> <div><div></div><div></div><div></div></div> <div><div>UNI</div><div>TiN</div><div>≤ 10xD</div><div>DIN 340</div></div> <div><div></div><div></div><div></div></div> |             |       |             |       |             |       |             |        |             |       |             |       |             |       |
| <div>WNT \ Performance</div> <div>WNT \ Performance</div> <div>WNT \ Performance</div> <div>WNT \ Performance</div> <div>WNT \ Performance</div> <div>WNT \ Performance</div> <div>WNT \ Performance</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |       |             |       |             |       |             |        |             |       |             |       |             |       |
| DC <small>h8/h6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Article no. |       | Article no. |       | Article no. |       | Article no. |        | Article no. |       | Article no. |       | Article no. |       |
| mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | EUR         |       | EUR         |       | EUR         |       | EUR         |        | EUR         |       | EUR         |       | EUR         |       |
| 7,30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10 520 080  | 12,50 | 10 107 073  | 11,76 | 10 110 073  | 12,29 | 10 122 073  | 27,66  | 10 171 073  | 9,53  | 10 124 073  | 32,22 | 10 270 073  | 15,79 |
| 7,40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 074  | 11,13 | 10 110 074  | 12,29 | 10 122 074  | 27,77  | 10 171 074  | 9,32  | 10 124 074  | 32,22 | 10 270 074  | 16,42 |
| 7,45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       |             |       |             |       | 10 122 745  | 27,77  | 10 171 745  | 8,49  |             |       |             |       |
| 7,50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 075  | 9,17  | 10 110 075  | 9,46  | 10 122 075  | 19,93  | 10 171 075  | 8,49  | 10 124 075  | 32,22 | 10 270 075  | 16,64 |
| 7,55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       |             |       |             |       |             |        |             |       | 10 124 755  | 33,70 |             |       |
| 7,60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 076  | 14,31 | 10 110 076  | 13,68 | 10 122 076  | 27,87  | 10 171 076  | 10,30 | 10 124 076  | 33,70 | 10 270 076  | 17,91 |
| 7,70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 077  | 15,48 | 10 110 077  | 13,68 | 10 122 077  | 31,05  | 10 171 077  | 11,76 | 10 124 077  | 33,70 | 10 270 077  | 17,07 |
| 7,80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 078  | 11,87 | 10 110 078  | 13,78 | 10 122 078  | 31,05  | 10 171 078  | 10,05 | 10 124 078  | 33,70 | 10 270 078  | 18,65 |
| 7,90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 079  | 16,54 | 10 110 079  | 13,78 | 10 122 079  | 31,05  | 10 171 079  | 11,97 | 10 124 079  | 33,70 | 10 270 079  | 18,01 |
| 7,94                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 794  | 11,34 |             |       | 10 171 794  | 10,81  |             |       |             |       |             |       |
| 8,00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 080  | 11,02 | 10 110 080  | 9,83  | 10 122 080  | 20,46  | 10 171 080  | 9,57  | 10 124 080  | 33,70 | 10 270 080  | 15,26 |
| 8,10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 081  | 13,99 | 10 110 081  | 13,88 | 10 122 081  | 34,12  | 10 171 081  | 10,46 | 10 124 081  | 36,77 | 10 270 081  | 16,74 |
| 8,20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 082  | 14,52 | 10 110 082  | 13,88 | 10 122 082  | 34,12  | 10 171 082  | 10,30 | 10 124 082  | 36,77 | 10 270 082  | 18,34 |
| 8,30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 083  | 15,26 | 10 110 083  | 14,09 | 10 122 083  | 34,12  | 10 171 083  | 11,45 | 10 124 083  | 36,77 | 10 270 083  | 19,50 |
| 8,40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 084  | 14,73 | 10 110 084  | 14,09 | 10 122 084  | 34,12  | 10 171 084  | 11,45 | 10 124 084  | 36,77 | 10 270 084  | 20,87 |
| 8,50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 085  | 12,82 | 10 110 085  | 11,76 | 10 122 085  | 23,10  | 10 171 085  | 9,85  | 10 124 085  | 38,26 | 10 270 085  | 17,91 |
| 8,60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 086  | 14,31 | 10 110 086  | 14,41 | 10 122 086  | 35,61  | 10 171 086  | 17,27 | 10 124 086  | 34,12 | 10 270 086  | 17,91 |
| 8,70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 087  | 16,42 | 10 110 087  | 14,41 | 10 122 087  | 35,61  | 10 171 087  | 17,27 | 10 124 087  | 34,12 | 10 270 087  | 18,01 |
| 8,73                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 873  | 20,13 |             |       | 10 171 873  | 10,60  |             |       |             |       |             |       |
| 8,80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 088  | 15,90 | 10 110 088  | 14,52 | 10 122 088  | 35,61  | 10 171 088  | 11,45 | 10 124 088  | 34,12 | 10 270 088  | 18,34 |
| 8,90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 089  | 20,34 | 10 110 089  | 15,26 | 10 122 089  | 35,61  | 10 171 089  | 16,01 | 10 124 089  | 34,12 | 10 270 089  | 18,54 |
| 9,00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 090  | 13,03 | 10 110 090  | 11,87 | 10 122 090  | 25,44  | 10 171 090  | 10,81 | 10 124 090  | 34,12 | 10 270 090  | 18,76 |
| 9,10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 091  | 17,17 | 10 110 091  | 18,87 | 10 122 091  | 43,76  | 10 171 091  | 17,80 | 10 124 091  | 36,88 | 10 270 091  | 18,76 |
| 9,20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 092  | 17,27 | 10 110 092  | 18,87 | 10 122 092  | 43,76  | 10 171 092  | 17,80 | 10 124 092  | 36,88 | 10 270 092  | 18,76 |
| 9,30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 093  | 14,73 | 10 110 093  | 18,87 | 10 122 093  | 43,76  | 10 171 093  | 12,50 | 10 124 093  | 36,88 | 10 270 093  | 18,76 |
| 9,35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       |             |       |             |       | 10 122 935  | 43,76  | 10 171 935  | 11,34 |             |       |             |       |
| 9,40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 094  | 20,03 | 10 110 094  | 18,87 | 10 122 094  | 43,76  | 10 171 094  | 18,23 | 10 124 094  | 36,88 | 10 270 094  | 18,76 |
| 9,50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 095  | 14,31 | 10 110 095  | 15,58 | 10 122 095  | 30,52  | 10 171 095  | 11,34 | 10 124 095  | 36,88 | 10 270 095  | 18,76 |
| 9,55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       |             |       |             |       |             |        |             |       | 10 124 955  | 40,49 |             |       |
| 9,60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 096  | 20,99 | 10 110 096  | 19,60 | 10 122 096  | 32,96  | 10 171 096  | 13,56 | 10 124 096  | 40,49 | 10 270 096  | 19,93 |
| 9,70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 097  | 20,34 | 10 110 097  | 19,60 | 10 122 097  | 32,96  | 10 171 097  | 19,60 | 10 124 097  | 40,49 | 10 270 097  | 20,87 |
| 9,80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 098  | 17,17 | 10 110 098  | 20,99 | 10 122 098  | 32,96  | 10 171 098  | 13,56 | 10 124 098  | 40,49 | 10 270 098  | 22,36 |
| 9,90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |       | 10 107 099  | 21,73 | 10 110 099  | 20,99 | 10 122 099  | 32,96  | 10 171 099  | 16,11 | 10 124 099  | 40,49 | 10 270 099  | 24,27 |
| 10,00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 520 100  | 13,88 | 10 107 100  | 14,09 | 10 110 100  | 14,52 | 10 122 100  | 29,24  | 10 171 100  | 12,82 | 10 124 100  | 40,49 | 10 270 100  | 26,28 |
| 10,10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 101  | 20,99 |             |       | 10 122 101  | 45,99  | 10 171 101  | 18,34 | 10 124 101  | 50,13 | 10 270 101  | 28,83 |
| 10,20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 102  | 17,91 | 10 110 102  | 20,34 | 10 122 102  | 43,13  | 10 171 102  | 14,84 | 10 124 102  | 50,13 | 10 270 102  | 30,63 |
| 10,30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 103  | 19,50 |             |       | 10 122 103  | 44,72  | 10 171 103  | 16,01 | 10 124 103  | 50,13 | 10 270 103  | 33,17 |
| 10,40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 104  | 22,79 |             |       | 10 122 104  | 47,58  | 10 171 104  | 19,82 | 10 124 104  | 50,13 | 10 270 104  | 33,17 |
| 10,50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 105  | 17,07 | 10 110 105  | 19,40 | 10 122 105  | 42,07  | 10 171 105  | 14,94 | 10 124 105  | 50,13 | 10 270 105  | 33,59 |
| 10,55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        |             |       |             |       |             |       |
| 10,60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 106  | 51,08  |             |       | 10 124 106  | 55,01 |             |       |
| 10,70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 107  | 46,63  |             |       | 10 124 107  | 55,01 |             |       |
| 10,80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       | 10 110 108  | 43,56 | 10 122 108  | 44,82  |             |       | 10 124 108  | 55,01 |             |       |
| 10,90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 109  | 65,81  |             |       | 10 124 109  | 55,01 |             |       |
| 11,00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 110  | 18,65 | 10 110 110  | 19,40 | 10 122 110  | 42,07  | 10 171 110  | 15,48 | 10 124 110  | 47,16 | 10 270 110  | 39,96 |
| 11,10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 111  | 22,15 |             |       | 10 122 111  | 41,76  |             |       | 10 124 111  | 50,76 |             |       |
| 11,11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        |             |       |             |       |             |       |
| 11,20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        |             |       | 10 124 112  | 50,76 |             |       |
| 11,30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        | 10 171 112  | 17,17 | 10 124 113  | 50,76 |             |       |
| 11,40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        | 10 171 113  | 17,17 | 10 124 114  | 50,76 |             |       |
| 11,50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        | 10 171 114  | 17,17 | 10 124 115  | 50,76 | 10 270 115  | 40,37 |
| 11,60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 115  | 21,83 | 10 110 115  | 20,56 | 10 122 115  | 43,76  | 10 171 115  | 17,17 | 10 124 115  | 50,76 |             |       |
| 11,70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        | 10 171 116  | 18,34 | 10 124 116  | 54,79 |             |       |
| 11,80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 117  | 50,02  |             |       | 10 124 117  | 54,79 |             |       |
| 11,90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       | 10 110 118  | 24,48 | 10 122 118  | 52,46  |             |       | 10 124 118  | 54,79 |             |       |
| 12,00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 520 120  | 20,13 | 10 107 120  | 21,30 | 10 110 120  | 23,85 | 10 122 119  | 65,92  | 10 171 120  | 18,34 | 10 124 119  | 54,79 | 10 270 120  | 40,80 |
| 12,10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 120  | 50,44  |             |       | 10 124 120  | 54,79 |             |       |
| 12,15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 121  | 37,20  |             |       | 10 124 121  | 62,42 |             |       |
| 12,20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        |             |       |             |       |             |       |
| 12,30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 123  | 35,51 | 10 110 123  | 36,45 | 10 122 122  | 55,42  | 10 171 123  | 32,85 | 10 124 122  | 62,42 | 10 270 125  | 44,72 |
| 12,40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 123  | 68,14  |             |       | 10 124 123  | 62,42 |             |       |
| 12,50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 125  | 23,21 | 10 110 125  | 24,48 | 10 122 124  | 81,18  |             |       | 10 124 124  | 62,42 |             |       |
| 12,60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 125  | 52,78  |             |       | 10 124 125  | 62,42 |             |       |
| 12,70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 127  | 29,46 |             |       | 10 122 126  | 107,00 | 10 171 925  | 19,07 | 10 124 126  | 66,02 |             |       |
| 12,80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 127  | 116,60 |             |       | 10 124 127  | 66,02 |             |       |
| 12,90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       | 10 110 128  | 46,21 | 10 122 128  | 55,32  |             |       | 10 124 128  | 66,02 |             |       |
| 13,00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       | 10 122 129  | 81,60  |             |       | 10 124 129  | 66,02 |             |       |
| 13,10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 130  | 23,21 | 10 110 130  | 25,12 | 10 122 130  | 56,70  | 10 171 130  | 20,24 | 10 124 130  | 73,33 | 10 270 130  | 48,64 |
| 13,30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       |             |       |             |        |             |       |             |       |             |       |
| 13,50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 135  | 24,79 | 10 110 135  | 27,34 | 10 122 135  | 83,72  |             |       |             |       |             |       |
| 13,80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       |             |       | 10 110 138  | 29,04 |             |        |             |       | 10 124 135  | 94,74 | 10 270 135  | 49,49 |
| 14,00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |       | 10 107 140  | 30,94 |             |       |             |        |             |       |             |       |             |       |





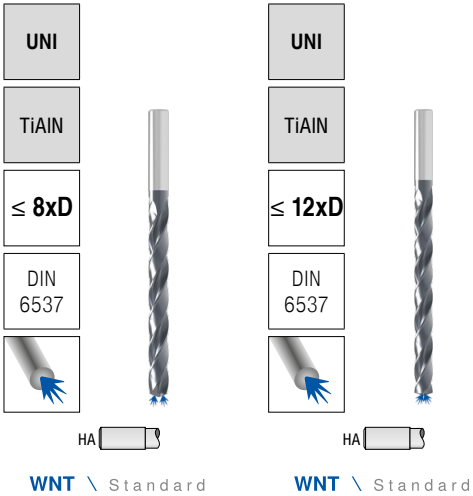
|                       |   |   |   |   |   |   |   |
|-----------------------|---|---|---|---|---|---|---|
| Steel                 | ● | ● | ● | ● | ○ | ○ | ○ |
| Stainless steel       |   | ○ |   | ○ | ● | ● | ● |
| Cast iron             | ● | ● | ● | ● | ○ | ○ | ○ |
| Non ferrous metals    | ○ | ○ | ○ | ○ | ● | ● | ● |
| Heat resistant alloys |   |   |   |   |   | ● | ● |

WPC – High Performance Drill, DIN 6537

|                                                                                          |             |       |                                                                                          |       |             |                                                                                          |             |        |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |
|------------------------------------------------------------------------------------------|-------------|-------|------------------------------------------------------------------------------------------|-------|-------------|------------------------------------------------------------------------------------------|-------------|--------|------------------------------------------------------------------------------------------|-------|-------------|-----------------------------------------------------------------------------------------|-------------|--------|-----------------------------------------------------------------------------------------|-----|--|-----------------------------------------------------------------------------------------|--|--|
| <div><div>UNI</div><div>TiAlN</div><div>≤ 3xD</div><div>DIN 6537</div></div> <div></div> |             |       | <div><div>UNI</div><div>TiAlN</div><div>≤ 3xD</div><div>DIN 6537</div></div> <div></div> |       |             | <div><div>UNI</div><div>TiAlN</div><div>≤ 5xD</div><div>DIN 6537</div></div> <div></div> |             |        | <div><div>UNI</div><div>TiAlN</div><div>≤ 5xD</div><div>DIN 6537</div></div> <div></div> |       |             | <div><div>VA</div><div>TiAlN</div><div>≤ 3xD</div><div>DIN 6537</div></div> <div></div> |             |        | <div><div>VA</div><div>TiAlN</div><div>≤ 3xD</div><div>DIN 6537</div></div> <div></div> |     |  | <div><div>VA</div><div>TiAlN</div><div>≤ 5xD</div><div>DIN 6537</div></div> <div></div> |  |  |
| HB                                                                                       |             |       | HB                                                                                       |       |             | HB                                                                                       |             |        | HB                                                                                       |       |             | HB                                                                                      |             |        | HB                                                                                      |     |  |                                                                                         |  |  |
| WNT \ Standard                                                                           |             |       | WNT \ Standard                                                                           |       |             | WNT \ Standard                                                                           |             |        | WNT \ Standard                                                                           |       |             | WNT \ Standard                                                                          |             |        | WNT \ Standard                                                                          |     |  |                                                                                         |  |  |
| DC <sub>m7</sub>                                                                         | Article no. |       | Article no.                                                                              |       | Article no. |                                                                                          | Article no. |        | Article no.                                                                              |       | Article no. |                                                                                         | Article no. |        | Article no.                                                                             |     |  |                                                                                         |  |  |
| mm                                                                                       |             | EUR   |                                                                                          | EUR   |             | EUR                                                                                      |             | EUR    |                                                                                          | EUR   |             | EUR                                                                                     |             | EUR    |                                                                                         | EUR |  |                                                                                         |  |  |
| 9,25                                                                                     | 11 601 925  | 26,01 | 11 604 925                                                                               | 46,96 | 11 607 925  | 30,97                                                                                    | 11 610 925  | 52,35  | 11 621 925                                                                               | 26,01 | 11 624 925  | 46,96                                                                                   | 11 630 925  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 9,30                                                                                     | 11 601 093  | 26,01 | 11 604 093                                                                               | 46,96 | 11 607 093  | 30,97                                                                                    | 11 610 093  | 52,35  | 11 621 093                                                                               | 26,01 | 11 624 093  | 46,96                                                                                   | 11 630 093  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 9,35                                                                                     |             |       | 11 604 930                                                                               | 46,96 |             |                                                                                          | 11 610 930  | 52,35  |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |
| 9,40                                                                                     | 11 601 094  | 26,01 | 11 604 094                                                                               | 46,96 | 11 607 094  | 30,97                                                                                    | 11 610 094  | 52,35  | 11 621 094                                                                               | 26,01 | 11 624 094  | 46,96                                                                                   | 11 630 094  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 9,50                                                                                     | 11 601 095  | 26,01 | 11 604 095                                                                               | 46,96 | 11 607 095  | 30,97                                                                                    | 11 610 095  | 52,35  | 11 621 095                                                                               | 26,01 | 11 624 095  | 46,96                                                                                   | 11 630 095  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 9,60                                                                                     | 11 601 096  | 26,01 | 11 604 096                                                                               | 46,96 | 11 607 096  | 30,97                                                                                    | 11 610 096  | 52,35  | 11 621 096                                                                               | 26,01 | 11 624 096  | 46,96                                                                                   | 11 630 096  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 9,70                                                                                     | 11 601 097  | 26,01 | 11 604 097                                                                               | 46,96 | 11 607 097  | 30,97                                                                                    | 11 610 097  | 52,35  | 11 621 097                                                                               | 26,01 | 11 624 097  | 46,96                                                                                   | 11 630 097  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 9,80                                                                                     | 11 601 098  | 26,01 | 11 604 098                                                                               | 46,96 | 11 607 098  | 30,97                                                                                    | 11 610 098  | 52,35  | 11 621 098                                                                               | 26,01 | 11 624 098  | 46,96                                                                                   | 11 630 098  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 9,90                                                                                     | 11 601 099  | 26,01 | 11 604 099                                                                               | 46,96 | 11 607 099  | 30,97                                                                                    | 11 610 099  | 52,35  | 11 621 099                                                                               | 26,01 | 11 624 099  | 46,96                                                                                   | 11 630 099  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 10,00                                                                                    | 11 601 100  | 26,01 | 11 604 100                                                                               | 46,96 | 11 607 100  | 30,97                                                                                    | 11 610 100  | 52,35  | 11 621 100                                                                               | 26,01 | 11 624 100  | 46,96                                                                                   | 11 630 100  | 52,35  |                                                                                         |     |  |                                                                                         |  |  |
| 10,10                                                                                    | 11 601 101  | 39,24 | 11 604 101                                                                               | 67,34 | 11 607 101  | 46,29                                                                                    | 11 610 101  | 76,26  | 11 621 101                                                                               | 39,24 | 11 624 101  | 67,34                                                                                   | 11 630 101  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 10,20                                                                                    | 11 601 102  | 39,24 | 11 604 102                                                                               | 67,34 | 11 607 102  | 46,29                                                                                    | 11 610 102  | 76,26  | 11 621 102                                                                               | 39,24 | 11 624 102  | 67,34                                                                                   | 11 630 102  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 10,30                                                                                    | 11 601 103  | 39,24 | 11 604 103                                                                               | 67,34 | 11 607 103  | 46,29                                                                                    | 11 610 103  | 76,26  | 11 621 103                                                                               | 39,24 | 11 624 103  | 67,34                                                                                   | 11 630 103  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 10,40                                                                                    | 11 601 104  | 39,24 | 11 604 104                                                                               | 67,34 | 11 607 104  | 46,29                                                                                    | 11 610 104  | 76,26  | 11 621 104                                                                               | 39,24 | 11 624 104  | 67,34                                                                                   | 11 630 104  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 10,50                                                                                    | 11 601 105  | 39,24 | 11 604 105                                                                               | 67,34 | 11 607 105  | 46,29                                                                                    | 11 610 105  | 76,26  | 11 621 105                                                                               | 39,24 | 11 624 105  | 67,34                                                                                   | 11 630 105  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 10,60                                                                                    | 11 601 106  | 39,24 | 11 604 106                                                                               | 67,34 | 11 607 106  | 46,29                                                                                    | 11 610 106  | 76,26  | 11 621 106                                                                               | 39,24 | 11 624 106  | 67,34                                                                                   | 11 630 106  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 10,70                                                                                    | 11 601 107  | 39,24 | 11 604 107                                                                               | 67,34 | 11 607 107  | 46,29                                                                                    | 11 610 107  | 76,26  | 11 621 107                                                                               | 39,24 | 11 624 107  | 67,34                                                                                   | 11 630 107  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 10,75                                                                                    |             |       | 11 604 904                                                                               | 67,34 |             |                                                                                          | 11 610 904  | 76,26  |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |
| 10,80                                                                                    | 11 601 108  | 39,24 | 11 604 108                                                                               | 67,34 | 11 607 108  | 46,29                                                                                    | 11 610 108  | 76,26  | 11 621 108                                                                               | 39,24 | 11 624 108  | 67,34                                                                                   | 11 630 108  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 10,90                                                                                    | 11 601 109  | 39,24 | 11 604 109                                                                               | 67,34 | 11 607 109  | 46,29                                                                                    | 11 610 109  | 76,26  | 11 621 109                                                                               | 39,24 | 11 624 109  | 67,34                                                                                   | 11 630 109  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,00                                                                                    | 11 601 110  | 39,24 | 11 604 110                                                                               | 67,34 | 11 607 110  | 46,29                                                                                    | 11 610 110  | 76,26  | 11 621 110                                                                               | 39,24 | 11 624 110  | 67,34                                                                                   | 11 630 110  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,10                                                                                    | 11 601 111  | 39,24 | 11 604 111                                                                               | 67,34 | 11 607 111  | 46,29                                                                                    | 11 610 111  | 76,26  | 11 621 111                                                                               | 39,24 | 11 624 111  | 67,34                                                                                   | 11 630 111  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,20                                                                                    | 11 601 112  | 39,24 | 11 604 112                                                                               | 67,34 | 11 607 112  | 46,29                                                                                    | 11 610 112  | 76,26  | 11 621 112                                                                               | 39,24 | 11 624 112  | 67,34                                                                                   | 11 630 112  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,25                                                                                    |             |       | 11 604 912                                                                               | 67,34 |             |                                                                                          | 11 610 912  | 76,26  |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |
| 11,30                                                                                    | 11 601 113  | 39,24 | 11 604 113                                                                               | 67,34 | 11 607 113  | 46,29                                                                                    | 11 610 113  | 76,26  | 11 621 113                                                                               | 39,24 | 11 624 113  | 67,34                                                                                   | 11 630 113  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,40                                                                                    | 11 601 114  | 39,24 | 11 604 114                                                                               | 67,34 | 11 607 114  | 46,29                                                                                    | 11 610 114  | 76,26  | 11 621 114                                                                               | 39,24 | 11 624 114  | 67,34                                                                                   | 11 630 114  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,50                                                                                    | 11 601 115  | 39,24 | 11 604 115                                                                               | 67,34 | 11 607 115  | 46,29                                                                                    | 11 610 115  | 76,26  | 11 621 115                                                                               | 39,24 | 11 624 115  | 67,34                                                                                   | 11 630 115  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,60                                                                                    | 11 601 116  | 39,24 | 11 604 116                                                                               | 67,34 | 11 607 116  | 46,29                                                                                    | 11 610 116  | 76,26  | 11 621 116                                                                               | 39,24 | 11 624 116  | 67,34                                                                                   | 11 630 116  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,70                                                                                    | 11 601 117  | 39,24 | 11 604 117                                                                               | 67,34 | 11 607 117  | 46,29                                                                                    | 11 610 117  | 76,26  | 11 621 117                                                                               | 39,24 | 11 624 117  | 67,34                                                                                   | 11 630 117  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,80                                                                                    | 11 601 118  | 39,24 | 11 604 118                                                                               | 67,34 | 11 607 118  | 46,29                                                                                    | 11 610 118  | 76,26  | 11 621 118                                                                               | 39,24 | 11 624 118  | 67,34                                                                                   | 11 630 118  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 11,90                                                                                    | 11 601 119  | 39,24 | 11 604 119                                                                               | 67,34 | 11 607 119  | 46,29                                                                                    | 11 610 119  | 76,26  | 11 621 119                                                                               | 39,24 | 11 624 119  | 67,34                                                                                   | 11 630 119  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 12,00                                                                                    | 11 601 120  | 39,24 | 11 604 120                                                                               | 67,34 | 11 607 120  | 46,29                                                                                    | 11 610 120  | 76,26  | 11 621 120                                                                               | 39,24 | 11 624 120  | 67,34                                                                                   | 11 630 120  | 76,26  |                                                                                         |     |  |                                                                                         |  |  |
| 12,25                                                                                    | 11 601 122  | 52,57 | 11 604 122                                                                               | 93,46 | 11 607 122  | 60,74                                                                                    | 11 610 122  | 102,70 |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |
| 12,50                                                                                    | 11 601 125  | 52,57 | 11 604 125                                                                               | 93,46 | 11 607 125  | 60,74                                                                                    | 11 610 125  | 102,70 | 11 621 125                                                                               | 52,57 | 11 624 125  | 93,46                                                                                   | 11 630 125  | 102,70 |                                                                                         |     |  |                                                                                         |  |  |
| 12,70                                                                                    | 11 601 127  | 52,57 | 11 604 127                                                                               | 93,46 | 11 607 127  | 60,74                                                                                    | 11 610 127  | 102,70 | 11 621 127                                                                               | 52,57 | 11 624 127  | 93,46                                                                                   | 11 630 127  | 102,70 |                                                                                         |     |  |                                                                                         |  |  |
| 12,80                                                                                    | 11 601 128  | 52,57 | 11 604 128                                                                               | 93,46 | 11 607 128  | 60,74                                                                                    | 11 610 128  | 102,70 |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |
| 12,90                                                                                    | 11 601 129  | 52,57 | 11 604 129                                                                               | 93,46 | 11 607 129  | 60,74                                                                                    | 11 610 129  | 102,70 |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |
| 13,00                                                                                    | 11 601 130  | 52,57 | 11 604 130                                                                               | 93,46 | 11 607 130  | 60,74                                                                                    | 11 610 130  | 102,70 | 11 621 130                                                                               | 52,57 | 11 624 130  | 93,46                                                                                   | 11 630 130  | 102,70 |                                                                                         |     |  |                                                                                         |  |  |
| 13,10                                                                                    |             |       | 11 604 131                                                                               | 93,46 |             |                                                                                          | 11 610 131  | 102,70 |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |
| 13,30                                                                                    | 11 601 133  | 52,57 | 11 604 133                                                                               | 93,46 | 11 607 133  | 60,74                                                                                    |             |        |                                                                                          |       |             |                                                                                         |             |        |                                                                                         |     |  |                                                                                         |  |  |

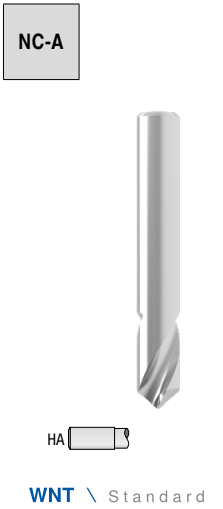


WPC – High Performance Drill, factory standard



| DC <sub>h7</sub>      | Article no. | EUR    | Article no. | EUR    |
|-----------------------|-------------|--------|-------------|--------|
| mm                    |             |        |             |        |
| 3,0                   | 11 612 030  | 81,99  | 11 615 030  | 110,20 |
| 3,1                   | 11 612 031  | 81,99  | 11 615 031  | 110,20 |
| 3,2                   | 11 612 032  | 81,99  | 11 615 032  | 110,20 |
| 3,3                   | 11 612 033  | 81,99  | 11 615 033  | 110,20 |
| 3,4                   | 11 612 034  | 81,99  | 11 615 034  | 110,20 |
| 3,5                   | 11 612 035  | 81,99  | 11 615 035  | 110,20 |
| 3,6                   | 11 612 036  | 81,99  | 11 615 036  | 110,20 |
| 3,7                   | 11 612 037  | 81,99  | 11 615 037  | 110,20 |
| 3,8                   | 11 612 038  | 81,99  | 11 615 038  | 110,20 |
| 3,9                   | 11 612 039  | 81,99  | 11 615 039  | 110,20 |
| 4,0                   | 11 612 040  | 81,99  | 11 615 040  | 110,20 |
| 4,1                   | 11 612 041  | 81,99  | 11 615 041  | 110,20 |
| 4,2                   | 11 612 042  | 81,99  | 11 615 042  | 110,20 |
| 4,3                   | 11 612 043  | 81,99  | 11 615 043  | 110,20 |
| 4,4                   | 11 612 044  | 81,99  | 11 615 044  | 110,20 |
| 4,5                   | 11 612 045  | 81,99  | 11 615 045  | 110,20 |
| 4,6                   | 11 612 046  | 81,99  | 11 615 046  | 110,20 |
| 4,7                   | 11 612 047  | 81,99  | 11 615 047  | 110,20 |
| 4,8                   | 11 612 048  | 81,99  | 11 615 048  | 110,20 |
| 4,9                   | 11 612 049  | 81,99  | 11 615 049  | 110,20 |
| 5,0                   | 11 612 050  | 81,99  | 11 615 050  | 110,20 |
| 5,1                   | 11 612 051  | 81,99  |             |        |
| 5,2                   | 11 612 052  | 81,99  |             |        |
| 5,3                   | 11 612 053  | 81,99  |             |        |
| 5,5                   | 11 612 055  | 81,99  | 11 615 055  | 110,20 |
| 5,8                   | 11 612 058  | 81,99  | 11 615 058  | 110,20 |
| 5,9                   | 11 612 059  | 81,99  |             |        |
| 6,0                   | 11 612 060  | 81,99  | 11 615 060  | 110,20 |
| 6,1                   | 11 612 061  | 101,10 |             |        |
| 6,2                   | 11 612 062  | 101,10 |             |        |
| 6,3                   | 11 612 063  | 101,10 | 11 615 063  | 122,30 |
| 6,5                   | 11 612 065  | 101,10 | 11 615 065  | 122,30 |
| 6,6                   | 11 612 066  | 101,10 | 11 615 066  | 122,30 |
| 6,8                   | 11 612 068  | 101,10 | 11 615 068  | 122,30 |
| 7,0                   | 11 612 070  | 101,10 | 11 615 070  | 122,30 |
| 7,4                   | 11 612 074  | 101,10 |             |        |
| 7,5                   | 11 612 075  | 101,10 | 11 615 075  | 122,30 |
| 7,7                   | 11 612 077  | 101,10 |             |        |
| 7,8                   | 11 612 078  | 101,10 | 11 615 078  | 122,30 |
| 7,9                   | 11 612 079  | 101,10 |             |        |
| 8,0                   | 11 612 080  | 101,10 | 11 615 080  | 122,30 |
| 8,1                   | 11 612 081  | 124,60 |             |        |
| 8,2                   | 11 612 082  | 124,60 | 11 615 082  | 172,00 |
| 8,3                   | 11 612 083  | 124,60 |             |        |
| 8,5                   | 11 612 085  | 124,60 | 11 615 085  | 172,00 |
| 8,6                   | 11 612 086  | 124,60 |             |        |
| 8,7                   | 11 612 087  | 124,60 |             |        |
| 8,8                   | 11 612 088  | 124,60 |             |        |
| 9,0                   | 11 612 090  | 124,60 | 11 615 090  | 172,00 |
| 9,1                   | 11 612 091  | 124,60 |             |        |
| 9,2                   | 11 612 092  | 124,60 |             |        |
| 9,3                   | 11 612 093  | 124,60 |             |        |
| 9,4                   | 11 612 094  | 124,60 |             |        |
| 9,5                   | 11 612 095  | 124,60 | 11 615 095  | 172,00 |
| 9,7                   | 11 612 097  | 124,60 |             |        |
| 9,8                   | 11 612 098  | 124,60 | 11 615 098  | 172,00 |
| 9,9                   | 11 612 099  | 124,60 |             |        |
| 10,0                  | 11 612 100  | 124,60 | 11 615 100  | 172,00 |
| 10,2                  | 11 612 102  | 165,40 |             |        |
| 10,5                  | 11 612 105  | 165,40 | 11 615 105  | 237,00 |
| 10,8                  | 11 612 108  | 165,40 |             |        |
| 11,0                  | 11 612 110  | 165,40 | 11 615 110  | 237,00 |
| 11,2                  | 11 612 112  | 165,40 |             |        |
| 11,5                  | 11 612 115  | 165,40 | 11 615 115  | 237,00 |
| 11,8                  | 11 612 118  | 165,40 |             |        |
| 12,0                  | 11 612 120  | 165,40 | 11 615 120  | 237,00 |
| 12,5                  | 11 612 125  | 248,00 |             |        |
| 13,0                  | 11 612 130  | 248,00 | 11 615 130  | 305,30 |
| 13,5                  | 11 612 135  | 248,00 |             |        |
| 14,0                  | 11 612 140  | 248,00 | 11 615 140  | 305,30 |
| 14,5                  | 11 612 145  | 324,10 |             |        |
| 15,0                  | 11 612 150  | 324,10 | 11 615 150  | 402,30 |
| 15,5                  | 11 612 155  | 324,10 |             |        |
| 16,0                  | 11 612 160  | 324,10 | 11 615 160  | 402,30 |
| 16,5                  | 11 612 165  | 419,90 |             |        |
| 17,0                  | 11 612 170  | 419,90 |             |        |
| 17,5                  | 11 612 175  | 419,90 |             |        |
| 18,0                  | 11 612 180  | 419,90 | 11 615 180  | 480,60 |
| 18,5                  | 11 612 185  | 467,40 |             |        |
| 19,0                  | 11 612 190  | 467,40 |             |        |
| 20,0                  | 11 612 200  | 467,40 |             |        |
| Steel                 | ●           | ●      |             |        |
| Stainless steel       | ○           | ○      |             |        |
| Cast iron             | ●           | ●      |             |        |
| Non ferrous metals    | ○           | ○      |             |        |
| Heat resistant alloys |             |        |             |        |

NC Spot Drill, factory standard

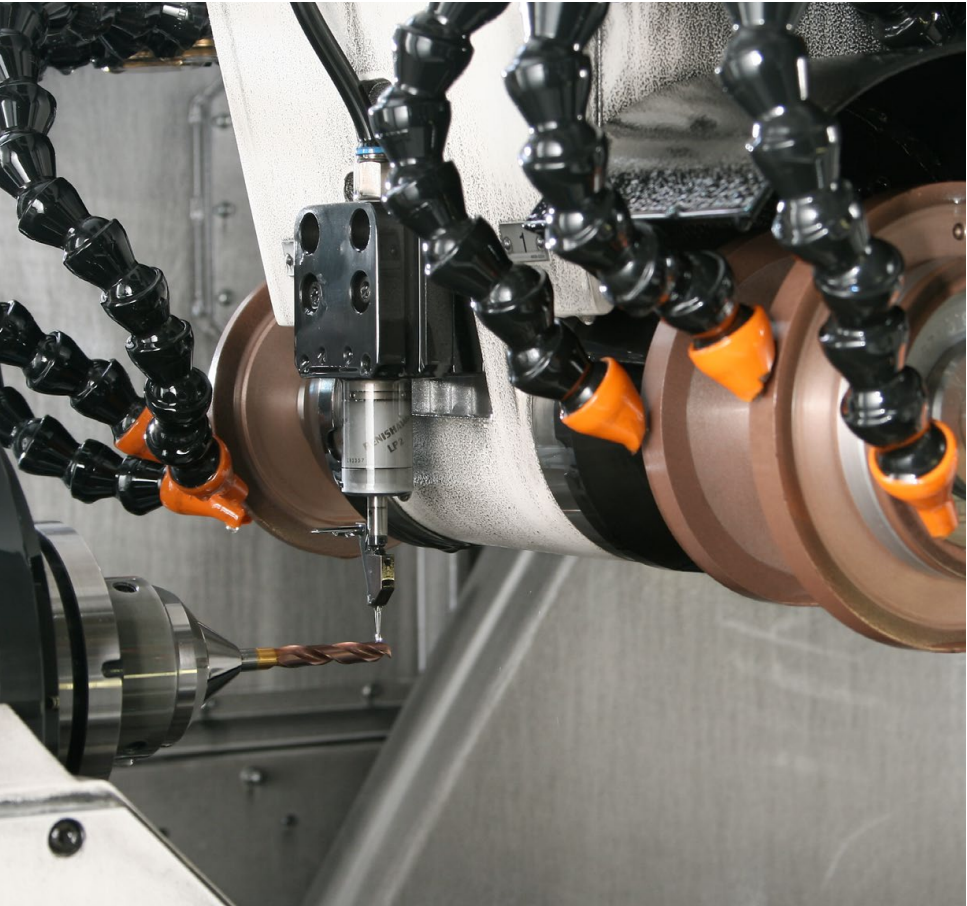
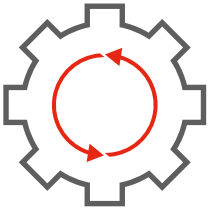


| DC <sub>h5</sub>      | Article no. | EUR    |
|-----------------------|-------------|--------|
| mm                    |             |        |
| 2                     | 10 702 002  | 13,55  |
| 3                     | 10 702 003  | 13,55  |
| 4                     | 10 702 004  | 15,10  |
| 5                     | 10 702 005  | 17,31  |
| 6                     | 10 702 006  | 19,28  |
| 8                     | 10 702 008  | 29,75  |
| 10                    | 10 702 010  | 41,77  |
| 12                    | 10 702 012  | 56,32  |
| 14                    | 10 702 014  | 82,77  |
| 16                    | 10 702 016  | 102,20 |
| 18                    | 10 702 018  | 192,80 |
| 20                    | 10 702 020  | 180,80 |
| Steel                 | ●           |        |
| Stainless steel       |             |        |
| Cast iron             | ●           |        |
| Non ferrous metals    | ●           |        |
| Heat resistant alloys |             |        |

New for old

Regrind instead of buying new

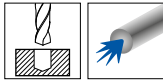
Your used precision tool is in the best possible hands with us. We return your tool to you with the original finish, coating and geometry – as good as new and ready for use back in the machine.



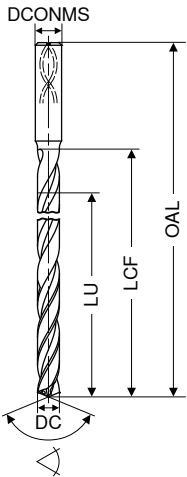


WTX – High performance deep hole drills

- ▲ Pilot hole necessary
- ▲ Excellent alignment precision
- ▲ Secure chip evacuation



WNT \ Performance



| DC <sub>N7</sub>      |  | TB 16 UNI             |        | TB 16 ALU             |        | TB 20 UNI             |        | TB 20 ALU             |        |
|-----------------------|--|-----------------------|--------|-----------------------|--------|-----------------------|--------|-----------------------|--------|
|                       |  | TiAlN                 |        | DLC                   |        | TiAlN                 |        | DLC                   |        |
|                       |  | ≤ 16xD                |        | ≤ 16xD                |        | ≤ 20xD                |        | ≤ 20xD                |        |
|                       |  |                       |        |                       |        |                       |        |                       |        |
|                       |  | 135°<br>Solid carbide |        | 135°<br>Solid carbide |        | 135°<br>Solid carbide |        | 135°<br>Solid carbide |        |
| mm                    |  | Article no. EUR       |        | Article no. EUR       |        | Article no. EUR       |        | Article no. EUR       |        |
| 2,0                   |  | 11 016 020            | 122,30 | 11 017 020            | 122,30 | 11 020 020            | 130,00 | 11 021 020            | 130,00 |
| 2,2                   |  | 11 016 022            | 122,30 | 11 017 022            | 122,30 | 11 020 022            | 130,00 | 11 021 022            | 130,00 |
| 2,3                   |  | 11 016 023            | 122,30 | 11 017 023            | 122,30 | 11 020 023            | 130,00 | 11 021 023            | 130,00 |
| 2,4                   |  | 11 016 024            | 136,80 | 11 017 024            | 136,80 | 11 020 024            | 144,40 | 11 021 024            | 144,40 |
| 2,5                   |  | 11 016 025            | 136,80 | 11 017 025            | 136,80 | 11 020 025            | 144,40 | 11 021 025            | 144,40 |
| 2,7                   |  | 11 016 027            | 136,80 | 11 017 027            | 136,80 | 11 020 027            | 144,40 | 11 021 027            | 144,40 |
| 2,8                   |  | 11 016 028            | 136,80 | 11 017 028            | 136,80 | 11 020 028            | 144,40 | 11 021 028            | 144,40 |
| 3,0                   |  | 11 016 030            | 174,10 | 11 017 030            | 174,10 | 11 020 030            | 194,00 | 11 021 030            | 194,00 |
| 3,2                   |  | 11 016 032            | 174,10 | 11 017 032            | 174,10 | 11 020 032            | 194,00 | 11 021 032            | 194,00 |
| 3,3                   |  | 11 016 033            | 174,10 | 11 017 033            | 174,10 | 11 020 033            | 194,00 | 11 021 033            | 194,00 |
| 3,5                   |  | 11 016 035            | 174,10 | 11 017 035            | 174,10 | 11 020 035            | 194,00 | 11 021 035            | 194,00 |
| 3,8                   |  | 11 016 038            | 181,80 | 11 017 038            | 181,80 | 11 020 038            | 201,80 | 11 021 038            | 201,80 |
| 4,0                   |  | 11 016 040            | 181,80 | 11 017 040            | 181,80 | 11 020 040            | 201,80 | 11 021 040            | 201,80 |
| 4,2                   |  | 11 016 042            | 195,10 | 11 017 042            | 195,10 | 11 020 042            | 217,10 | 11 021 042            | 217,10 |
| 4,5                   |  | 11 016 045            | 195,10 | 11 017 045            | 195,10 | 11 020 045            | 217,10 | 11 021 045            | 217,10 |
| 4,8                   |  | 11 016 048            | 206,10 | 11 017 048            | 206,10 | 11 020 048            | 229,30 | 11 021 048            | 229,30 |
| 5,0                   |  | 11 016 050            | 206,10 | 11 017 050            | 206,10 | 11 020 050            | 229,30 | 11 021 050            | 229,30 |
| 5,5                   |  | 11 016 055            | 216,00 | 11 017 055            | 216,00 | 11 020 055            | 239,10 | 11 021 055            | 239,10 |
| 5,8                   |  | 11 016 058            | 216,00 | 11 017 058            | 216,00 | 11 020 058            | 239,10 | 11 021 058            | 239,10 |
| 6,0                   |  | 11 016 060            | 216,00 | 11 017 060            | 216,00 | 11 020 060            | 239,10 | 11 021 060            | 239,10 |
| 6,5                   |  | 11 016 065            | 229,30 | 11 017 065            | 229,30 | 11 020 065            | 255,70 | 11 021 065            | 255,70 |
| 6,8                   |  | 11 016 068            | 246,90 | 11 017 068            | 246,90 | 11 020 068            | 274,50 | 11 021 068            | 274,50 |
| 7,0                   |  | 11 016 070            | 246,90 | 11 017 070            | 246,90 | 11 020 070            | 274,50 | 11 021 070            | 274,50 |
| 7,5                   |  | 11 016 075            | 275,60 | 11 017 075            | 275,60 | 11 020 075            | 306,40 | 11 021 075            | 306,40 |
| 7,8                   |  | 11 016 078            | 275,60 | 11 017 078            | 275,60 | 11 020 078            | 306,40 | 11 021 078            | 306,40 |
| 8,0                   |  | 11 016 080            | 275,60 | 11 017 080            | 275,60 | 11 020 080            | 306,40 | 11 021 080            | 306,40 |
| 8,5                   |  | 11 016 085            | 304,20 | 11 017 085            | 304,20 | 11 020 085            | 337,30 | 11 021 085            | 337,30 |
| 8,8                   |  | 11 016 088            | 339,60 | 11 017 088            | 339,60 | 11 020 088            | 379,10 | 11 021 088            | 379,10 |
| 9,0                   |  | 11 016 090            | 339,60 | 11 017 090            | 339,60 | 11 020 090            | 379,10 | 11 021 090            | 379,10 |
| 9,8                   |  | 11 016 098            | 339,60 | 11 017 098            | 339,60 | 11 020 098            | 379,10 | 11 021 098            | 379,10 |
| 10,0                  |  | 11 016 100            | 339,60 | 11 017 100            | 339,60 | 11 020 100            | 379,10 | 11 021 100            | 379,10 |
| 10,2                  |  | 11 016 102            | 379,10 | 11 017 102            | 379,10 | 11 020 102            | 416,60 | 11 021 102            | 416,60 |
| 10,8                  |  | 11 016 108            | 379,10 | 11 017 108            | 379,10 | 11 020 108            | 416,60 | 11 021 108            | 416,60 |
| 11,8                  |  | 11 016 118            | 379,10 | 11 017 118            | 379,10 | 11 020 118            | 416,60 | 11 021 118            | 416,60 |
| 12,0                  |  | 11 016 120            | 379,10 | 11 017 120            | 379,10 | 11 020 120            | 416,60 | 11 021 120            | 416,60 |
| Steel                 |  | ●                     |        | ●                     |        | ●                     |        | ●                     |        |
| Stainless steel       |  | ●                     |        | ●                     |        | ●                     |        | ●                     |        |
| Cast iron             |  | ●                     |        | ●                     |        | ●                     |        | ●                     |        |
| Non ferrous metals    |  | ●                     |        | ●                     |        | ●                     |        | ●                     |        |
| Heat resistant alloys |  | ●                     |        | ●                     |        | ●                     |        | ●                     |        |

Technical support: 1800 93 22 55  
3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

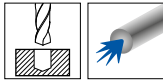
Speed Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

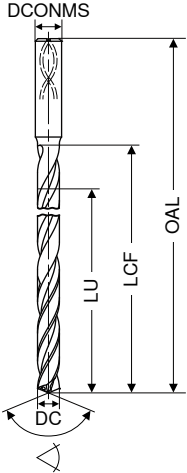
$v_c =$  (See Individual  $v_c$  Charts)  
 $\pi = 3,142$   
 $D =$  Diameter

WTX – High performance deep hole drills

- ▲ Pilot hole necessary
- ▲ Excellent alignment precision
- ▲ Secure chip evacuation



WNT \ Performance



TB 25  
UNI

TiAlN

≤ 25xD

HA

135°

Solid carbide

TB 25  
ALU

DLC

≤ 25xD

HA

135°

Solid carbide

TB 30  
UNI

TiAlN

≤ 30xD

HA

135°

Solid carbide

TB 30  
ALU

DLC

≤ 30xD

HA

135°

Solid carbide

TB 40  
UNI

TiAlN

≤ 40xD

HA

135°

Solid carbide

TB 50  
UNI

TiAlN

≤ 50xD

HA

135°

Solid carbide

| mm                    | Article no. |        | Article no. |        | Article no. |        | Article no. |        | Article no. |        | Article no. |        |
|-----------------------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
|                       |             | EUR    |             | EUR    |             | EUR    |             | EUR    |             | EUR    |             | EUR    |
| 2,0                   | 11 025 020  | 137,80 | 11 026 020  | 137,80 | 11 030 020  | 147,80 | 11 031 020  | 147,80 |             |        |             |        |
| 2,2                   | 11 025 022  | 137,80 | 11 026 022  | 137,80 | 11 030 022  | 147,80 | 11 031 022  | 147,80 |             |        |             |        |
| 2,3                   | 11 025 023  | 137,80 | 11 026 023  | 137,80 | 11 030 023  | 147,80 | 11 031 023  | 147,80 |             |        |             |        |
| 2,4                   | 11 025 024  | 157,60 | 11 026 024  | 157,60 | 11 030 024  | 170,90 | 11 031 024  | 170,90 |             |        |             |        |
| 2,5                   | 11 025 025  | 157,60 | 11 026 025  | 157,60 | 11 030 025  | 170,90 | 11 031 025  | 170,90 |             |        |             |        |
| 2,7                   | 11 025 027  | 157,60 | 11 026 027  | 157,60 | 11 030 027  | 170,90 | 11 031 027  | 170,90 |             |        |             |        |
| 2,8                   | 11 025 028  | 157,60 | 11 026 028  | 157,60 | 11 030 028  | 170,90 | 11 031 028  | 170,90 |             |        |             |        |
| 3,0                   | 11 025 030  | 224,90 | 11 026 030  | 224,90 | 11 030 030  | 288,80 | 11 031 030  | 288,80 | 11 040 030  | 365,90 | 11 050 030  | 497,10 |
| 3,2                   | 11 025 032  | 224,90 | 11 026 032  | 224,90 | 11 030 032  | 288,80 | 11 031 032  | 288,80 |             |        |             |        |
| 3,3                   | 11 025 033  | 250,20 | 11 026 033  | 250,20 | 11 030 033  | 296,50 | 11 031 033  | 296,50 |             |        |             |        |
| 3,5                   | 11 025 035  | 250,20 | 11 026 035  | 250,20 | 11 030 035  | 296,50 | 11 031 035  | 296,50 |             |        |             |        |
| 3,8                   | 11 025 038  | 256,80 | 11 026 038  | 256,80 | 11 030 038  | 296,50 | 11 031 038  | 296,50 |             |        |             |        |
| 4,0                   | 11 025 040  | 256,80 | 11 026 040  | 256,80 | 11 030 040  | 296,50 | 11 031 040  | 296,50 | 11 040 040  | 365,90 | 11 050 040  | 497,10 |
| 4,2                   | 11 025 042  | 256,80 | 11 026 042  | 256,80 | 11 030 042  | 296,50 | 11 031 042  | 296,50 | 11 040 042  | 404,60 | 11 050 042  | 553,30 |
| 4,5                   | 11 025 045  | 267,80 | 11 026 045  | 267,80 | 11 030 045  | 305,30 | 11 031 045  | 305,30 | 11 040 045  | 404,60 | 11 050 045  | 553,30 |
| 4,8                   | 11 025 048  | 267,80 | 11 026 048  | 267,80 | 11 030 048  | 305,30 | 11 031 048  | 305,30 | 11 040 048  | 432,10 | 11 050 048  | 624,90 |
| 5,0                   | 11 025 050  | 267,80 | 11 026 050  | 267,80 | 11 030 050  | 305,30 | 11 031 050  | 305,30 | 11 040 050  | 432,10 | 11 050 050  | 624,90 |
| 5,5                   | 11 025 055  | 287,70 | 11 026 055  | 287,70 | 11 030 055  | 319,60 | 11 031 055  | 319,60 | 11 040 055  | 465,10 | 11 050 055  | 703,10 |
| 5,8                   | 11 025 058  | 287,70 | 11 026 058  | 287,70 | 11 030 058  | 319,60 | 11 031 058  | 319,60 | 11 040 058  | 465,10 | 11 050 058  | 713,10 |
| 6,0                   | 11 025 060  | 287,70 | 11 026 060  | 287,70 | 11 030 060  | 319,60 | 11 031 060  | 319,60 | 11 040 060  | 465,10 | 11 050 060  | 713,10 |
| 6,5                   | 11 025 065  | 320,70 | 11 026 065  | 320,70 | 11 030 065  | 352,70 | 11 031 065  | 352,70 | 11 040 065  | 500,30 | 11 050 065  | 792,50 |
| 6,8                   | 11 025 068  | 320,70 | 11 026 068  | 320,70 | 11 030 068  | 365,90 | 11 031 068  | 365,90 | 11 040 068  | 500,30 | 11 050 068  | 859,70 |
| 7,0                   | 11 025 070  | 320,70 | 11 026 070  | 320,70 | 11 030 070  | 365,90 | 11 031 070  | 365,90 | 11 040 070  | 500,30 |             |        |
| 7,5                   | 11 025 075  | 357,10 | 11 026 075  | 357,10 | 11 030 075  | 365,90 | 11 031 075  | 365,90 | 11 040 075  | 556,60 |             |        |
| 7,8                   | 11 025 078  | 357,10 | 11 026 078  | 357,10 | 11 030 078  | 407,80 | 11 031 078  | 407,80 | 11 040 078  | 556,60 |             |        |
| 8,0                   | 11 025 080  | 357,10 | 11 026 080  | 357,10 | 11 030 080  | 407,80 | 11 031 080  | 407,80 | 11 040 080  | 556,60 |             |        |
| 8,5                   | 11 025 085  | 401,10 | 11 026 085  | 401,10 | 11 030 085  | 470,60 | 11 031 085  | 470,60 | 11 040 085  | 612,90 |             |        |
| 8,8                   | 11 025 088  | 436,40 | 11 026 088  | 436,40 | 11 030 088  | 494,80 | 11 031 088  | 494,80 | 11 040 088  | 612,90 |             |        |
| 9,0                   | 11 025 090  | 436,40 | 11 026 090  | 436,40 | 11 030 090  | 494,80 | 11 031 090  | 494,80 | 11 040 090  | 612,90 |             |        |
| 9,8                   | 11 025 098  | 436,40 | 11 026 098  | 436,40 | 11 030 098  | 494,80 | 11 031 098  | 494,80 |             |        |             |        |
| 10,0                  | 11 025 100  | 436,40 | 11 026 100  | 436,40 | 11 030 100  | 494,80 | 11 031 100  | 494,80 |             |        |             |        |
| 10,2                  | 11 025 102  | 524,60 | 11 026 102  | 524,60 | 11 030 102  | 631,60 | 11 031 102  | 631,60 |             |        |             |        |
| 10,8                  | 11 025 108  | 524,60 | 11 026 108  | 524,60 | 11 030 108  | 631,60 | 11 031 108  | 631,60 |             |        |             |        |
| 11,8                  | 11 025 118  | 524,60 | 11 026 118  | 524,60 | 11 030 118  | 631,60 | 11 031 118  | 631,60 |             |        |             |        |
| 12,0                  | 11 025 120  | 524,60 | 11 026 120  | 524,60 | 11 030 120  | 631,60 | 11 031 120  | 631,60 |             |        |             |        |
| Steel                 |             | •      |             |        |             | •      |             |        |             | •      |             | •      |
| Stainless steel       |             | •      |             |        |             | •      |             |        |             | •      |             | •      |
| Cast iron             |             | •      |             |        |             | •      |             |        |             | •      |             | •      |
| Non ferrous metals    |             |        | •           |        |             |        |             | •      |             |        |             |        |
| Heat resistant alloys |             |        |             |        |             |        |             |        |             |        |             |        |



# INDEXABLE INSERT DRILLING

## MaxiDrill 900

The specialist for high productivity in rough machining

- ▲ provides perfect drilling quality even under enormous loads
- ▲ ideal for large drilling depths: The high feed rates increase productivity
- ▲ for stable machining situations



*Drilling guide (Main catalogue 2019)*

|                          |       |                   |       |
|--------------------------|-------|-------------------|-------|
| Cutting Data             | 39-50 | Coding example    | 54    |
| Maximum adjustment range | 51-53 | Grade description | 56+57 |

## MaxiDrill Classic

The drilling tool for universal application

- ▲ ideal for use on machines with limited power
- ▲ suitable for use under unstable conditions



## KUB Pentron

The specialist for large hole depths

- ▲ the all-rounder for process-secure drilling under a wide variety of conditions
- ▲ ideal for extreme machining situations



## KUB 100

Ideal for robust machining situations

- ▲ the high performance all-rounder for outstanding productivity and reliability
- ▲ offers consistent hole quality and a constant diameter across all materials and feed rates



## KUB Trigon

The solution for unstable conditions and high accuracy

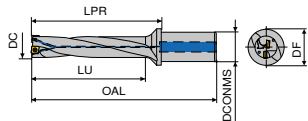
- ▲ ideal for machining under unstable conditions
- ▲ well-suited to machining on less powerful machines
- ▲ the first choice for creating dimensionally accurate holes





MaxiDrill 900

Scope of supply:  
Indexable Insert Drill including clamping screws and key



≤ 2xD



KOMET \ Performance

| Designation           | DC   | DF | DCONMS | OAL | LU | LPR | Insert      | Article no. |                        |
|-----------------------|------|----|--------|-----|----|-----|-------------|-------------|------------------------|
|                       | mm   | mm | mm     | mm  | mm | mm  |             |             |                        |
| MD900.2D.120.R.03-C20 | 12,0 | 28 | 20     | 90  | 24 | 40  | SONT 031804 | 10 852 120  | <a href="#">170,66</a> |
| MD900.2D.125.R.03-C20 | 12,5 | 28 | 20     | 91  | 25 | 41  | SONT 031804 | 10 852 125  | <a href="#">170,66</a> |
| MD900.2D.130.R.03-C20 | 13,0 | 28 | 20     | 92  | 26 | 42  | SONT 031804 | 10 852 130  | <a href="#">170,66</a> |
| MD900.2D.135.R.03-C20 | 13,5 | 28 | 20     | 93  | 27 | 43  | SONT 031804 | 10 852 135  | <a href="#">170,66</a> |
| MD900.2D.140.R.04-C20 | 14,0 | 30 | 20     | 96  | 28 | 46  | SONT 042105 | 10 852 140  | <a href="#">181,65</a> |
| MD900.2D.145.R.04-C20 | 14,5 | 30 | 20     | 97  | 29 | 47  | SONT 042105 | 10 852 145  | <a href="#">181,65</a> |
| MD900.2D.150.R.04-C20 | 15,0 | 30 | 20     | 98  | 30 | 48  | SONT 042105 | 10 852 150  | <a href="#">181,65</a> |
| MD900.2D.155.R.04-C20 | 15,5 | 30 | 20     | 99  | 31 | 49  | SONT 042105 | 10 852 155  | <a href="#">181,65</a> |
| MD900.2D.160.R.05-C20 | 16,0 | 30 | 20     | 100 | 32 | 50  | SONT 052306 | 10 852 160  | <a href="#">181,65</a> |
| MD900.2D.165.R.05-C20 | 16,5 | 30 | 20     | 101 | 33 | 51  | SONT 052306 | 10 852 165  | <a href="#">181,65</a> |
| MD900.2D.170.R.05-C20 | 17,0 | 30 | 20     | 102 | 34 | 52  | SONT 052306 | 10 852 170  | <a href="#">193,34</a> |
| MD900.2D.175.R.05-C20 | 17,5 | 30 | 20     | 103 | 35 | 53  | SONT 052306 | 10 852 175  | <a href="#">193,34</a> |
| MD900.2D.180.R.06-C25 | 18,0 | 32 | 25     | 111 | 36 | 55  | SONT 062506 | 10 852 180  | <a href="#">193,34</a> |
| MD900.2D.185.R.06-C25 | 18,5 | 32 | 25     | 112 | 37 | 56  | SONT 062506 | 10 852 185  | <a href="#">193,34</a> |
| MD900.2D.190.R.06-C25 | 19,0 | 32 | 25     | 113 | 38 | 57  | SONT 062506 | 10 852 190  | <a href="#">207,76</a> |
| MD900.2D.195.R.06-C25 | 19,5 | 32 | 25     | 114 | 39 | 58  | SONT 062506 | 10 852 195  | <a href="#">207,76</a> |
| MD900.2D.200.R.06-C25 | 20,0 | 32 | 25     | 115 | 40 | 59  | SONT 062506 | 10 852 200  | <a href="#">207,76</a> |
| MD900.2D.205.R.06-C25 | 20,5 | 32 | 25     | 116 | 41 | 60  | SONT 062506 | 10 852 205  | <a href="#">207,76</a> |
| MD900.2D.210.R.07-C25 | 21,0 | 32 | 25     | 118 | 42 | 62  | SONT 072907 | 10 852 210  | <a href="#">207,76</a> |
| MD900.2D.220.R.07-C25 | 22,0 | 32 | 25     | 120 | 44 | 64  | SONT 072907 | 10 852 220  | <a href="#">207,76</a> |
| MD900.2D.230.R.07-C25 | 23,0 | 32 | 25     | 122 | 46 | 66  | SONT 072907 | 10 852 230  | <a href="#">214,27</a> |
| MD900.2D.240.R.08-C32 | 24,0 | 40 | 32     | 132 | 48 | 72  | SONT 083308 | 10 852 240  | <a href="#">214,27</a> |
| MD900.2D.250.R.08-C32 | 25,0 | 40 | 32     | 134 | 50 | 74  | SONT 083308 | 10 852 250  | <a href="#">214,27</a> |
| MD900.2D.260.R.08-C32 | 26,0 | 40 | 32     | 136 | 52 | 76  | SONT 083308 | 10 852 260  | <a href="#">237,23</a> |
| MD900.2D.270.R.08-C32 | 27,0 | 40 | 32     | 138 | 54 | 78  | SONT 083308 | 10 852 270  | <a href="#">237,23</a> |
| MD900.2D.280.R.09-C32 | 28,0 | 40 | 32     | 140 | 56 | 80  | SONT 093808 | 10 852 280  | <a href="#">237,23</a> |
| MD900.2D.290.R.09-C32 | 29,0 | 40 | 32     | 142 | 58 | 82  | SONT 093808 | 10 852 290  | <a href="#">237,23</a> |
| MD900.2D.300.R.09-C32 | 30,0 | 40 | 32     | 144 | 60 | 84  | SONT 093808 | 10 852 300  | <a href="#">237,23</a> |
| MD900.2D.310.R.09-C32 | 31,0 | 40 | 32     | 146 | 62 | 86  | SONT 093808 | 10 852 310  | <a href="#">257,32</a> |
| MD900.2D.320.R.09-C32 | 32,0 | 40 | 32     | 148 | 64 | 88  | SONT 093808 | 10 852 320  | <a href="#">257,32</a> |
| MD900.2D.330.R.10-C40 | 33,0 | 50 | 40     | 163 | 66 | 93  | SONT 104408 | 10 852 330  | <a href="#">257,32</a> |
| MD900.2D.340.R.10-C40 | 34,0 | 50 | 40     | 165 | 68 | 95  | SONT 104408 | 10 852 340  | <a href="#">257,32</a> |

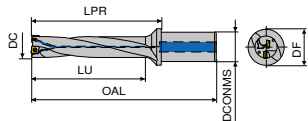
| Designation           | DC   | DF | DCONMS | OAL | LU  | LPR | Insert      | Article no. |        |
|-----------------------|------|----|--------|-----|-----|-----|-------------|-------------|--------|
|                       | mm   | mm | mm     | mm  | mm  | mm  |             |             | EUR    |
| MD900.2D.350.R.10-C40 | 35,0 | 50 | 40     | 167 | 70  | 97  | SONT 104408 | 10 852 350  | 263,13 |
| MD900.2D.360.R.10-C40 | 36,0 | 50 | 40     | 169 | 72  | 99  | SONT 104408 | 10 852 360  | 263,13 |
| MD900.2D.370.R.12-C40 | 37,0 | 56 | 40     | 174 | 74  | 104 | SONT 124810 | 10 852 370  | 271,67 |
| MD900.2D.380.R.12-C40 | 38,0 | 56 | 40     | 176 | 76  | 106 | SONT 124810 | 10 852 380  | 271,67 |
| MD900.2D.390.R.12-C40 | 39,0 | 56 | 40     | 178 | 78  | 108 | SONT 124810 | 10 852 390  | 271,67 |
| MD900.2D.400.R.12-C40 | 40,0 | 56 | 40     | 180 | 80  | 110 | SONT 124810 | 10 852 400  | 271,67 |
| MD900.2D.410.R.12-C40 | 41,0 | 56 | 40     | 182 | 82  | 112 | SONT 124810 | 10 852 410  | 271,67 |
| MD900.2D.420.R.13-C40 | 42,0 | 60 | 40     | 187 | 84  | 117 | SONT 135012 | 10 852 420  | 285,39 |
| MD900.2D.430.R.13-C40 | 43,0 | 60 | 40     | 189 | 86  | 119 | SONT 135012 | 10 852 430  | 285,39 |
| MD900.2D.440.R.13-C40 | 44,0 | 60 | 40     | 191 | 88  | 121 | SONT 135012 | 10 852 440  | 285,39 |
| MD900.2D.450.R.13-C40 | 45,0 | 60 | 40     | 193 | 90  | 123 | SONT 135012 | 10 852 450  | 285,39 |
| MD900.2D.460.R.13-C40 | 46,0 | 60 | 40     | 195 | 92  | 125 | SONT 135012 | 10 852 460  | 285,39 |
| MD900.2D.470.R.15-C40 | 47,0 | 60 | 40     | 198 | 94  | 128 | SONT 155312 | 10 852 470  | 299,81 |
| MD900.2D.480.R.15-C40 | 48,0 | 60 | 40     | 200 | 96  | 130 | SONT 155312 | 10 852 480  | 299,81 |
| MD900.2D.490.R.15-C40 | 49,0 | 60 | 40     | 202 | 98  | 132 | SONT 155312 | 10 852 490  | 323,47 |
| MD900.2D.500.R.15-C40 | 50,0 | 60 | 40     | 204 | 100 | 134 | SONT 155312 | 10 852 500  | 323,47 |
| MD900.2D.510.R.15-C40 | 52,0 | 60 | 40     | 208 | 104 | 138 | SONT 155312 | 10 852 520  | 332,15 |
| MD900.2D.520.R.15-C40 | 51,0 | 60 | 40     | 206 | 102 | 136 | SONT 155312 | 10 852 510  | 332,15 |
| MD900.2D.530.R.15-C40 | 53,0 | 60 | 40     | 210 | 106 | 140 | SONT 155312 | 10 852 530  | 332,15 |
| MD900.2D.540.R.15-C40 | 54,0 | 60 | 40     | 212 | 108 | 142 | SONT 155312 | 10 852 540  | 332,15 |
| MD900.2D.550.R.17-C40 | 55,0 | 60 | 40     | 215 | 110 | 145 | SONT 175612 | 10 852 550  | 332,15 |
| MD900.2D.560.R.17-C40 | 56,0 | 60 | 40     | 217 | 112 | 147 | SONT 175612 | 10 852 560  | 344,33 |
| MD900.2D.570.R.17-C40 | 57,0 | 60 | 40     | 219 | 114 | 149 | SONT 175612 | 10 852 570  | 344,33 |
| MD900.2D.580.R.17-C40 | 58,0 | 60 | 40     | 221 | 116 | 151 | SONT 175612 | 10 852 580  | 344,33 |
| MD900.2D.590.R.17-C40 | 59,0 | 60 | 40     | 223 | 118 | 153 | SONT 175612 | 10 852 590  | 344,33 |
| MD900.2D.600.R.17-C40 | 60,0 | 62 | 40     | 225 | 120 | 155 | SONT 175612 | 10 852 600  | 344,33 |
| MD900.2D.610.R.17-C40 | 61,0 | 62 | 40     | 227 | 122 | 157 | SONT 175612 | 10 852 610  | 344,33 |
| MD900.2D.620.R.17-C40 | 62,0 | 64 | 40     | 229 | 124 | 159 | SONT 175612 | 10 852 620  | 344,33 |
| MD900.2D.630.R.17-C40 | 63,0 | 64 | 40     | 231 | 126 | 161 | SONT 175612 | 10 852 630  | 344,33 |

Spare parts  
DC

|           | Article no. |       |            | Article no.    |      |            |
|-----------|-------------|-------|------------|----------------|------|------------|
|           | EUR         |       |            | EUR            |      |            |
| 12 - 13,5 | T06 - IP    | 9,35  | 80 950 123 | M1,8x3,6 - IP  | 3,31 | 70 950 862 |
| 14 - 17,5 | T06 - IP    | 9,35  | 80 950 123 | M2x4,3 - IP    | 2,95 | 70 950 863 |
| 18 - 23   | T07 - IP    | 9,20  | 80 950 124 | M2,2x5 - IP    | 2,86 | 70 950 856 |
| 24 - 27   | T08 - IP    | 9,18  | 80 950 125 | M2,5x6 - IP    | 3,68 | 70 950 857 |
| 28 - 32   | T09 - IP    | 10,12 | 80 950 126 | M3x7 - IP      | 2,83 | 70 950 819 |
| 33 - 41   | T15 - IP    | 10,70 | 80 950 128 | M3,5x8,6 - IP  | 2,83 | 70 950 859 |
| 42 - 63   | T20 - IP    | 11,29 | 80 950 129 | M4,5x10,5 - IP | 2,83 | 70 950 864 |

MaxiDrill 900

Scope of supply:  
Indexable Insert Drill including clamping screws and key

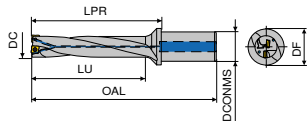


| Designation           | DC   | DF | DCONMS | OAL | LU   | LPR | Insert      | Article no. |        |
|-----------------------|------|----|--------|-----|------|-----|-------------|-------------|--------|
|                       |      |    |        |     |      |     |             | EUR         |        |
| MD900.3D.120.R.03-C20 | 12,0 | 28 | 20     | 102 | 36,0 | 52  | SONT 031804 | 10 853 120  | 181,79 |
| MD900.3D.125.R.03-C20 | 12,5 | 28 | 20     | 104 | 37,5 | 54  | SONT 031804 | 10 853 125  | 181,79 |
| MD900.3D.130.R.03-C20 | 13,0 | 28 | 20     | 105 | 39,0 | 55  | SONT 031804 | 10 853 130  | 181,79 |
| MD900.3D.135.R.03-C20 | 13,5 | 28 | 20     | 107 | 40,5 | 57  | SONT 031804 | 10 853 135  | 181,79 |
| MD900.3D.140.R.04-C20 | 14,0 | 30 | 20     | 109 | 42,0 | 59  | SONT 042105 | 10 853 140  | 191,45 |
| MD900.3D.145.R.04-C20 | 14,5 | 30 | 20     | 111 | 44,0 | 61  | SONT 042105 | 10 853 145  | 191,45 |
| MD900.3D.150.R.04-C20 | 15,0 | 30 | 20     | 112 | 45,0 | 62  | SONT 042105 | 10 853 150  | 191,45 |
| MD900.3D.155.R.04-C20 | 15,5 | 30 | 20     | 114 | 47,0 | 64  | SONT 042105 | 10 853 155  | 196,00 |
| MD900.3D.160.R.05-C20 | 16,0 | 30 | 20     | 115 | 48,0 | 65  | SONT 052306 | 10 853 160  | 196,00 |
| MD900.3D.165.R.05-C20 | 16,5 | 30 | 20     | 117 | 50,0 | 67  | SONT 052306 | 10 853 165  | 196,00 |
| MD900.3D.170.R.05-C20 | 17,0 | 30 | 20     | 118 | 51,0 | 68  | SONT 052306 | 10 853 170  | 203,56 |
| MD900.3D.175.R.05-C20 | 17,5 | 30 | 20     | 120 | 53,0 | 70  | SONT 052306 | 10 853 175  | 203,56 |
| MD900.3D.180.R.06-C25 | 18,0 | 32 | 25     | 128 | 54,0 | 72  | SONT 062506 | 10 853 180  | 203,56 |
| MD900.3D.185.R.06-C25 | 18,5 | 32 | 25     | 130 | 56,0 | 74  | SONT 062506 | 10 853 185  | 203,56 |
| MD900.3D.190.R.06-C25 | 19,0 | 32 | 25     | 131 | 57,0 | 75  | SONT 062506 | 10 853 190  | 218,68 |
| MD900.3D.195.R.06-C25 | 19,5 | 32 | 25     | 133 | 59,0 | 77  | SONT 062506 | 10 853 195  | 218,68 |
| MD900.3D.200.R.06-C25 | 20,0 | 32 | 25     | 134 | 60,0 | 78  | SONT 062506 | 10 853 200  | 218,68 |
| MD900.3D.205.R.06-C25 | 20,5 | 32 | 25     | 136 | 62,0 | 80  | SONT 062506 | 10 853 205  | 218,68 |
| MD900.3D.210.R.07-C25 | 21,0 | 32 | 25     | 138 | 63,0 | 82  | SONT 072907 | 10 853 210  | 218,68 |
| MD900.3D.215.R.07-C25 | 21,5 | 32 | 25     | 140 | 65,0 | 84  | SONT 072907 | 10 853 215  | 218,68 |
| MD900.3D.220.R.07-C25 | 22,0 | 32 | 25     | 141 | 66,0 | 85  | SONT 072907 | 10 853 220  | 218,68 |
| MD900.3D.225.R.07-C25 | 22,5 | 32 | 25     | 143 | 68,0 | 87  | SONT 072907 | 10 853 225  | 225,47 |
| MD900.3D.230.R.07-C25 | 23,0 | 32 | 25     | 144 | 69,0 | 88  | SONT 072907 | 10 853 230  | 225,47 |
| MD900.3D.235.R.07-C25 | 23,5 | 32 | 25     | 146 | 71,0 | 90  | SONT 072907 | 10 853 235  | 225,47 |
| MD900.3D.240.R.08-C32 | 24,0 | 40 | 32     | 155 | 72,0 | 95  | SONT 083308 | 10 853 240  | 225,47 |
| MD900.3D.245.R.08-C32 | 24,5 | 40 | 32     | 157 | 74,0 | 97  | SONT 083308 | 10 853 245  | 225,47 |
| MD900.3D.250.R.08-C32 | 25,0 | 40 | 32     | 158 | 75,0 | 98  | SONT 083308 | 10 853 250  | 225,47 |
| MD900.3D.255.R.08-C32 | 25,5 | 40 | 32     | 160 | 77,0 | 100 | SONT 083308 | 10 853 255  | 225,47 |
| MD900.3D.260.R.08-C32 | 26,0 | 40 | 32     | 161 | 78,0 | 101 | SONT 083308 | 10 853 260  | 249,69 |
| MD900.3D.265.R.08-C32 | 26,5 | 40 | 32     | 163 | 80,0 | 103 | SONT 083308 | 10 853 265  | 249,69 |
| MD900.3D.270.R.08-C32 | 27,0 | 40 | 32     | 164 | 81,0 | 104 | SONT 083308 | 10 853 270  | 249,69 |
| MD900.3D.275.R.08-C32 | 27,5 | 40 | 32     | 166 | 83,0 | 106 | SONT 083308 | 10 853 275  | 249,69 |
| MD900.3D.280.R.09-C32 | 28,0 | 40 | 32     | 167 | 84,0 | 107 | SONT 093808 | 10 853 280  | 249,69 |
| MD900.3D.285.R.09-C32 | 28,5 | 40 | 32     | 169 | 86,0 | 109 | SONT 093808 | 10 853 285  | 249,69 |
| MD900.3D.290.R.09-C32 | 29,0 | 40 | 32     | 170 | 87,0 | 110 | SONT 093808 | 10 853 290  | 249,69 |
| MD900.3D.295.R.09-C32 | 29,5 | 40 | 32     | 172 | 89,0 | 112 | SONT 093808 | 10 853 295  | 249,69 |
| MD900.3D.300.R.09-C32 | 30,0 | 40 | 32     | 173 | 90,0 | 113 | SONT 093808 | 10 853 300  | 249,69 |
| MD900.3D.305.R.09-C32 | 30,5 | 40 | 32     | 175 | 92,0 | 115 | SONT 093808 | 10 853 305  | 249,69 |
| MD900.3D.310.R.09-C32 | 31,0 | 40 | 32     | 176 | 93,0 | 116 | SONT 093808 | 10 853 310  | 270,90 |

| Designation           | DC   | DF | DCONMS | OAL | LU    | LPR | Insert      | Article no. |        |
|-----------------------|------|----|--------|-----|-------|-----|-------------|-------------|--------|
|                       |      |    |        |     |       |     |             | EUR         |        |
| MD900.3D.315.R.09-C32 | 31,5 | 40 | 32     | 178 | 95,0  | 118 | SONT 093808 | 10 853 315  | 270,90 |
| MD900.3D.320.R.09-C32 | 32,0 | 40 | 32     | 179 | 96,0  | 119 | SONT 093808 | 10 853 320  | 270,90 |
| MD900.3D.325.R.10-C40 | 32,5 | 50 | 40     | 192 | 98,0  | 124 | SONT 104408 | 10 853 325  | 270,90 |
| MD900.3D.330.R.10-C40 | 33,0 | 50 | 40     | 193 | 99,0  | 125 | SONT 104408 | 10 853 330  | 270,90 |
| MD900.3D.335.R.10-C40 | 33,5 | 50 | 40     | 195 | 101,0 | 127 | SONT 104408 | 10 853 335  | 270,90 |
| MD900.3D.340.R.10-C40 | 34,0 | 50 | 40     | 196 | 102,0 | 128 | SONT 104408 | 10 853 340  | 270,90 |
| MD900.3D.345.R.10-C40 | 34,5 | 50 | 40     | 198 | 104,0 | 130 | SONT 104408 | 10 853 345  | 270,90 |
| MD900.3D.350.R.10-C40 | 35,0 | 50 | 40     | 199 | 105,0 | 131 | SONT 104408 | 10 853 350  | 276,92 |
| MD900.3D.355.R.10-C40 | 35,5 | 50 | 40     | 201 | 107,0 | 133 | SONT 104408 | 10 853 355  | 276,92 |
| MD900.3D.360.R.10-C40 | 36,0 | 50 | 40     | 202 | 108,0 | 134 | SONT 104408 | 10 853 360  | 276,92 |
| MD900.3D.365.R.10-C40 | 36,5 | 50 | 40     | 204 | 110,0 | 136 | SONT 104408 | 10 853 365  | 276,92 |
| MD900.3D.370.R.12-C40 | 37,0 | 56 | 40     | 211 | 111,0 | 141 | SONT 124810 | 10 853 370  | 286,02 |
| MD900.3D.380.R.12-C40 | 38,0 | 56 | 40     | 214 | 114,0 | 144 | SONT 124810 | 10 853 380  | 286,02 |
| MD900.3D.390.R.12-C40 | 39,0 | 56 | 40     | 217 | 117,0 | 147 | SONT 124810 | 10 853 390  | 286,02 |
| MD900.3D.400.R.12-C40 | 40,0 | 56 | 40     | 220 | 120,0 | 150 | SONT 124810 | 10 853 400  | 286,02 |
| MD900.3D.410.R.12-C40 | 41,0 | 56 | 40     | 223 | 123,0 | 153 | SONT 124810 | 10 853 410  | 286,02 |
| MD900.3D.420.R.13-C40 | 42,0 | 60 | 40     | 229 | 126,0 | 159 | SONT 135012 | 10 853 420  | 300,37 |
| MD900.3D.430.R.13-C40 | 43,0 | 60 | 40     | 232 | 129,0 | 162 | SONT 135012 | 10 853 430  | 300,37 |
| MD900.3D.440.R.13-C40 | 44,0 | 60 | 40     | 235 | 132,0 | 165 | SONT 135012 | 10 853 440  | 300,37 |
| MD900.3D.450.R.13-C40 | 45,0 | 60 | 40     | 238 | 135,0 | 168 | SONT 135012 | 10 853 450  | 300,37 |
| MD900.3D.460.R.13-C40 | 46,0 | 60 | 40     | 241 | 138,0 | 171 | SONT 135012 | 10 853 460  | 300,37 |
| MD900.3D.470.R.15-C40 | 47,0 | 60 | 40     | 245 | 141,0 | 175 | SONT 155312 | 10 853 470  | 315,49 |
| MD900.3D.480.R.15-C40 | 48,0 | 60 | 40     | 248 | 144,0 | 178 | SONT 155312 | 10 853 480  | 315,49 |
| MD900.3D.490.R.15-C40 | 49,0 | 60 | 40     | 251 | 147,0 | 181 | SONT 155312 | 10 853 490  | 340,48 |
| MD900.3D.500.R.15-C40 | 50,0 | 60 | 40     | 254 | 150,0 | 184 | SONT 155312 | 10 853 500  | 340,48 |
| MD900.3D.510.R.15-C40 | 51,0 | 60 | 40     | 257 | 153,0 | 187 | SONT 155312 | 10 853 510  | 349,58 |
| MD900.3D.520.R.15-C40 | 52,0 | 60 | 40     | 260 | 156,0 | 190 | SONT 155312 | 10 853 520  | 349,58 |
| MD900.3D.530.R.15-C40 | 53,0 | 60 | 40     | 263 | 159,0 | 193 | SONT 155312 | 10 853 530  | 349,58 |
| MD900.3D.540.R.15-C40 | 54,0 | 60 | 40     | 266 | 162,0 | 196 | SONT 155312 | 10 853 540  | 349,58 |
| MD900.3D.550.R.17-C40 | 55,0 | 60 | 40     | 270 | 165,0 | 200 | SONT 175612 | 10 853 550  | 349,58 |
| MD900.3D.560.R.17-C40 | 56,0 | 60 | 40     | 273 | 168,0 | 203 | SONT 175612 | 10 853 560  | 362,46 |
| MD900.3D.570.R.17-C40 | 57,0 | 60 | 40     | 276 | 171,0 | 206 | SONT 175612 | 10 853 570  | 362,46 |
| MD900.3D.580.R.17-C40 | 58,0 | 60 | 40     | 279 | 174,0 | 209 | SONT 175612 | 10 853 580  | 362,46 |
| MD900.3D.590.R.17-C40 | 59,0 | 60 | 40     | 282 | 177,0 | 212 | SONT 175612 | 10 853 590  | 362,46 |
| MD900.3D.600.R.17-C40 | 60,0 | 62 | 40     | 285 | 180,0 | 215 | SONT 175612 | 10 853 600  | 362,46 |
| MD900.3D.610.R.17-C40 | 61,0 | 62 | 40     | 288 | 183,0 | 218 | SONT 175612 | 10 853 610  | 362,46 |
| MD900.3D.620.R.17-C40 | 62,0 | 64 | 40     | 291 | 186,0 | 221 | SONT 175612 | 10 853 620  | 362,46 |
| MD900.3D.630.R.17-C40 | 63,0 | 64 | 40     | 294 | 189,0 | 224 | SONT 175612 | 10 853 630  | 362,46 |

MaxiDrill 900

Scope of supply:  
Indexable Insert Drill including clamping screws and key

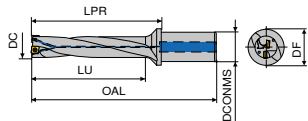


| Designation           | DC | DF | DCONMS | OAL | LU  | LPR | Insert      | Article no. |        |
|-----------------------|----|----|--------|-----|-----|-----|-------------|-------------|--------|
|                       | mm | mm | mm     | mm  | mm  | mm  |             |             | EUR    |
| MD900.4D.120.R.03-C20 | 12 | 28 | 20     | 114 | 48  | 64  | SONT 031804 | 10 854 120  | 250,74 |
| MD900.4D.130.R.03-C20 | 13 | 28 | 20     | 118 | 52  | 68  | SONT 031804 | 10 854 130  | 250,74 |
| MD900.4D.140.R.04-C20 | 14 | 30 | 20     | 123 | 56  | 73  | SONT 042105 | 10 854 140  | 258,02 |
| MD900.4D.150.R.04-C20 | 15 | 30 | 20     | 127 | 60  | 77  | SONT 042105 | 10 854 150  | 258,02 |
| MD900.4D.160.R.05-C20 | 16 | 30 | 20     | 131 | 64  | 81  | SONT 052306 | 10 854 160  | 264,04 |
| MD900.4D.170.R.05-C20 | 17 | 30 | 20     | 135 | 68  | 85  | SONT 052306 | 10 854 170  | 273,98 |
| MD900.4D.180.R.06-C25 | 18 | 32 | 25     | 146 | 72  | 90  | SONT 062506 | 10 854 180  | 273,98 |
| MD900.4D.190.R.06-C25 | 19 | 32 | 25     | 150 | 76  | 94  | SONT 062506 | 10 854 190  | 294,35 |
| MD900.4D.200.R.06-C25 | 20 | 32 | 25     | 154 | 80  | 98  | SONT 062506 | 10 854 200  | 294,35 |
| MD900.4D.210.R.07-C25 | 21 | 32 | 25     | 159 | 84  | 103 | SONT 072907 | 10 854 210  | 294,35 |
| MD900.4D.220.R.07-C25 | 22 | 32 | 25     | 163 | 88  | 107 | SONT 072907 | 10 854 220  | 294,35 |
| MD900.4D.230.R.07-C25 | 23 | 32 | 25     | 167 | 92  | 111 | SONT 072907 | 10 854 230  | 304,15 |
| MD900.4D.240.R.08-C32 | 24 | 40 | 32     | 179 | 96  | 119 | SONT 083308 | 10 854 240  | 304,15 |
| MD900.4D.250.R.08-C32 | 25 | 40 | 32     | 183 | 100 | 123 | SONT 083308 | 10 854 250  | 304,15 |
| MD900.4D.260.R.08-C32 | 26 | 40 | 32     | 187 | 104 | 127 | SONT 083308 | 10 854 260  | 336,00 |
| MD900.4D.270.R.08-C32 | 27 | 40 | 32     | 191 | 108 | 131 | SONT 083308 | 10 854 270  | 336,00 |
| MD900.4D.280.R.09-C32 | 28 | 40 | 32     | 195 | 112 | 135 | SONT 093808 | 10 854 280  | 336,00 |
| MD900.4D.290.R.09-C32 | 29 | 40 | 32     | 199 | 116 | 139 | SONT 093808 | 10 854 290  | 336,00 |
| MD900.4D.300.R.09-C32 | 30 | 40 | 32     | 203 | 120 | 143 | SONT 093808 | 10 854 300  | 336,00 |
| MD900.4D.310.R.09-C32 | 31 | 40 | 32     | 207 | 124 | 147 | SONT 093808 | 10 854 310  | 364,70 |
| MD900.4D.320.R.09-C32 | 32 | 40 | 32     | 211 | 128 | 151 | SONT 093808 | 10 854 320  | 364,70 |
| MD900.4D.330.R.10-C40 | 33 | 50 | 40     | 228 | 132 | 158 | SONT 104408 | 10 854 330  | 364,70 |
| MD900.4D.340.R.10-C40 | 34 | 50 | 40     | 232 | 136 | 162 | SONT 104408 | 10 854 340  | 364,70 |



MaxiDrill 900

Scope of supply:  
Indexable Insert Drill including clamping screws and key



| Designation           | DC | DF | DCONMS | OAL | LU  | LPR | Insert      | Article no. |        |
|-----------------------|----|----|--------|-----|-----|-----|-------------|-------------|--------|
|                       |    |    |        |     |     |     |             |             | EUR    |
| MD900.5D.120.R.03-C20 | 12 | 28 | 20     | 126 | 60  | 76  | SONT 031804 | 10 855 120  | 299,74 |
| MD900.5D.130.R.03-C20 | 13 | 28 | 20     | 131 | 65  | 81  | SONT 031804 | 10 855 130  | 299,74 |
| MD900.5D.140.R.04-C20 | 14 | 30 | 20     | 137 | 70  | 87  | SONT 042105 | 10 855 140  | 306,46 |
| MD900.5D.150.R.04-C20 | 15 | 30 | 20     | 142 | 75  | 92  | SONT 042105 | 10 855 150  | 306,46 |
| MD900.5D.160.R.05-C20 | 16 | 30 | 20     | 147 | 80  | 97  | SONT 052306 | 10 855 160  | 314,02 |
| MD900.5D.170.R.05-C20 | 17 | 30 | 20     | 152 | 85  | 102 | SONT 052306 | 10 855 170  | 325,36 |
| MD900.5D.180.R.06-C25 | 18 | 32 | 25     | 164 | 90  | 108 | SONT 062506 | 10 855 180  | 325,36 |
| MD900.5D.190.R.06-C25 | 19 | 32 | 25     | 169 | 95  | 113 | SONT 062506 | 10 855 190  | 349,58 |
| MD900.5D.200.R.06-C25 | 20 | 32 | 25     | 174 | 100 | 118 | SONT 062506 | 10 855 200  | 349,58 |
| MD900.5D.210.R.07-C25 | 21 | 32 | 25     | 180 | 105 | 124 | SONT 072907 | 10 855 210  | 349,58 |
| MD900.5D.220.R.07-C25 | 22 | 32 | 25     | 184 | 110 | 128 | SONT 072907 | 10 855 220  | 349,58 |
| MD900.5D.230.R.07-C25 | 23 | 32 | 25     | 189 | 115 | 133 | SONT 072907 | 10 855 230  | 362,04 |
| MD900.5D.240.R.08-C32 | 24 | 40 | 32     | 203 | 120 | 143 | SONT 083308 | 10 855 240  | 362,04 |
| MD900.5D.250.R.08-C32 | 25 | 40 | 32     | 208 | 125 | 148 | SONT 083308 | 10 855 250  | 362,04 |
| MD900.5D.260.R.08-C32 | 26 | 40 | 32     | 212 | 130 | 152 | SONT 083308 | 10 855 260  | 399,56 |

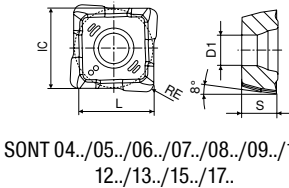
| Designation           | DC | DF | DCONMS | OAL | LU  | LPR | Insert      | Article no. |        |
|-----------------------|----|----|--------|-----|-----|-----|-------------|-------------|--------|
|                       |    |    |        |     |     |     |             |             | EUR    |
| MD900.5D.270.R.08-C32 | 27 | 40 | 32     | 217 | 135 | 157 | SONT 083308 | 10 855 270  | 399,56 |
| MD900.5D.280.R.09-C32 | 28 | 40 | 32     | 221 | 140 | 161 | SONT 093808 | 10 855 280  | 399,56 |
| MD900.5D.290.R.09-C32 | 29 | 40 | 32     | 226 | 145 | 166 | SONT 093808 | 10 855 290  | 399,56 |
| MD900.5D.300.R.09-C32 | 30 | 40 | 32     | 230 | 150 | 170 | SONT 093808 | 10 855 300  | 399,56 |
| MD900.5D.310.R.09-C32 | 31 | 40 | 32     | 235 | 155 | 175 | SONT 093808 | 10 855 310  | 432,81 |
| MD900.5D.320.R.09-C32 | 32 | 40 | 32     | 239 | 160 | 179 | SONT 093808 | 10 855 320  | 432,81 |
| MD900.5D.330.R.10-C40 | 33 | 50 | 40     | 259 | 165 | 191 | SONT 104408 | 10 855 330  | 432,81 |
| MD900.5D.340.R.10-C40 | 34 | 50 | 40     | 264 | 170 | 196 | SONT 104408 | 10 855 340  | 432,81 |
| MD900.5D.350.R.10-C40 | 35 | 50 | 40     | 269 | 175 | 201 | SONT 104408 | 10 855 350  | 442,61 |
| MD900.5D.360.R.10-C40 | 36 | 50 | 40     | 274 | 180 | 206 | SONT 104408 | 10 855 360  | 442,61 |
| MD900.5D.370.R.12-C40 | 37 | 56 | 40     | 285 | 185 | 215 | SONT 124810 | 10 855 370  | 457,80 |
| MD900.5D.380.R.12-C40 | 38 | 56 | 40     | 290 | 190 | 220 | SONT 124810 | 10 855 380  | 457,80 |
| MD900.5D.390.R.12-C40 | 39 | 56 | 40     | 295 | 195 | 225 | SONT 124810 | 10 855 390  | 457,80 |
| MD900.5D.400.R.12-C40 | 40 | 56 | 40     | 300 | 200 | 230 | SONT 124810 | 10 855 400  | 457,80 |
| MD900.5D.410.R.12-C40 | 41 | 56 | 40     | 305 | 205 | 235 | SONT 124810 | 10 855 410  | 457,80 |

Spare parts  
DC

|         |          |       |            |               |      |            |
|---------|----------|-------|------------|---------------|------|------------|
| 12 - 13 | T06 - IP | 9,35  | 80 950 123 | M1,8x3,6 - IP | 3,31 | 70 950 862 |
| 14 - 17 | T06 - IP | 9,35  | 80 950 123 | M2x4,3 - IP   | 2,95 | 70 950 863 |
| 18 - 23 | T07 - IP | 9,20  | 80 950 124 | M2,2x5 - IP   | 2,86 | 70 950 856 |
| 24 - 27 | T08 - IP | 9,18  | 80 950 125 | M2,5x6 - IP   | 3,68 | 70 950 857 |
| 28 - 32 | T09 - IP | 10,12 | 80 950 126 | M3x7 - IP     | 2,83 | 70 950 819 |
| 33 - 41 | T15 - IP | 10,70 | 80 950 128 | M3,5x8,6 - IP | 2,83 | 70 950 859 |

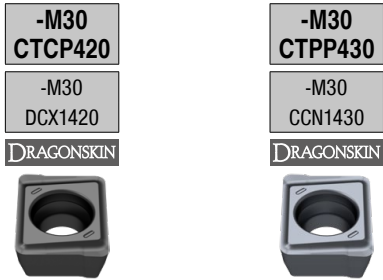
SONT

| Designation | IC   | D1   | L    | S    |
|-------------|------|------|------|------|
|             | mm   | mm   | mm   | mm   |
| SONT 0318.. | 5,4  | 2,10 | 3,8  | 1,80 |
| SONT 0421.. | 4,6  | 2,25 | 4,2  | 2,10 |
| SONT 0523.. | 5,3  | 2,25 | 4,8  | 2,30 |
| SONT 0625.. | 5,9  | 2,50 | 5,5  | 2,50 |
| SONT 0729.. | 6,5  | 2,50 | 6,1  | 2,90 |
| SONT 0833.. | 7,7  | 2,90 | 7,3  | 3,30 |
| SONT 0938.. | 8,9  | 3,50 | 8,5  | 3,80 |
| SONT 1044.. | 10,1 | 4,10 | 9,6  | 4,40 |
| SONT 1248.. | 11,6 | 4,10 | 11,0 | 4,80 |
| SONT 1350.. | 13,0 | 5,30 | 12,2 | 5,00 |
| SONT 1553.. | 15,2 | 5,30 | 14,4 | 5,30 |
| SONT 1756.. | 17,5 | 5,30 | 16,7 | 5,60 |



SONT

KOMET \ Performance

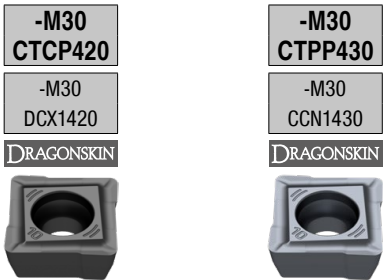


| ISO                   | RE  | Article no.              |       | Article no.              |       |
|-----------------------|-----|--------------------------|-------|--------------------------|-------|
|                       | mm  |                          | EUR   |                          | EUR   |
| 031804                | 0,4 | 10 830 703 <sup>1)</sup> | 10,90 | 10 830 103 <sup>1)</sup> | 10,90 |
| Steel                 |     | ●                        |       | ●                        |       |
| Stainless steel       |     | ○                        |       | ●                        |       |
| Cast iron             |     | ●                        |       | ○                        |       |
| Non ferrous metals    |     |                          |       | ○                        |       |
| Heat resistant alloys |     |                          |       | ○                        |       |

1) two usable cutting edges

SONT

KOMET \ Performance

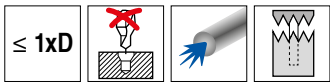


| ISO    | RE  | Article no. |       | Article no. |       |
|--------|-----|-------------|-------|-------------|-------|
|        | mm  |             | EUR   |             | EUR   |
| 042105 | 0,5 | 10 830 704  | 12,49 | 10 830 104  | 12,49 |
| 052306 | 0,6 | 10 830 705  | 12,66 | 10 830 105  | 12,66 |
| 062506 | 0,6 | 10 830 706  | 12,87 | 10 830 106  | 12,87 |
| 072907 | 0,7 | 10 830 707  | 13,16 | 10 830 107  | 13,16 |
| 083308 | 0,8 | 10 830 708  | 13,45 | 10 830 108  | 13,45 |
| 093808 | 0,8 | 10 830 709  | 13,77 | 10 830 109  | 13,77 |
| 104408 | 0,8 | 10 830 710  | 14,43 | 10 830 110  | 14,43 |
| 124810 | 1,0 | 10 830 712  | 15,28 | 10 830 112  | 15,28 |
| 135012 | 1,2 | 10 830 713  | 16,18 | 10 830 113  | 16,18 |
| 155312 | 1,2 | 10 830 715  | 18,35 | 10 830 115  | 18,35 |
| 175612 | 1,2 | 10 830 717  | 19,45 | 10 830 117  | 19,45 |

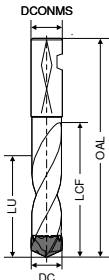
|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ○ | ● |
| Cast iron             | ● | ○ |
| Non ferrous metals    |   | ○ |
| Heat resistant alloys |   | ○ |

WTX – Holder for Exchangeable drills

▲ with radial teeth



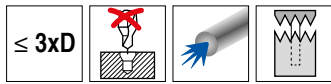
WNT \ Performance



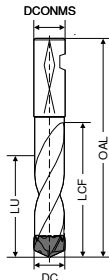
| DC            | DCONMS <sub>h6</sub> | OAL | LCF | LU   | Article no. |        |
|---------------|----------------------|-----|-----|------|-------------|--------|
| mm            | mm                   | mm  | mm  | mm   |             | EUR    |
| 12,00 - 12,49 | 14                   | 81  | 29  | 12,5 | 10 911 120  | 199,20 |
| 12,50 - 12,99 | 14                   | 81  | 29  | 13,0 | 10 911 125  | 199,20 |
| 13,00 - 13,49 | 14                   | 81  | 31  | 13,5 | 10 911 130  | 199,20 |
| 13,50 - 13,99 | 16                   | 86  | 32  | 14,0 | 10 911 135  | 199,20 |
| 14,00 - 14,49 | 16                   | 86  | 33  | 14,5 | 10 911 140  | 199,20 |
| 14,50 - 14,99 | 16                   | 91  | 34  | 15,0 | 10 911 145  | 199,20 |
| 15,00 - 15,49 | 16                   | 91  | 36  | 15,5 | 10 911 150  | 199,20 |
| 15,50 - 16,49 | 20                   | 97  | 38  | 16,5 | 10 911 161  | 206,50 |
| 15,50 - 16,49 | 18                   | 92  | 38  | 16,5 | 10 911 160  | 206,50 |
| 16,50 - 17,49 | 18                   | 94  | 40  | 17,5 | 10 911 165  | 206,50 |
| 16,50 - 17,49 | 20                   | 99  | 40  | 17,5 | 10 911 166  | 206,50 |
| 17,50 - 18,49 | 20                   | 104 | 43  | 18,5 | 10 911 176  | 206,50 |
| 17,50 - 18,49 | 18                   | 99  | 43  | 18,5 | 10 911 175  | 206,50 |
| 18,50 - 19,49 | 20                   | 99  | 45  | 19,5 | 10 911 185  | 244,30 |
| 19,50 - 20,49 | 20                   | 104 | 47  | 20,5 | 10 911 195  | 244,30 |
| 20,50 - 21,49 | 25                   | 111 | 49  | 21,5 | 10 911 205  | 269,50 |
| 21,50 - 22,49 | 25                   | 116 | 52  | 22,5 | 10 911 215  | 269,50 |
| 22,50 - 23,49 | 25                   | 116 | 54  | 23,5 | 10 911 225  | 295,70 |
| 23,50 - 24,49 | 25                   | 121 | 56  | 24,5 | 10 911 235  | 295,70 |
| 24,50 - 25,49 | 25                   | 123 | 59  | 25,5 | 10 911 245  | 320,80 |
| 25,50 - 26,49 | 25                   | 123 | 61  | 26,5 | 10 911 255  | 320,80 |
| 26,50 - 27,49 | 25                   | 128 | 63  | 27,5 | 10 911 265  | 320,80 |
| 27,50 - 28,49 | 25                   | 128 | 66  | 28,5 | 10 911 275  | 320,80 |
| 28,50 - 29,49 | 32                   | 134 | 68  | 29,5 | 10 911 285  | 372,30 |
| 29,50 - 30,49 | 32                   | 139 | 70  | 30,5 | 10 911 295  | 372,30 |
| 30,50 - 31,49 | 32                   | 139 | 75  | 31,5 | 10 911 305  | 411,10 |
| 31,50 - 32,49 | 32                   | 139 | 75  | 32,5 | 10 911 315  | 411,10 |
| 32,50 - 33,49 | 32                   | 150 | 78  | 33,5 | 10 911 325  | 442,50 |
| 33,50 - 34,49 | 32                   | 150 | 79  | 34,5 | 10 911 335  | 442,50 |
| 34,50 - 35,49 | 32                   | 150 | 82  | 35,5 | 10 911 345  | 442,50 |
| 35,50 - 37,49 | 32                   | 152 | 86  | 37,5 | 10 911 355  | 510,70 |
| 37,50 - 39,49 | 32                   | 157 | 91  | 39,5 | 10 911 375  | 528,50 |
| 39,50 - 41,00 | 32                   | 167 | 95  | 41,5 | 10 911 395  | 542,10 |

WTX – Holder for Exchangeable drills

▲ with radial teeth



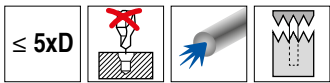
WNT \ Performance



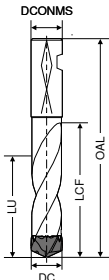
| DC            | DCONMS <sub>h6</sub> | OAL | LCF | LU    | Article no. |        |
|---------------|----------------------|-----|-----|-------|-------------|--------|
| mm            | mm                   | mm  | mm  | mm    |             | EUR    |
| 12,00 - 12,49 | 14                   | 100 | 53  | 38,0  | 10 913 120  | 220,20 |
| 12,50 - 12,99 | 14                   | 105 | 55  | 39,0  | 10 913 125  | 220,20 |
| 13,00 - 13,49 | 14                   | 105 | 57  | 40,0  | 10 913 130  | 220,20 |
| 13,50 - 13,99 | 16                   | 110 | 59  | 42,0  | 10 913 135  | 220,20 |
| 14,00 - 14,49 | 16                   | 115 | 61  | 43,0  | 10 913 140  | 220,20 |
| 14,50 - 14,99 | 16                   | 115 | 63  | 45,0  | 10 913 145  | 220,20 |
| 15,00 - 15,49 | 16                   | 115 | 65  | 46,0  | 10 913 150  | 220,20 |
| 15,50 - 16,49 | 20                   | 125 | 70  | 50,0  | 10 913 161  | 225,50 |
| 15,50 - 16,49 | 18                   | 120 | 70  | 50,0  | 10 913 160  | 225,50 |
| 16,50 - 17,49 | 18                   | 125 | 74  | 53,0  | 10 913 165  | 225,50 |
| 16,50 - 17,49 | 20                   | 130 | 74  | 50,0  | 10 913 166  | 225,50 |
| 17,50 - 18,49 | 20                   | 135 | 78  | 50,0  | 10 913 176  | 225,50 |
| 17,50 - 18,49 | 18                   | 130 | 78  | 55,0  | 10 913 175  | 225,50 |
| 18,50 - 19,49 | 20                   | 135 | 82  | 58,0  | 10 913 185  | 269,50 |
| 19,50 - 20,49 | 20                   | 140 | 87  | 62,0  | 10 913 195  | 269,50 |
| 20,50 - 21,49 | 25                   | 150 | 91  | 65,0  | 10 913 205  | 299,90 |
| 21,50 - 22,49 | 25                   | 155 | 95  | 67,0  | 10 913 215  | 299,90 |
| 22,50 - 23,49 | 25                   | 160 | 99  | 70,0  | 10 913 225  | 327,10 |
| 23,50 - 24,49 | 25                   | 165 | 103 | 73,0  | 10 913 235  | 327,10 |
| 24,50 - 25,49 | 25                   | 165 | 108 | 77,0  | 10 913 245  | 356,60 |
| 25,50 - 26,49 | 25                   | 175 | 112 | 80,0  | 10 913 255  | 356,60 |
| 26,50 - 27,49 | 25                   | 175 | 116 | 82,0  | 10 913 265  | 356,60 |
| 27,50 - 28,49 | 25                   | 180 | 120 | 85,0  | 10 913 275  | 356,60 |
| 28,50 - 29,49 | 32                   | 190 | 124 | 88,0  | 10 913 285  | 413,10 |
| 29,50 - 30,49 | 32                   | 195 | 129 | 92,0  | 10 913 295  | 413,10 |
| 30,50 - 31,49 | 32                   | 195 | 133 | 94,0  | 10 913 305  | 456,20 |
| 31,50 - 32,49 | 32                   | 200 | 137 | 97,0  | 10 913 315  | 456,20 |
| 32,50 - 33,49 | 32                   | 210 | 144 | 100,5 | 10 913 325  | 515,90 |
| 33,50 - 34,49 | 32                   | 215 | 148 | 103,5 | 10 913 335  | 515,90 |
| 34,50 - 35,49 | 32                   | 220 | 153 | 106,5 | 10 913 345  | 515,90 |
| 35,50 - 37,49 | 32                   | 227 | 161 | 112,5 | 10 913 355  | 592,40 |
| 37,50 - 39,49 | 32                   | 237 | 170 | 118,5 | 10 913 375  | 615,60 |
| 39,50 - 41,00 | 32                   | 247 | 178 | 124,5 | 10 913 395  | 630,20 |

WTX – Holder for Exchangeable drills

▲ with radial teeth



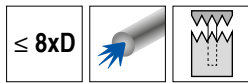
WNT \ Performance



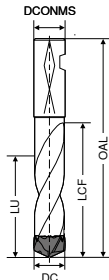
| DC            | DCONMS <sub>h6</sub> | OAL | LCF | LU    | Article no. |        |
|---------------|----------------------|-----|-----|-------|-------------|--------|
| mm            | mm                   | mm  | mm  | mm    |             | EUR    |
| 12,00 - 12,49 | 14                   | 125 | 78  | 62,0  | 10 915 120  | 250,60 |
| 12,50 - 12,99 | 14                   | 130 | 81  | 65,0  | 10 915 125  | 250,60 |
| 13,00 - 13,49 | 14                   | 130 | 84  | 67,0  | 10 915 130  | 250,60 |
| 13,50 - 13,99 | 16                   | 140 | 88  | 70,0  | 10 915 135  | 250,60 |
| 14,00 - 14,49 | 16                   | 140 | 90  | 72,0  | 10 915 140  | 250,60 |
| 14,50 - 14,99 | 16                   | 145 | 94  | 75,0  | 10 915 145  | 250,60 |
| 15,00 - 15,49 | 16                   | 145 | 96  | 77,0  | 10 915 150  | 250,60 |
| 15,50 - 16,49 | 20                   | 160 | 103 | 82,0  | 10 915 161  | 269,50 |
| 15,50 - 16,49 | 18                   | 155 | 103 | 82,0  | 10 915 160  | 269,50 |
| 16,50 - 17,49 | 18                   | 160 | 109 | 87,0  | 10 915 165  | 269,50 |
| 16,50 - 17,49 | 20                   | 165 | 109 | 87,0  | 10 915 166  | 269,50 |
| 17,50 - 18,49 | 20                   | 170 | 115 | 92,0  | 10 915 176  | 269,50 |
| 17,50 - 18,49 | 18                   | 165 | 115 | 92,0  | 10 915 175  | 269,50 |
| 18,50 - 19,49 | 20                   | 175 | 121 | 97,0  | 10 915 185  | 313,50 |
| 19,50 - 20,49 | 20                   | 180 | 128 | 102,0 | 10 915 195  | 313,50 |
| 20,50 - 21,49 | 25                   | 195 | 134 | 107,0 | 10 915 205  | 341,80 |
| 21,50 - 22,49 | 25                   | 200 | 140 | 112,0 | 10 915 215  | 341,80 |
| 22,50 - 23,49 | 25                   | 205 | 146 | 117,0 | 10 915 225  | 370,10 |
| 23,50 - 24,49 | 25                   | 210 | 152 | 122,0 | 10 915 235  | 370,10 |
| 24,50 - 25,49 | 25                   | 220 | 159 | 127,0 | 10 915 245  | 397,40 |
| 25,50 - 26,49 | 25                   | 225 | 165 | 132,0 | 10 915 255  | 397,40 |
| 26,50 - 27,49 | 25                   | 230 | 171 | 137,0 | 10 915 265  | 397,40 |
| 27,50 - 28,49 | 25                   | 240 | 177 | 142,0 | 10 915 275  | 397,40 |
| 28,50 - 29,49 | 32                   | 250 | 183 | 146,0 | 10 915 285  | 456,20 |
| 29,50 - 30,49 | 32                   | 255 | 190 | 152,0 | 10 915 295  | 456,20 |
| 30,50 - 31,49 | 32                   | 260 | 196 | 157,0 | 10 915 305  | 498,00 |
| 31,50 - 32,49 | 32                   | 265 | 202 | 162,0 | 10 915 315  | 498,00 |
| 32,50 - 33,49 | 32                   | 275 | 210 | 167,5 | 10 915 325  | 583,00 |
| 33,50 - 34,49 | 32                   | 285 | 217 | 172,5 | 10 915 335  | 583,00 |
| 34,50 - 35,49 | 32                   | 290 | 224 | 177,5 | 10 915 345  | 583,00 |
| 35,50 - 37,49 | 32                   | 302 | 236 | 187,5 | 10 915 355  | 655,40 |
| 37,50 - 39,49 | 32                   | 317 | 249 | 197,5 | 10 915 375  | 680,50 |
| 39,50 - 41,00 | 32                   | 327 | 261 | 207,5 | 10 915 395  | 695,20 |

WTX – Holder for Exchangeable drills

▲ with radial teeth



WNT \ Performance



| DC            | DCONMS <sub>h6</sub> | OAL | LCF | LU  | Article no. |        |
|---------------|----------------------|-----|-----|-----|-------------|--------|
| mm            | mm                   | mm  | mm  | mm  |             | EUR    |
| 12,00 - 12,49 | 14                   | 165 | 116 | 100 | 10 918 120  | 307,30 |
| 12,50 - 12,99 | 14                   | 170 | 121 | 104 | 10 918 125  | 307,30 |
| 13,00 - 13,49 | 14                   | 175 | 126 | 108 | 10 918 130  | 307,30 |
| 13,50 - 13,99 | 16                   | 180 | 129 | 111 | 10 918 135  | 307,30 |
| 14,00 - 14,49 | 16                   | 185 | 134 | 115 | 10 918 140  | 307,30 |
| 14,50 - 14,99 | 16                   | 190 | 139 | 120 | 10 918 145  | 307,30 |
| 15,00 - 15,49 | 16                   | 195 | 144 | 124 | 10 918 150  | 307,30 |
| 15,50 - 16,49 | 20                   | 210 | 152 | 131 | 10 918 161  | 313,50 |
| 15,50 - 16,49 | 18                   | 205 | 152 | 131 | 10 918 160  | 313,50 |
| 16,50 - 17,49 | 20                   | 220 | 161 | 138 | 10 918 166  | 313,50 |
| 16,50 - 17,49 | 18                   | 215 | 161 | 138 | 10 918 165  | 313,50 |
| 17,50 - 18,49 | 18                   | 220 | 171 | 147 | 10 918 175  | 313,50 |
| 17,50 - 18,49 | 20                   | 225 | 171 | 147 | 10 918 176  | 313,50 |
| 18,50 - 19,49 | 20                   | 235 | 180 | 155 | 10 918 185  | 356,60 |
| 19,50 - 20,49 | 20                   | 240 | 189 | 163 | 10 918 195  | 356,60 |
| 20,50 - 21,49 | 25                   | 260 | 198 | 170 | 10 918 205  | 385,90 |
| 21,50 - 22,49 | 25                   | 270 | 207 | 178 | 10 918 215  | 385,90 |
| 22,50 - 23,49 | 25                   | 275 | 217 | 187 | 10 918 225  | 427,90 |
| 23,50 - 24,49 | 25                   | 285 | 226 | 194 | 10 918 235  | 427,90 |
| 24,50 - 25,49 | 25                   | 295 | 235 | 202 | 10 918 245  | 483,40 |
| 25,50 - 26,49 | 25                   | 305 | 244 | 210 | 10 918 255  | 483,40 |
| 26,50 - 27,49 | 25                   | 315 | 253 | 218 | 10 918 265  | 483,40 |
| 27,50 - 28,49 | 25                   | 325 | 263 | 226 | 10 918 275  | 483,40 |
| 28,50 - 29,49 | 32                   | 340 | 272 | 234 | 10 918 285  | 554,70 |
| 29,50 - 30,49 | 32                   | 345 | 281 | 242 | 10 918 295  | 554,70 |
| 30,50 - 31,49 | 32                   | 355 | 290 | 249 | 10 918 305  | 612,40 |
| 31,50 - 32,00 | 32                   | 360 | 299 | 257 | 10 918 315  | 612,40 |

Drilling Head for Exchangeable drills can be found on → Page 16.

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

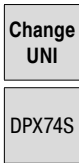
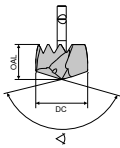
$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
D = Diameter

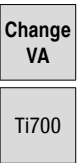


WTX – Drilling Head for Exchangeable drills

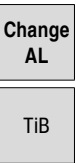
▲ extra long head type



140°  
Solid carbide



138°  
Solid carbide



140°  
Solid carbide

| DC<br>h7/m7 | OAL  | Article no.  |        | Article no. |        | Article no. |        |
|-------------|------|--------------|--------|-------------|--------|-------------|--------|
|             |      |              | EUR    |             | EUR    |             | EUR    |
| mm          | mm   |              |        |             |        |             |        |
| 12,0        | 10,7 | 10 919 12000 | 82,77  | 10 921 120  | 82,77  | 10 922 120  | 82,77  |
| 12,1        | 10,7 | 10 919 12100 | 82,77  | 10 921 121  | 82,77  | 10 922 121  | 82,77  |
| 12,2        | 10,7 | 10 919 12200 | 82,77  | 10 921 122  | 82,77  | 10 922 122  | 82,77  |
| 12,3        | 10,7 | 10 919 12300 | 82,77  | 10 921 123  | 82,77  | 10 922 123  | 82,77  |
| 12,4        | 10,7 | 10 919 12400 | 82,77  | 10 921 124  | 82,77  | 10 922 124  | 82,77  |
| 12,5        | 10,7 | 10 919 12500 | 82,77  | 10 921 125  | 82,77  | 10 922 125  | 82,77  |
| 12,6        | 10,7 | 10 919 12600 | 82,77  | 10 921 126  | 82,77  | 10 922 126  | 82,77  |
| 12,7        | 10,7 | 10 919 12700 | 82,77  | 10 921 127  | 82,77  | 10 922 127  | 82,77  |
| 12,8        | 10,7 | 10 919 12800 | 82,77  | 10 921 128  | 82,77  | 10 922 128  | 82,77  |
| 12,9        | 10,7 | 10 919 12900 | 82,77  | 10 921 129  | 82,77  | 10 922 129  | 82,77  |
| 13,0        | 10,7 | 10 919 13000 | 82,77  | 10 921 130  | 82,77  | 10 922 130  | 82,77  |
| 13,1        | 10,7 | 10 919 13100 | 82,77  | 10 921 131  | 82,77  | 10 922 131  | 82,77  |
| 13,2        | 10,7 | 10 919 13200 | 82,77  | 10 921 132  | 82,77  | 10 922 132  | 82,77  |
| 13,3        | 10,7 | 10 919 13300 | 82,77  | 10 921 133  | 82,77  | 10 922 133  | 82,77  |
| 13,4        | 10,7 | 10 919 13400 | 82,77  | 10 921 134  | 82,77  | 10 922 134  | 82,77  |
| 13,5        | 11,3 | 10 919 13500 | 82,77  | 10 921 135  | 82,77  | 10 922 135  | 82,77  |
| 13,6        | 11,3 | 10 919 13600 | 82,77  | 10 921 136  | 82,77  | 10 922 136  | 82,77  |
| 13,7        | 11,3 | 10 919 13700 | 82,77  | 10 921 137  | 82,77  | 10 922 137  | 82,77  |
| 13,8        | 11,3 | 10 919 13800 | 82,77  | 10 921 138  | 82,77  | 10 922 138  | 82,77  |
| 13,9        | 11,3 | 10 919 13900 | 82,77  | 10 921 139  | 82,77  | 10 922 139  | 82,77  |
| 14,0        | 11,3 | 10 919 14000 | 82,77  | 10 921 140  | 82,77  | 10 922 140  | 82,77  |
| 14,1        | 11,3 | 10 919 14100 | 82,77  | 10 921 141  | 82,77  | 10 922 141  | 82,77  |
| 14,2        | 11,3 | 10 919 14200 | 82,77  | 10 921 142  | 82,77  | 10 922 142  | 82,77  |
| 14,3        | 11,3 | 10 919 14300 | 82,77  | 10 921 143  | 82,77  | 10 922 143  | 82,77  |
| 14,4        | 11,3 | 10 919 14400 | 82,77  | 10 921 144  | 82,77  | 10 922 144  | 82,77  |
| 14,5        | 11,3 | 10 919 14500 | 82,77  | 10 921 145  | 82,77  | 10 922 145  | 82,77  |
| 14,6        | 11,3 | 10 919 14600 | 82,77  | 10 921 146  | 82,77  | 10 922 146  | 82,77  |
| 14,7        | 11,3 | 10 919 14700 | 82,77  | 10 921 147  | 82,77  | 10 922 147  | 82,77  |
| 14,8        | 11,3 | 10 919 14800 | 82,77  | 10 921 148  | 82,77  | 10 922 148  | 82,77  |
| 14,9        | 11,3 | 10 919 14900 | 82,77  | 10 921 149  | 82,77  | 10 922 149  | 82,77  |
| 15,0        | 11,3 | 10 919 15000 | 82,77  | 10 921 150  | 82,77  | 10 922 150  | 82,77  |
| 15,1        | 11,3 | 10 919 15100 | 82,77  | 10 921 151  | 82,77  | 10 922 151  | 82,77  |
| 15,2        | 11,3 | 10 919 15200 | 82,77  | 10 921 152  | 82,77  | 10 922 152  | 82,77  |
| 15,3        | 11,3 | 10 919 15300 | 82,77  | 10 921 153  | 82,77  | 10 922 153  | 82,77  |
| 15,4        | 11,3 | 10 919 15400 | 82,77  | 10 921 154  | 82,77  | 10 922 154  | 82,77  |
| 15,5        | 11,9 | 10 919 15500 | 82,77  | 10 921 155  | 82,77  | 10 922 155  | 82,77  |
| 15,6        | 11,9 | 10 919 15600 | 86,41  | 10 921 156  | 86,41  | 10 922 156  | 86,41  |
| 15,7        | 11,9 | 10 919 15700 | 86,41  | 10 921 157  | 86,41  | 10 922 157  | 86,41  |
| 15,8        | 11,9 | 10 919 15800 | 86,41  | 10 921 158  | 86,41  | 10 922 158  | 86,41  |
| 15,9        | 11,9 | 10 919 15900 | 86,41  | 10 921 159  | 86,41  | 10 922 159  | 86,41  |
| 16,0        | 11,9 | 10 919 16000 | 86,41  | 10 921 160  | 86,41  | 10 922 160  | 86,41  |
| 16,1        | 11,9 | 10 919 16100 | 86,41  | 10 921 161  | 86,41  | 10 922 161  | 86,41  |
| 16,2        | 11,9 | 10 919 16200 | 86,41  | 10 921 162  | 86,41  | 10 922 162  | 86,41  |
| 16,3        | 11,9 | 10 919 16300 | 86,41  | 10 921 163  | 86,41  | 10 922 163  | 86,41  |
| 16,4        | 11,9 | 10 919 16400 | 86,41  | 10 921 164  | 86,41  | 10 922 164  | 86,41  |
| 16,5        | 13,4 | 10 919 16500 | 86,41  | 10 921 165  | 86,41  | 10 922 165  | 86,41  |
| 16,6        | 13,4 | 10 919 16600 | 86,41  | 10 921 166  | 86,41  | 10 922 166  | 86,41  |
| 16,7        | 13,4 | 10 919 16700 | 86,41  | 10 921 167  | 86,41  | 10 922 167  | 86,41  |
| 16,8        | 13,4 | 10 919 16800 | 86,41  | 10 921 168  | 86,41  | 10 922 168  | 86,41  |
| 16,9        | 13,4 | 10 919 16900 | 86,41  | 10 921 169  | 86,41  | 10 922 169  | 86,41  |
| 17,0        | 13,4 | 10 919 17000 | 86,41  | 10 921 170  | 86,41  | 10 922 170  | 86,41  |
| 17,1        | 13,4 | 10 919 17100 | 86,41  | 10 921 171  | 86,41  | 10 922 171  | 86,41  |
| 17,2        | 13,4 | 10 919 17200 | 86,41  | 10 921 172  | 86,41  | 10 922 172  | 86,41  |
| 17,3        | 13,4 | 10 919 17300 | 86,41  | 10 921 173  | 86,41  | 10 922 173  | 86,41  |
| 17,4        | 13,4 | 10 919 17400 | 86,41  | 10 921 174  | 86,41  | 10 922 174  | 86,41  |
| 17,5        | 13,4 | 10 919 17500 | 86,41  | 10 921 175  | 86,41  | 10 922 175  | 86,41  |
| 17,6        | 13,4 | 10 919 17600 | 86,41  | 10 921 176  | 86,41  | 10 922 176  | 86,41  |
| 17,7        | 13,4 | 10 919 17700 | 86,41  | 10 921 177  | 86,41  | 10 922 177  | 86,41  |
| 17,8        | 13,4 | 10 919 17800 | 86,41  | 10 921 178  | 86,41  | 10 922 178  | 86,41  |
| 17,9        | 13,4 | 10 919 17900 | 86,41  | 10 921 179  | 86,41  | 10 922 179  | 86,41  |
| 18,0        | 13,4 | 10 919 18000 | 86,41  | 10 921 180  | 86,41  | 10 922 180  | 86,41  |
| 18,1        | 13,4 | 10 919 18100 | 93,57  | 10 921 181  | 93,57  | 10 922 181  | 93,57  |
| 18,2        | 13,4 | 10 919 18200 | 93,57  | 10 921 182  | 93,57  | 10 922 182  | 93,57  |
| 18,3        | 13,4 | 10 919 18300 | 93,57  | 10 921 183  | 93,57  | 10 922 183  | 93,57  |
| 18,4        | 13,4 | 10 919 18400 | 93,57  | 10 921 184  | 93,57  | 10 922 184  | 93,57  |
| 18,5        | 13,4 | 10 919 18500 | 93,57  | 10 921 185  | 93,57  | 10 922 185  | 93,57  |
| 18,6        | 13,4 | 10 919 18600 | 93,57  | 10 921 186  | 93,57  | 10 922 186  | 93,57  |
| 18,7        | 13,4 | 10 919 18700 | 93,57  | 10 921 187  | 93,57  | 10 922 187  | 93,57  |
| 18,8        | 13,4 | 10 919 18800 | 93,57  | 10 921 188  | 93,57  | 10 922 188  | 93,57  |
| 18,9        | 13,4 | 10 919 18900 | 93,57  | 10 921 189  | 93,57  | 10 922 189  | 93,57  |
| 19,0        | 13,4 | 10 919 19000 | 93,57  | 10 921 190  | 93,57  | 10 922 190  | 93,57  |
| 19,1        | 13,4 | 10 919 19100 | 93,57  | 10 921 191  | 93,57  | 10 922 191  | 93,57  |
| 19,2        | 13,4 | 10 919 19200 | 93,57  | 10 921 192  | 93,57  | 10 922 192  | 93,57  |
| 19,3        | 13,4 | 10 919 19300 | 93,57  | 10 921 193  | 93,57  | 10 922 193  | 93,57  |
| 19,4        | 13,4 | 10 919 19400 | 93,57  | 10 921 194  | 93,57  | 10 922 194  | 93,57  |
| 19,5        | 13,4 | 10 919 19500 | 93,57  | 10 921 195  | 93,57  | 10 922 195  | 93,57  |
| 19,6        | 13,4 | 10 919 19600 | 93,57  | 10 921 196  | 93,57  | 10 922 196  | 93,57  |
| 19,7        | 13,4 | 10 919 19700 | 93,57  | 10 921 197  | 93,57  | 10 922 197  | 93,57  |
| 19,8        | 13,4 | 10 919 19800 | 93,57  | 10 921 198  | 93,57  | 10 922 198  | 93,57  |
| 19,9        | 13,4 | 10 919 19900 | 93,57  | 10 921 199  | 93,57  | 10 922 199  | 93,57  |
| 20,0        | 13,4 | 10 919 20000 | 93,57  | 10 921 200  | 93,57  | 10 922 200  | 93,57  |
| 20,1        | 13,4 | 10 919 20100 | 103,80 | 10 921 201  | 103,80 | 10 922 201  | 103,80 |
| 20,2        | 13,4 | 10 919 20200 | 103,80 | 10 921 202  | 103,80 | 10 922 202  | 103,80 |
| 20,3        | 13,4 | 10 919 20300 | 103,80 | 10 921 203  | 103,80 | 10 922 203  | 103,80 |
| 20,4        | 13,4 | 10 919 20400 | 103,80 | 10 921 204  | 103,80 | 10 922 204  | 103,80 |
| 20,5        | 15,4 | 10 919 20500 | 103,80 | 10 921 205  | 103,80 | 10 922 205  | 103,80 |
| 20,6        | 15,4 | 10 919 20600 | 103,80 | 10 921 206  | 103,80 | 10 922 206  | 103,80 |
| 20,7        | 15,4 | 10 919 20700 | 103,80 | 10 921 207  | 103,80 | 10 922 207  | 103,80 |
| 20,8        | 15,4 | 10 919 20800 | 103,80 | 10 921 208  | 103,80 | 10 922 208  | 103,80 |
| 20,9        | 15,4 | 10 919 20900 | 103,80 | 10 921 209  | 103,80 | 10 922 209  | 103,80 |
| 21,0        | 15,4 | 10 919 21000 | 103,80 | 10 921 210  | 103,80 | 10 922 210  | 103,80 |
| 21,1        | 15,4 | 10 919 21100 | 103,80 | 10 921 211  | 103,80 | 10 922 211  | 103,80 |
| 21,2        | 15,4 | 10 919 21200 | 103,80 | 10 921 212  | 103,80 | 10 922 212  | 103,80 |
| 21,3        | 15,4 | 10 919 21300 | 103,80 | 10 921 213  | 103,80 | 10 922 213  | 103,80 |
| 21,4        | 15,4 | 10 919 21400 | 103,80 | 10 921 214  | 103,80 | 10 922 214  | 103,80 |
| 21,5        | 15,4 | 10 919 21500 | 103,80 | 10 921 215  | 103,80 | 10 922 215  | 103,80 |
| 21,6        | 15,4 | 10 919 21600 | 103,80 | 10 921 216  | 103,80 | 10 922 216  | 103,80 |
| 21,7        | 15,4 | 10 919 21700 | 103,80 | 10 921 217  | 103,80 | 10 922 217  | 103,80 |
| 21,8        | 15,4 | 10 919 21800 | 103,80 | 10 921 218  | 103,80 | 10 922 218  | 103,80 |
| 21,9        | 15,4 | 10 919 21900 | 103,80 | 10 921 219  | 103,80 | 10 922 219  | 103,80 |
| 22,0        | 15,4 | 10 919 22000 | 103,80 | 10 921 220  | 103,80 | 10 922 220  | 103,80 |
| 22,1        | 15,4 | 10 919 22100 | 112,40 | 10 921 221  | 112,40 | 10 922 221  | 112,40 |
| 22,2        | 15,4 | 10 919 22200 | 112,40 | 10 921 222  | 112,40 | 10 922 222  | 112,40 |
| 22,3        | 15,4 | 10 919 22300 | 112,40 | 10 921 223  | 112,40 | 10 922 223  | 112,40 |

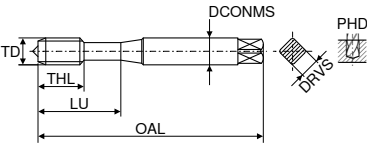
| DC<br>h7/m7           | OAL  | Article no.  |        | Article no. |        | Article no. |        |
|-----------------------|------|--------------|--------|-------------|--------|-------------|--------|
|                       |      |              | EUR    |             | EUR    |             | EUR    |
| mm                    | mm   |              |        |             |        |             |        |
| 22,4                  | 15,4 | 10 919 22400 | 112,40 | 10 921 224  | 112,40 | 10 922 224  | 112,40 |
| 22,5                  | 15,4 | 10 919 22500 | 112,40 | 10 921 225  | 112,40 | 10 922 225  | 112,40 |
| 22,6                  | 15,4 | 10 919 22600 | 112,40 | 10 921 226  | 112,40 | 10 922 226  | 112,40 |
| 22,7                  | 15,4 | 10 919 22700 | 112,40 | 10 921 227  | 112,40 | 10 922 227  | 112,40 |
| 22,8                  | 15,4 | 10 919 22800 | 112,40 | 10 921 228  | 112,40 | 10 922 228  | 112,40 |
| 22,9                  | 15,4 | 10 919 22900 | 112,40 | 10 921 229  | 112,40 | 10 922 229  | 112,40 |
| 23,0                  | 15,4 | 10 919 23000 | 112,40 | 10 921 230  | 112,40 | 10 922 230  | 112,40 |
| 23,1                  | 15,4 | 10 919 23100 | 112,40 | 10 921 231  | 112,40 | 10 922 231  | 112,40 |
| 23,2                  | 15,4 | 10 919 23200 | 112,40 | 10 921 232  | 112,40 | 10 922 232  | 112,40 |
| 23,3                  | 15,4 | 10 919 23300 | 112,40 | 10 921 233  | 112,40 | 10 922 233  | 112,40 |
| 23,4                  | 15,4 | 10 919 23400 | 112,40 | 10 921 234  | 112,40 | 10 922 234  | 112,40 |
| 23,5                  | 15,4 | 10 919 23500 | 112,40 | 10 921 235  | 112,40 | 10 922 235  | 112,40 |
| 23,6                  | 15,4 | 10 919 23600 | 112,40 | 10 921 236  | 112,40 | 10 922 236  | 112,40 |
| 23,7                  | 15,4 | 10 919 23700 | 112,40 | 10 921 237  | 112,40 | 10 922 237  | 112,40 |
| 23,8                  | 15,4 | 10 919 23800 | 112,40 | 10 921 238  | 112,40 | 10 922 238  | 112,40 |
| 23,9                  | 15,4 | 10 919 23900 | 112,40 | 10 921 239  | 112,40 | 10 922 239  | 112,40 |
| 24,0                  | 15,4 | 10 919 24000 | 112,40 | 10 921 240  | 112,40 | 10 922 240  | 112,40 |
| 24,1                  | 15,4 | 10 919 24100 | 123,50 | 10 921 241  | 123,50 | 10 922 241  | 123,50 |
| 24,2                  | 15,4 | 10 919 24200 | 123,50 | 10 921 242  | 123,50 | 10 922 242  | 123,50 |
| 24,3                  | 15,4 | 10 919 24300 | 123,50 | 10 921 243  | 123,50 | 10 922 243  | 123,50 |
| 24,4                  | 15,4 | 10 919 24400 | 123,50 | 10 921 244  | 123,50 | 10 922 244  | 123,50 |
| 24,5                  | 17,4 | 10 919 24500 | 123,50 | 10 921 245  | 123,50 | 10 922 245  | 123,50 |
| 24,6                  | 17,4 | 10 919 24600 | 123,50 | 10 921 246  | 123,50 | 10 922 246  | 123,50 |
| 24,7                  | 17,4 | 10 919 24700 | 123,50 | 10 921 247  | 123,50 | 10 922 247  | 123,50 |
| 24,8                  | 17,4 | 10 919 24800 | 123,50 | 10 921 248  | 123,50 | 10 922 248  | 123,50 |
| 24,9                  | 17,4 | 10 919 24900 | 123,50 | 10 921 249  | 123,50 | 10 922 249  | 123,50 |
| 25,0                  | 17,4 | 10 919 25000 | 123,50 | 10 921 250  | 123,50 | 10 922 250  | 123,50 |
| 25,1                  | 17,4 | 10 919 25100 | 123,50 | 10 921 251  | 123,50 | 10 922 251  | 123,50 |
| 25,2                  | 17,4 | 10 919 25200 | 123,50 | 10 921 252  | 123,50 | 10 922 252  | 123,50 |
| 25,3                  | 17,4 | 10 919 25300 | 123,50 | 10 921 253  | 123,50 | 10 922 253  | 123,50 |
| 25,4                  | 17,4 | 10 919 25400 | 123,50 | 10 921 254  | 123,50 | 10 922 254  | 123,50 |
| 25,5                  | 17,4 | 10 919 25500 | 123,50 | 10 921 255  | 123,50 | 10 922 255  | 123,50 |
| 25,6                  | 17,4 | 10 919 25600 | 130,00 | 10 921 256  | 130,00 | 10 922 256  | 130,00 |
| 25,7                  | 17,4 | 10 919 25700 | 130,00 | 10 921 257  | 130,00 | 10 922 257  | 130,00 |
| 25,8                  | 17,4 | 10 919 25800 | 130,00 | 10 921 258  | 130,00 | 10 922 258  | 130,00 |
| 25,9                  | 17,4 | 10 919 25900 | 130,00 | 10 921 259  | 130,00 | 10 922 259  | 130,00 |
| 26,0                  | 17,4 | 10 919 26000 | 130,00 | 10 921 260  | 130,00 | 10 922 260  | 130,00 |
| 26,1                  | 17,4 | 10 919 26100 | 130,00 | 10 921 261  | 130,00 | 10 922 261  | 130,00 |
| 26,2                  | 17,4 | 10 919 26200 | 130,00 | 10 921 262  | 130,00 | 10 922 262  | 130,00 |
| 26,3                  | 17,4 | 10 919 26300 | 130,00 | 10 921 263  | 130,00 | 10 922 263  | 130,00 |
| 26,4                  | 17,4 | 10 919 26400 | 130,00 | 10 921 264  | 130,00 | 10 922 264  | 130,00 |
| 26,5                  | 17,4 | 10 919 26500 | 130,00 | 10 921 265  | 130,00 | 10 922 265  | 130,00 |
| 26,6                  | 17,4 | 10 919 26600 | 130,00 | 10 921 266  | 130,00 | 10 922 266  | 130,00 |
| 26,7                  | 17,4 | 10 919 26700 | 130,00 | 10 921 267  | 130,00 | 10 922 267  | 130,00 |
| 26,8                  | 17,4 | 10 919 26800 | 130,00 | 10 921 268  | 130,00 | 10 922 268  | 130,00 |
| 26,9                  | 17,4 | 10 919 26900 | 130,00 | 10 921 269  | 130,00 | 10 922 269  | 130,00 |
| 27,0                  | 17,4 | 10 919 27000 | 130,00 | 10 921 270  | 130,00 | 10 922 270  | 130,00 |
| 27,1                  | 17,4 | 10 919 27100 | 130,00 | 10 921 271  | 130,00 | 10 922 271  | 130,00 |
| 27,2                  | 17,4 | 10 919 27200 | 130,00 | 10 921 272  | 130,00 | 10 922 272  | 130,00 |
| 27,3                  | 17,4 | 10 919 27300 | 130,00 | 10 921 273  | 130,00 | 10 922 273  | 130,00 |
| 27,4                  | 17,4 | 10 919 27400 | 130,00 | 10 921 274  | 130,00 | 10 922 274  | 130,00 |
| 27,5                  | 17,4 | 10 919 27500 | 130,00 | 10 921 275  | 130,00 | 10 922 275  | 130,00 |
| 27,6                  | 17,4 | 10 919 27600 | 130,00 | 10 921 276  | 130,00 | 10 922 276  | 130,00 |
| 27,7                  | 17,4 | 10 919 27700 | 130,00 | 10 921 277  | 130,00 | 10 922 277  | 130,00 |
| 27,8                  | 17,4 | 10 919 27800 | 130,00 | 10 921 278  | 130,00 | 10 922 278  | 130,00 |
| 27,9                  | 17,4 | 10 919 27900 | 130,00 | 10 921 279  | 130,00 | 10 922 279  | 130,00 |
| 28,0                  | 17,4 | 10 919 28000 | 130,00 | 10 921 280  | 130,00 | 10 922 280  | 130,00 |
| 28,1                  | 17,4 | 10 919 28100 | 142,30 | 10 921 281  | 142,30 | 10 922 281  | 142,30 |
| 28,2                  | 17,4 | 10 919 28200 | 142,30 | 10 921 282  | 142,30 | 10 922 282  | 142,30 |
| 28,3                  | 17,4 | 10 919 28300 | 142,30 | 10 921 283  | 142,30 | 10 922 283  | 142,30 |
| 28,4                  | 17,4 | 10 919 28400 | 142,30 | 10 921 284  | 142,30 | 10 922 284  | 142,30 |
| 28,5                  | 18,4 | 10 919 28500 | 142,30 | 10 921 285  | 142,30 | 10 922 285  | 142,30 |
| 28,6                  | 18,4 | 10 919 28600 | 142,30 | 10 921 286  | 142,30 | 10 922 286  | 142,30 |
| 28,7                  | 18,4 | 10 919 28700 | 142,30 | 10 921 287  | 142,30 | 10 922 287  | 142,30 |
| 28,8                  | 18,4 | 10 919 28800 | 142,30 | 10 921 288  | 142,30 | 10 922 288  | 142,30 |
| 28,9                  | 18,4 | 10 919 28900 | 142,30 | 10 921 289  | 142,30 | 10 922 289  | 142,30 |
| 29,0                  | 18,4 | 10 919 29000 | 142,30 | 10 921 290  | 142,30 | 10 922 290  | 142,30 |
| 29,1                  | 18,4 | 10 919 29100 | 142,30 | 10 921 291  | 142,30 | 10 922 291  | 142,30 |
| 29,2                  | 18,4 | 10 919 29200 | 142,30 | 10 921 292  | 142,30 | 10 922 292  | 142,30 |
| 29,3                  | 18,4 | 10 919 29300 | 142,30 | 10 921 293  | 142,30 | 10 922 293  | 142,30 |
| 29,4                  | 18,4 | 10 919 29400 | 142,30 | 10 921 294  | 142,30 | 10 922 294  | 142,30 |
| 29,5                  | 18,4 | 10 919 29500 | 142,30 | 10 921 295  | 142,30 | 10 922 295  | 142,30 |
| 29,6                  | 18,4 | 10 919 29600 | 142,30 | 10 921 296  | 142,30 | 10 922 296  | 142,30 |
| 29,7                  | 18,4 | 10 919 29700 | 142,30 | 10 921 297  | 142,30 | 10 922 297  | 142,30 |
| 29,8                  | 18,4 | 10 919 29800 | 142,30 | 10 921 298  | 142,30 | 10 922 298  | 142,30 |
| 29,9                  | 18,4 | 10 919 29900 | 142,30 | 10 921 299  | 142,30 | 10 922 299  | 142,30 |
| 30,0                  | 18,4 | 10 919 30000 | 142,30 | 10 921 300  | 142,30 | 10 922 300  | 142,30 |
| 30,1                  | 18,4 | 10 919 30100 | 157,60 | 10 921 301  | 157,60 | 10 922 301  | 157,60 |
| 30,2                  | 18,4 | 10 919 30200 | 157,60 | 10 921 302  | 157,60 | 10 922 302  | 157,60 |
| 30,3                  | 18,4 | 10 919 30300 | 157,60 | 10 921 303  | 157,60 | 10 922 303  | 157,60 |
| 30,4                  | 18,4 | 10 919 30400 | 157,60 | 10 921 304  | 157,60 | 10 922 304  | 157,60 |
| 30,5                  | 18,4 | 10 919 30500 | 157,60 | 10 921 305  | 157,60 | 10 922 305  | 157,60 |
| 30,6                  | 18,4 | 10 919 30600 | 157,60 | 10 921 306  | 157,60 | 10 922 306  | 157,60 |
| 30,7                  | 18,4 | 10 919 30700 | 157,60 | 10 921 307  | 157,60 | 10 922 307  | 157,60 |
| 30,8                  | 18,4 | 10 919 30800 | 157,60 | 10 921 308  | 157,60 | 10 922 308  | 157,60 |
| 30,9                  | 18,4 | 10 919 30900 | 157,60 | 10 921 309  | 157,60 | 10 922 309  | 157,60 |
| 31,0                  | 18,4 | 10 919 31000 | 157,60 | 10 921 310  | 157,60 | 10 922 310  | 157,60 |
| 31,1                  | 18,4 | 10 919 31100 | 157,60 | 10 921 311  | 157,60 | 10 922 311  | 157,60 |
| 31,2                  | 18,4 | 10 919 31200 | 157,60 | 10 921 312  | 157,60 | 10 922 312  | 157,60 |
| 31,3                  | 18,4 | 10 919 31300 | 157,60 | 10 921 313  | 157,60 | 10 922 313  | 157,60 |
| 31,4                  | 18,4 | 10 919 31400 | 157,60 | 10 921 314  | 157,60 | 10 922 314  | 157,60 |
| 31,5                  | 18,4 | 10 919 31500 | 157,60 | 10 921 315  | 157,60 | 10 922 315  | 157,60 |
| 31,6                  | 18,4 | 10 919 31600 | 157,60 | 10 921 316  | 157,60 | 10 922 316  | 157,60 |
| 31,7                  | 18,4 | 10 919 31700 | 157,60 | 10 921 317  | 157,60 | 10 922 317  | 157,60 |
| 31,8                  | 18,4 | 10 919 31800 | 157,60 | 10 921 318  | 157,60 | 10 922 318  | 157,60 |
| 31,9                  | 18,4 | 10 919 31900 | 157,60 | 10 921 319  | 157,60 | 10 922 319  | 157,60 |
| 32,0                  | 18,4 | 10 919 32000 | 157,60 | 10 921 320  | 157,60 | 10 922 320  | 157,60 |
| 32,5                  | 24,3 | 10 919 32500 | 219,30 |             |        |             |        |
| 33,0                  | 24,3 | 10 919 33000 | 219,30 |             |        |             |        |
| 33,5                  | 24,3 | 10 919 33500 | 219,30 |             |        |             |        |
| 34,0                  | 24,3 | 10 919 34000 | 219,30 |             |        |             |        |
| 34,5                  | 24,3 | 10 919 34500 | 219,30 |             |        |             |        |
| 35,0                  | 24,3 | 10 919 35000 | 219,30 |             |        |             |        |
| 35,5                  | 26,3 | 10 919 35500 | 249,10 |             |        |             |        |
| 36,0                  | 26,3 | 10 919 36000 | 249,10 |             |        |             |        |
| 36,5                  | 26,3 | 10 919 36500 | 249,10 |             |        |             |        |
| 37,0                  | 26,3 | 10 919 37000 | 249,10 |             |        |             |        |
| 37,5                  | 26,3 | 10 919 37500 | 249,10 |             |        |             |        |
| 38,0                  | 26,3 | 10 919 38000 | 249,10 |             |        |             |        |
| 38,5                  | 26,3 | 10 919 38500 | 271,10 |             |        |             |        |
| 39,0                  | 26,3 | 10 919 39000 | 271,10 |             |        |             |        |
| 39,5                  | 26,3 | 10 919 39500 | 271,10 |             |        |             |        |
| 40,0                  | 26,3 | 10 919 40000 | 271,10 |             |        |             |        |
| 40,5                  | 26,3 | 10 919 40500 | 271,10 |             |        |             |        |
| 41,0                  | 26,3 | 10 919 41000 | 271,10 |             |        |             |        |
| Steel                 |      | ●            |        | ○           |        |             |        |
| Stainless steel       |      |              |        | ●           |        |             |        |
| Cast iron             |      | ●            |        | ○           |        |             |        |
| Non ferrous metals    |      |              |        |             |        | ●           |        |
| Heat resistant alloys |      |              |        |             |        |             |        |

Through hole – Machine taps, right hand

M

Stabil

WNT \ Performance



DIN 371 with reinforced shank

UNI

B  
4-5

ISO 2  
6H

nitr. +  
vap.

HSS-E

VA

B  
4-5

ISO 2  
6H

nitr.

HSS-E

| TD   | TP   | OAL | DCONMS | DRVS | PHD   | THL | LU | Flutes | Article no.   |        |
|------|------|-----|--------|------|-------|-----|----|--------|---------------|--------|
|      |      |     |        |      |       |     |    |        | EUR           |        |
| M1   | 0,25 | 40  | 2,5    | 2,1  | 0,75  | 5   | 13 | 2      | 22 501 010 1) | 84,86  |
| M1,2 | 0,25 | 40  | 2,5    | 2,1  | 0,95  | 5   | 13 | 2      | 22 501 012 1) | 80,53  |
| M1,4 | 0,30 | 40  | 2,5    | 2,1  | 1,10  | 7   | 13 | 3      | 22 501 014 1) | 72,88  |
| M1,6 | 0,35 | 40  | 2,5    | 2,1  | 1,25  | 8   | 11 | 3      | 22 501 016    | 51,17  |
| M1,7 | 0,35 | 40  | 2,5    | 2,1  | 1,35  | 6   | 11 | 2      | 22 501 017    | 78,73  |
| M1,8 | 0,35 | 40  | 2,5    | 2,1  | 1,45  | 6   | 11 | 2      | 22 501 018    | 108,12 |
| M2   | 0,40 | 45  | 2,8    | 2,1  | 1,60  | 7   | 12 | 2      |               |        |
| M2   | 0,40 | 45  | 2,8    | 2,1  | 1,60  | 8   | 8  | 3      | 22 501 020    | 37,20  |
| M2,2 | 0,45 | 45  | 2,8    | 2,1  | 1,75  | 7   | 12 | 2      | 22 501 022    | 39,64  |
| M2,5 | 0,45 | 50  | 2,8    | 2,1  | 2,05  | 9   | 14 | 2      | 22 501 025    | 36,57  |
| M3   | 0,50 | 56  | 3,5    | 2,7  | 2,50  | 11  | 18 | 3      | 22 501 030    | 27,39  |
| M3,5 | 0,60 | 56  | 4,0    | 3,0  | 2,90  | 12  | 20 | 3      | 22 501 035    | 30,08  |
| M4   | 0,70 | 63  | 4,5    | 3,4  | 3,30  | 13  | 21 | 3      | 22 501 040    | 24,85  |
| M5   | 0,80 | 70  | 6,0    | 4,9  | 4,20  | 15  | 25 | 3      | 22 501 050    | 25,49  |
| M6   | 1,00 | 80  | 6,0    | 4,9  | 5,00  | 17  | 30 | 3      | 22 501 060    | 25,86  |
| M7   | 1,00 | 80  | 7,0    | 5,5  | 6,00  | 17  | 30 | 3      | 22 501 070    | 36,12  |
| M8   | 1,25 | 90  | 8,0    | 6,2  | 6,80  | 20  | 35 | 3      | 22 501 080    | 29,27  |
| M10  | 1,50 | 100 | 10,0   | 8,0  | 8,50  | 22  | 39 | 3      | 22 501 100    | 35,13  |
| M12  | 1,75 | 110 | 12,0   | 9,0  | 10,20 | 24  | 44 | 3      | 22 501 120    | 51,71  |

1) Tol. ISO 1 4H ≤ M1.4

UNI

B  
4-5

ISO 2  
6H

nitr. +  
vap.

HSS-E

VA

B  
4-5

ISO 2  
6H

nitr.

HSS-E

| TD  | TP   | OAL | DCONMS | DRVS | PHD  | THL | Flutes | Article no. |        |
|-----|------|-----|--------|------|------|-----|--------|-------------|--------|
|     |      |     |        |      |      |     |        | EUR         |        |
| M3  | 0,50 | 56  | 2,2    | 2,5  | 2,5  | 11  | 3      | 22 502 030  | 50,71  |
| M4  | 0,70 | 63  | 2,8    | 2,1  | 3,3  | 13  | 3      | 22 502 040  | 33,78  |
| M5  | 0,80 | 70  | 3,5    | 2,7  | 4,2  | 15  | 3      | 22 502 050  | 32,25  |
| M6  | 1,00 | 80  | 4,5    | 3,4  | 5,0  | 17  | 3      | 22 502 060  | 31,62  |
| M8  | 1,25 | 90  | 6,0    | 4,9  | 6,8  | 20  | 3      | 22 502 080  | 34,68  |
| M10 | 1,50 | 100 | 7,0    | 5,5  | 8,5  | 22  | 3      | 22 502 100  | 40,18  |
| M12 | 1,75 | 110 | 9,0    | 7,0  | 10,2 | 24  | 3      | 22 502 120  | 39,28  |
| M14 | 2,00 | 110 | 11,0   | 9,0  | 12,0 | 26  | 3      | 22 502 140  | 56,66  |
| M16 | 2,00 | 110 | 12,0   | 9,0  | 14,0 | 27  | 3      | 22 502 160  | 57,29  |
| M18 | 2,50 | 125 | 14,0   | 11,0 | 15,5 | 30  | 3      | 22 502 180  | 112,63 |
| M20 | 2,50 | 140 | 16,0   | 12,0 | 17,5 | 32  | 3      | 22 502 200  | 87,64  |
| M22 | 2,50 | 140 | 18,0   | 14,5 | 19,5 | 32  | 3      | 22 502 220  | 140,59 |
| M24 | 3,00 | 160 | 18,0   | 14,5 | 21,0 | 34  | 3      | 22 502 240  | 114,41 |
| M27 | 3,00 | 160 | 20,0   | 16,0 | 24,0 | 36  | 3      | 22 502 270  | 159,46 |
| M30 | 3,50 | 180 | 22,0   | 18,0 | 26,5 | 40  | 4      | 22 502 300  | 187,43 |
| M33 | 3,50 | 180 | 25,0   | 20,0 | 29,5 | 40  | 4      | 22 502 330  | 432,40 |
| M36 | 4,00 | 200 | 28,0   | 22,0 | 32,0 | 50  | 4      | 22 502 360  | 515,27 |
| M42 | 4,50 | 200 | 32,0   | 24,0 | 37,5 | 56  | 4      | 22 502 420  | 980,90 |
| M48 | 5,00 | 250 | 36,0   | 29,0 | 43,0 | 65  | 4      | 22 502 480  | 990,25 |

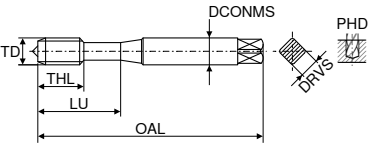
|                       |      |      |
|-----------------------|------|------|
| Steel                 | 6-20 |      |
| Stainless steel       | 4-8  | 5-10 |
| Cast iron             | 6-15 |      |
| Non ferrous metals    |      |      |
| Heat resistant alloys |      |      |
| Hardened materials    |      |      |

Blind hole – Machine taps, right hand

M

Salto-Rex

WNT \ Performance



DIN 371 with reinforced shank

UNI

C  
2-3

ISO 2  
6H

vap.

HSS-E

VA

C  
2-3

ISO 2  
6H

vap.

HSS-E

| TD   | TP   | OAL | DCONMS | DRVS | PHD   | THL  | LU | Flutes | Article no. |       |
|------|------|-----|--------|------|-------|------|----|--------|-------------|-------|
|      |      |     |        |      |       |      |    |        | EUR         |       |
| M2   | 0,40 | 45  | 2,8    | 2,1  | 1,60  | 4,0  | 12 | 2      | 22 518 020  | 28,74 |
| M2,2 | 0,45 | 45  | 2,8    | 2,1  | 1,75  | 4,5  | 12 | 2      | 22 518 022  | 32,52 |
| M2,3 | 0,40 | 45  | 2,8    | 2,1  | 1,90  | 4,5  | 12 | 2      | 22 518 023  | 34,42 |
| M2,5 | 0,45 | 50  | 2,8    | 2,1  | 2,05  | 5,0  | 15 | 2      | 22 518 025  | 27,57 |
| M2,6 | 0,45 | 50  | 2,8    | 2,1  | 2,15  | 5,0  | 15 | 2      | 22 518 026  | 32,78 |
| M3   | 0,50 | 56  | 3,5    | 2,7  | 2,50  | 6,0  | 18 | 3      | 22 518 030  | 24,51 |
| M3,5 | 0,60 | 56  | 4,0    | 3,0  | 2,90  | 7,0  | 20 | 3      | 22 518 035  | 26,49 |
| M4   | 0,70 | 63  | 4,5    | 3,4  | 3,30  | 7,0  | 21 | 3      | 22 518 040  | 25,86 |
| M5   | 0,80 | 70  | 6,0    | 4,9  | 4,20  | 8,0  | 25 | 3      | 22 518 050  | 26,12 |
| M6   | 1,00 | 80  | 6,0    | 4,9  | 5,00  | 10,0 | 30 | 3      | 22 518 060  | 26,94 |
| M7   | 1,00 | 80  | 7,0    | 5,5  | 6,00  | 10,0 | 30 | 3      | 22 518 070  | 39,64 |
| M8   | 1,25 | 90  | 8,0    | 6,2  | 6,80  | 14,0 | 35 | 3      | 22 518 080  | 31,71 |
| M10  | 1,50 | 100 | 10,0   | 8,0  | 8,50  | 16,0 | 39 | 3      | 22 518 100  | 38,01 |
| M12  | 1,75 | 110 | 12,0   | 9,0  | 10,20 | 18,0 | 44 | 3      | 22 518 120  | 41,79 |

UNI

C  
2-3

ISO 2  
6H

vap.

HSS-E

VA

C  
2-3

ISO 2  
6H

vap.

HSS-E

| TD  | TP   | OAL | DCONMS | DRVS | PHD  | THL | Flutes | Article no. |        |
|-----|------|-----|--------|------|------|-----|--------|-------------|--------|
|     |      |     |        |      |      |     |        | EUR         |        |
| M3  | 0,50 | 56  | 2,2    | 2,5  | 2,5  | 6   | 3      | 22 519 030  | 42,79  |
| M4  | 0,70 | 63  | 2,8    | 2,1  | 3,3  | 7   | 3      | 22 519 040  | 40,44  |
| M5  | 0,80 | 70  | 3,5    | 2,7  | 4,2  | 8   | 3      | 22 519 050  | 28,74  |
| M6  | 1,00 | 80  | 4,5    | 3,4  | 5,0  | 10  | 3      | 22 519 060  | 30,27  |
| M8  | 1,25 | 90  | 6,0    | 4,9  | 6,8  | 14  | 3      | 22 519 080  | 33,78  |
| M10 | 1,50 | 100 | 7,0    | 5,5  | 8,5  | 16  | 3      | 22 519 100  | 42,52  |
| M12 | 1,75 | 110 | 9,0    | 7,0  | 10,2 | 18  | 3      | 22 519 120  | 44,59  |
| M14 | 2,00 | 110 | 11,0   | 9,0  | 12,0 | 20  | 3      | 22 519 140  | 59,90  |
| M16 | 2,00 | 110 | 12,0   | 9,0  | 14,0 | 22  | 3      | 22 519 160  | 63,78  |
| M16 | 2,00 | 110 | 12,0   | 9,0  | 14,0 | 22  | 4      |             |        |
| M18 | 2,50 | 125 | 14,0   | 11,0 | 15,5 | 25  | 3      | 22 519 180  | 97,33  |
| M20 | 2,50 | 140 | 16,0   | 12,0 | 17,5 | 25  | 3      | 22 519 200  | 97,33  |
| M20 | 2,50 | 140 | 16,0   | 12,0 | 17,5 | 25  | 4      |             |        |
| M22 | 2,50 | 140 | 18,0   | 14,5 | 19,5 | 27  | 4      | 22 519 220  | 135,15 |
| M22 | 2,50 | 140 | 18,0   | 14,5 | 19,5 | 27  | 5      |             |        |
| M24 | 3,00 | 160 | 18,0   | 14,5 | 21,0 | 30  | 4      | 22 519 240  | 121,64 |
| M24 | 3,00 | 160 | 18,0   | 14,5 | 21,0 | 30  | 5      |             |        |
| M27 | 3,00 | 160 | 20,0   | 16,0 | 24,0 | 30  | 4      | 22 519 270  | 160,40 |
| M30 | 3,50 | 180 | 22,0   | 18,0 | 26,5 | 35  | 4      | 22 519 300  | 206,30 |
| M30 | 3,50 | 180 | 22,0   | 18,0 | 26,5 | 35  | 5      |             |        |
| M33 | 3,50 | 180 | 25,0   | 20,0 | 29,5 | 35  | 4      | 22 519 330  | 395,42 |
| M36 | 4,00 | 200 | 28,0   | 22,0 | 32,0 | 40  | 4      | 22 519 360  | 327,85 |

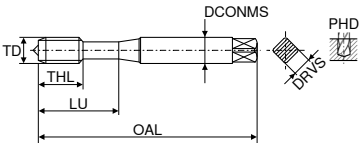
|                       |      |      |
|-----------------------|------|------|
| Steel                 | 6-20 |      |
| Stainless steel       | 4-8  | 5-10 |
| Cast iron             | 6-15 |      |
| Non ferrous metals    |      |      |
| Heat resistant alloys |      |      |
| Hardened materials    |      |      |



Through hole / Blind hole – Machine thread formers, right hand



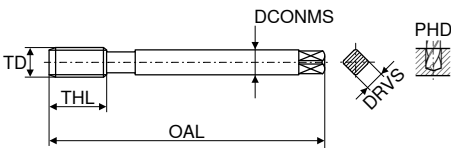
WNT \ Performance



DIN 2174 with reinforced shank

|      |      |     |        |      |      |     |      |        | EC                      |       | EC SN                 |       |
|------|------|-----|--------|------|------|-----|------|--------|-------------------------|-------|-----------------------|-------|
|      |      |     |        |      |      |     |      |        | C<br>2-3                |       | C<br>2-3              |       |
|      |      |     |        |      |      |     |      |        | ISO 2X<br>6HX           |       | ISO 2X<br>6HX         |       |
|      |      |     |        |      |      |     |      |        | TiN                     |       | TiN                   |       |
|      |      |     |        |      |      |     |      |        | HSS-E                   |       | HSS-E                 |       |
|      |      |     |        |      |      |     |      |        | ≤ 1100 N/mm²<br>≤ 1,5xD |       | ≤ 1100 N/mm²<br>≤ 3xD |       |
|      |      |     |        |      |      |     |      |        | Article no.             |       | Article no.           |       |
| TD   | TP   | OAL | DCONMS | DRVS | PHD  | THL | LU   | Flutes | EUR                     |       | EUR                   |       |
| M1   | 0,25 | 40  | 2,5    | 2,1  | 0,90 | 5   | 6,5  |        | 22 100 010 1)           | 66,30 |                       |       |
| M1,2 | 0,25 | 40  | 2,5    | 2,1  | 1,10 | 5   | 6,5  |        | 22 100 012 1)           | 62,78 |                       |       |
| M1,4 | 0,30 | 40  | 2,5    | 2,1  | 1,28 | 6   | 9,0  |        | 22 100 014 1)           | 56,12 |                       |       |
| M1,6 | 0,35 | 40  | 2,5    | 2,1  | 1,47 | 6   | 9,0  |        | 22 100 016              | 54,14 |                       |       |
| M1,7 | 0,35 | 40  | 2,5    | 2,1  | 1,57 | 6   | 9,0  |        | 22 100 017              | 59,45 |                       |       |
| M2   | 0,40 | 45  | 2,8    | 2,1  | 1,85 | 7   | 10,0 |        | 22 100 020              | 38,83 |                       |       |
| M2   | 0,40 | 45  | 2,8    | 2,1  | 1,85 | 7   | 10,0 | 3      |                         |       | 22 105 020            | 44,59 |
| M2,5 | 0,45 | 50  | 2,8    | 2,1  | 2,33 | 9   | 14,0 |        | 22 100 025              | 37,65 |                       |       |
| M2,5 | 0,45 | 50  | 2,8    | 2,1  | 2,33 | 9   | 14,0 | 3      |                         |       | 22 105 025            | 40,72 |
| M2,6 | 0,45 | 50  | 2,8    | 2,1  | 2,43 | 9   | 14,0 |        | 22 100 026              | 41,89 |                       |       |
| M3   | 0,50 | 56  | 3,5    | 2,7  | 2,80 | 11  | 18,0 |        | 22 100 030              | 36,03 |                       |       |
| M3   | 0,50 | 56  | 3,5    | 2,7  | 2,80 | 11  | 18,0 | 4      |                         |       | 22 105 030            | 39,28 |
| M3,5 | 0,60 | 56  | 4,0    | 3,0  | 3,25 | 12  | 20,0 |        | 22 100 035              | 31,71 |                       |       |
| M3,5 | 0,60 | 56  | 4,0    | 3,0  | 3,25 | 12  | 20,0 | 3      |                         |       | 22 105 035            | 38,83 |
| M4   | 0,70 | 63  | 4,5    | 3,4  | 3,70 | 13  | 21,0 |        | 22 100 040              | 36,85 |                       |       |
| M4   | 0,70 | 63  | 4,5    | 3,4  | 3,70 | 13  | 21,0 | 5      |                         |       | 22 105 040            | 40,72 |
| M5   | 0,80 | 70  | 6,0    | 4,9  | 4,65 | 15  | 25,0 |        | 22 100 050              | 38,46 |                       |       |
| M5   | 0,80 | 70  | 6,0    | 4,9  | 4,65 | 15  | 25,0 | 5      |                         |       | 22 105 050            | 42,34 |
| M6   | 1,00 | 80  | 6,0    | 4,9  | 5,60 | 17  | 30,0 |        | 22 100 060              | 43,96 |                       |       |
| M6   | 1,00 | 80  | 6,0    | 4,9  | 5,60 | 17  | 30,0 | 5      |                         |       | 22 105 060            | 48,01 |
| M8   | 1,25 | 90  | 8,0    | 6,2  | 7,40 | 20  | 35,0 |        | 22 100 080              | 48,28 |                       |       |
| M8   | 1,25 | 90  | 8,0    | 6,2  | 7,45 | 20  | 35,0 | 6      |                         |       | 22 105 080            | 52,97 |
| M10  | 1,50 | 100 | 10,0   | 8,0  | 9,35 | 22  | 39,0 | 6      |                         |       | 22 105 100            | 66,30 |
| M10  | 1,50 | 100 | 10,0   | 8,0  | 9,35 | 22  | 39,0 |        | 22 100 100              | 61,25 |                       |       |

1) Tol. ISO 1X 4HX ≤ M1.4



DIN 2174 with reduced shank

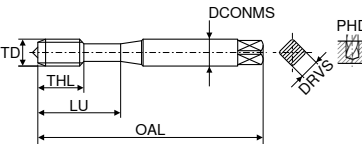
|     |      |     |        |      |       |     |        |  | EC                      |        | EC SN                 |        |
|-----|------|-----|--------|------|-------|-----|--------|--|-------------------------|--------|-----------------------|--------|
|     |      |     |        |      |       |     |        |  | C<br>2-3                |        | C<br>2-3              |        |
|     |      |     |        |      |       |     |        |  | ISO 2X<br>6HX           |        | ISO 2X<br>6HX         |        |
|     |      |     |        |      |       |     |        |  | TiN                     |        | TiN                   |        |
|     |      |     |        |      |       |     |        |  | HSS-E                   |        | HSS-E                 |        |
|     |      |     |        |      |       |     |        |  | ≤ 1100 N/mm²<br>≤ 1,5xD |        | ≤ 1100 N/mm²<br>≤ 3xD |        |
|     |      |     |        |      |       |     |        |  | Article no.             |        | Article no.           |        |
| TD  | TP   | OAL | DCONMS | DRVS | PHD   | THL | Flutes |  | EUR                     |        | EUR                   |        |
| M12 | 1,75 | 110 | 9      | 7    | 11,25 | 24  |        |  | 22 101 120              | 67,29  |                       |        |
| M12 | 1,75 | 110 | 9      | 7    | 11,25 | 24  | 6      |  |                         |        | 22 106 120            | 82,69  |
| M14 | 2,00 | 110 | 11     | 9    | 13,10 | 26  | 5      |  |                         |        | 22 106 140            | 159,46 |
| M16 | 2,00 | 110 | 12     | 9    | 15,10 | 27  | 7      |  |                         |        | 22 106 160            | 127,93 |
| M16 | 2,00 | 110 | 12     | 9    | 15,10 | 27  |        |  | 22 101 160              | 113,48 |                       |        |

|                       |       |       |
|-----------------------|-------|-------|
| Steel                 | 8-30  | 8-30  |
| Stainless steel       | 8-15  | 8-15  |
| Cast iron             |       |       |
| Non ferrous metals    | 12-25 | 12-25 |
| Heat resistant alloys |       |       |
| Hardened materials    |       |       |

Through hole – Machine taps, right hand

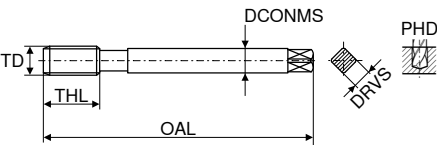


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DIN 371 with reinforced shank

|     |      |     |        |      |     |     |      |        | UNI                   |       | VA                    |       |
|-----|------|-----|--------|------|-----|-----|------|--------|-----------------------|-------|-----------------------|-------|
|     |      |     |        |      |     |     |      |        | B<br>4-5              |       | B<br>4-5              |       |
|     |      |     |        |      |     |     |      |        | ISO 2<br>6H           |       | ISO 2<br>6H           |       |
|     |      |     |        |      |     |     |      |        | TiN                   |       | nitr.                 |       |
|     |      |     |        |      |     |     |      |        | POWDERSTEEL<br>HSS-PM |       | POWDERSTEEL<br>HSS-PM |       |
|     |      |     |        |      |     |     |      |        | ≤ 1000 N/mm²<br>≤ 3xD |       | ≤ 1200 N/mm²<br>≤ 3xD |       |
|     |      |     |        |      |     |     |      |        | Article no.           |       | Article no.           |       |
| TD  | TP   | OAL | DCONMS | DRVS | PHD | THL | LU   | Flutes | EUR                   |       | EUR                   |       |
| M2  | 0,40 | 45  | 2,8    | 2,1  | 1,6 | 4   | 13,5 | 2      | 23 010 020            | 8,89  |                       |       |
| M3  | 0,50 | 56  | 3,5    | 2,7  | 2,5 | 11  | 18,0 | 3      | 23 010 030            | 11,10 | 23 450 030            | 10,36 |
| M4  | 0,70 | 63  | 4,5    | 3,4  | 3,3 | 13  | 21,0 | 3      | 23 010 040            | 10,18 | 23 450 040            | 10,46 |
| M5  | 0,80 | 70  | 6,0    | 4,9  | 4,2 | 15  | 25,0 | 3      | 23 010 050            | 11,38 | 23 450 050            | 11,28 |
| M6  | 1,00 | 80  | 6,0    | 4,9  | 5,0 | 17  | 30,0 | 3      | 23 010 060            | 13,57 | 23 450 060            | 11,47 |
| M8  | 1,25 | 90  | 8,0    | 6,2  | 6,8 | 20  | 35,0 | 3      | 23 010 080            | 15,13 | 23 450 080            | 12,84 |
| M10 | 1,50 | 100 | 10,0   | 8,0  | 8,5 | 22  | 39,0 | 3      | 23 010 100            | 19,99 | 23 450 100            | 14,58 |



DIN 376 with reduced shank

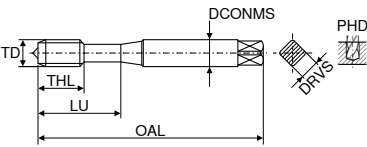
|     |      |     |        |      |      |     |        |  | UNI                   |       | VA                    |       |
|-----|------|-----|--------|------|------|-----|--------|--|-----------------------|-------|-----------------------|-------|
|     |      |     |        |      |      |     |        |  | B<br>4-5              |       | B<br>4-5              |       |
|     |      |     |        |      |      |     |        |  | ISO 2<br>6H           |       | ISO 2<br>6H           |       |
|     |      |     |        |      |      |     |        |  | TiN                   |       | nitr.                 |       |
|     |      |     |        |      |      |     |        |  | POWDERSTEEL<br>HSS-PM |       | POWDERSTEEL<br>HSS-PM |       |
|     |      |     |        |      |      |     |        |  | ≤ 1000 N/mm²<br>≤ 3xD |       | ≤ 1200 N/mm²<br>≤ 3xD |       |
|     |      |     |        |      |      |     |        |  | Article no.           |       | Article no.           |       |
| TD  | TP   | OAL | DCONMS | DRVS | PHD  | THL | Flutes |  | EUR                   |       | EUR                   |       |
| M12 | 1,75 | 110 | 9      | 7    | 10,2 | 24  | 3      |  | 23 021 120            | 23,84 | 23 451 120            | 25,96 |
| M14 | 2,00 | 110 | 11     | 9    | 12,0 | 26  | 3      |  |                       |       | 23 451 140            | 34,39 |
| M14 | 2,00 | 110 | 11     | 9    | 12,0 | 20  | 4      |  | 23 021 140            | 36,14 |                       |       |
| M16 | 2,00 | 110 | 12     | 9    | 14,0 | 27  | 3      |  | 23 021 160            | 33,57 | 23 451 160            | 36,41 |
| M18 | 2,50 | 125 | 14     | 11   | 15,5 | 25  | 4      |  | 23 021 180            | 58,79 |                       |       |
| M20 | 2,50 | 140 | 16     | 12   | 17,5 | 32  | 3      |  | 23 021 200            | 60,71 | 23 451 200            | 54,39 |

|                       |       |      |
|-----------------------|-------|------|
| Steel                 | 10-20 |      |
| Stainless steel       | 8-15  | 5-10 |
| Cast iron             | 20-25 |      |
| Non ferrous metals    | 20-25 |      |
| Heat resistant alloys |       |      |
| Hardened materials    |       |      |

Blind hole – Machine taps, right hand

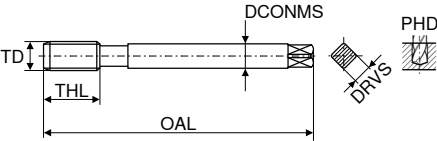
M

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DIN 371 with reinforced shank

| TD  | TP   | OAL | DCONMS | DRVS | PHD | THL | LU | Flutes |
|-----|------|-----|--------|------|-----|-----|----|--------|
|     | mm   | mm  | mm     | mm   | mm  | mm  | mm |        |
| M3  | 0,50 | 56  | 3,5    | 2,7  | 2,5 | 6   | 18 | 3      |
| M4  | 0,70 | 63  | 4,5    | 3,4  | 3,3 | 7   | 21 | 3      |
| M5  | 0,80 | 70  | 6,0    | 4,9  | 4,2 | 8   | 25 | 3      |
| M6  | 1,00 | 80  | 6,0    | 4,9  | 5,0 | 10  | 30 | 3      |
| M8  | 1,25 | 90  | 8,0    | 6,2  | 6,8 | 14  | 35 | 3      |
| M10 | 1,50 | 100 | 10,0   | 8,0  | 8,5 | 16  | 39 | 3      |



DIN 376 with reduced shank

| TD  | TP   | OAL | DCONMS | DRVS | PHD  | THL | Flutes |
|-----|------|-----|--------|------|------|-----|--------|
|     | mm   | mm  | mm     | mm   | mm   | mm  |        |
| M12 | 1,75 | 110 | 9      | 7,0  | 10,2 | 18  | 3      |
| M12 | 1,75 | 110 | 9      | 7,0  | 10,2 | 18  | 4      |
| M14 | 2,00 | 110 | 11     | 9,0  | 12,0 | 20  | 4      |
| M16 | 2,00 | 110 | 12     | 9,0  | 14,0 | 22  | 3      |
| M16 | 2,00 | 110 | 12     | 9,0  | 14,0 | 22  | 4      |
| M20 | 2,50 | 140 | 16     | 12,0 | 17,5 | 25  | 3      |
| M24 | 3,00 | 160 | 18     | 14,5 | 21,0 | 30  | 4      |

|                       |       |      |      |
|-----------------------|-------|------|------|
| Steel                 | 10-20 |      |      |
| Stainless steel       | 8-15  | 5-10 | 8-20 |
| Cast iron             | 20-25 |      |      |
| Non ferrous metals    | 20-25 |      |      |
| Heat resistant alloys |       |      |      |
| Hardened materials    |       |      |      |

|                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|
| UNI                              | VA                               | VA                               |
| C<br>2-3                         | C<br>2-3                         | C<br>2-3                         |
| ISO 2<br>6H                      | ISO 2<br>6H                      | ISO 2<br>6H                      |
| TiN                              |                                  | TiN                              |
|                                  |                                  |                                  |
| POWDERSTEEL<br>HSS-PM            | POWDERSTEEL<br>HSS-PM            | POWDERSTEEL<br>HSS-PM            |
| ≤ 50°<br>≤ 1000 N/mm²<br>≤ 2,5xD | ≤ 40°<br>≤ 1200 N/mm²<br>≤ 2,5xD | ≤ 40°<br>≤ 1200 N/mm²<br>≤ 2,5xD |
| Article no.                      | Article no.                      | Article no.                      |
|                                  | EUR                              | EUR                              |
| 23 026 030                       | 12,65                            | 23 426 030 11,28                 |
| 23 026 040                       | 12,65                            | 23 426 040 11,47                 |
| 23 026 050                       | 13,57                            | 23 426 050 11,74                 |
| 23 026 060                       | 15,78                            | 23 426 060 11,93                 |
| 23 026 080                       | 18,71                            | 23 426 080 14,03                 |
| 23 026 100                       | 23,57                            | 23 426 100 16,88                 |
|                                  |                                  | 23 456 030 12,65                 |
|                                  |                                  | 23 456 040 13,76                 |
|                                  |                                  | 23 456 050 14,03                 |
|                                  |                                  | 23 456 060 18,06                 |
|                                  |                                  | 23 456 080 19,35                 |
|                                  |                                  | 23 456 100 26,69                 |

|                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|
| UNI                              | VA                               | VA                               |
| C<br>2-3                         | C<br>2-3                         | C<br>2-3                         |
| ISO 2<br>6H                      | ISO 2<br>6H                      | ISO 2<br>6H                      |
| TiN                              |                                  | TiN                              |
|                                  |                                  |                                  |
| POWDERSTEEL<br>HSS-PM            | POWDERSTEEL<br>HSS-PM            | POWDERSTEEL<br>HSS-PM            |
| ≤ 50°<br>≤ 1000 N/mm²<br>≤ 2,5xD | ≤ 40°<br>≤ 1200 N/mm²<br>≤ 2,5xD | ≤ 40°<br>≤ 1200 N/mm²<br>≤ 2,5xD |
| Article no.                      | Article no.                      | Article no.                      |
|                                  | EUR                              | EUR                              |
| 23 027 120                       | 27,79                            | 23 427 120 27,88                 |
| 23 027 140                       | 40,08                            | 23 427 140 36,68                 |
| 23 027 160                       | 40,08                            | 23 427 160 39,90                 |
| 23 027 200                       | 45,86                            | 23 427 200 59,43                 |
|                                  |                                  | 23 427 240 75,20                 |
|                                  |                                  | 23 457 120 38,15                 |
|                                  |                                  | 23 457 160 48,06                 |
|                                  |                                  | 23 457 200 95,40                 |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

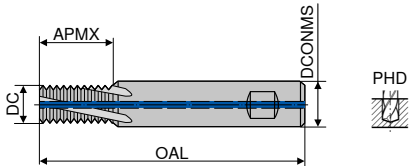
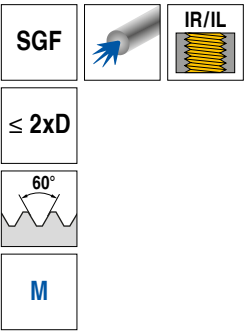
RPM =  $\frac{v_c \times 1000}{\pi \times D}$

v<sub>c</sub> = (See Individual v<sub>c</sub> Charts)  
π = 3,142  
D = Diameter



Thread milling cutter

- ▲ Profile corrected
- ▲ Hard machining to Ø DC = 4 mm possible



Solid carbide

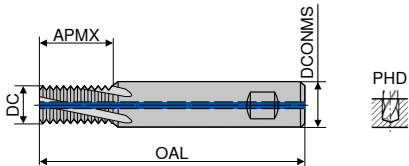
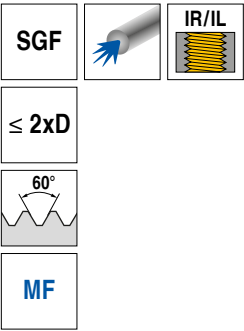
| DC    | Thread | TP   | APMX | DCONMS <sub>h6</sub> | OAL | ZEFP | PHD   | Article no.              | EUR    |
|-------|--------|------|------|----------------------|-----|------|-------|--------------------------|--------|
| mm    |        | mm   | mm   | mm                   | mm  |      | mm    |                          |        |
| 2,40  | M3     | 0,50 | 6,5  | 4                    | 42  | 2    | 2,50  | 54 800 030 <sup>1)</sup> | 94,90  |
| 3,15  | M4     | 0,70 | 9,0  | 6                    | 55  | 3    | 3,30  | 54 800 040 <sup>2)</sup> | 108,10 |
| 4,00  | M5     | 0,80 | 11,0 | 6                    | 55  | 3    | 4,20  | 54 800 050 <sup>2)</sup> | 108,10 |
| 4,80  | M6     | 1,00 | 13,0 | 6                    | 55  | 3    | 5,00  | 54 800 060 <sup>2)</sup> | 111,30 |
| 6,00  | M8     | 1,25 | 18,0 | 6                    | 60  | 3    | 6,75  | 54 800 080               | 119,10 |
| 8,00  | M10    | 1,50 | 21,0 | 8                    | 70  | 3    | 8,50  | 54 800 100               | 148,80 |
| 9,90  | M12    | 1,75 | 26,0 | 10                   | 75  | 4    | 10,25 | 54 800 120               | 170,90 |
| 11,60 | M14    | 2,00 | 30,0 | 12                   | 85  | 4    | 12,00 | 54 800 140               | 209,40 |
| 12,00 | M16    | 2,00 | 34,0 | 12                   | 85  | 4    | 14,00 | 54 800 160               | 215,00 |
| 14,00 | M18    | 2,50 | 40,0 | 14                   | 90  | 4    | 15,50 | 54 800 180               | 256,80 |
| 16,00 | M20    | 2,50 | 42,0 | 16                   | 90  | 4    | 17,50 | 54 800 200               | 262,30 |

|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ● |
| Cast iron             | ● |
| Non ferrous metals    | ● |
| Heat resistant alloys | ● |
| Hardened materials    | ● |

- 1) DIN 6535 HA Shank / Without Through Coolant  
2) Without Through Coolant

Thread milling cutter

- ▲ Profile corrected
- ▲ Hard machining to Ø DC = 4 mm possible



Solid carbide

| DC   | Thread | TP   | APMX | DCONMS <sub>h6</sub> | OAL | ZEFP | PHD   | Article no.              | EUR    |
|------|--------|------|------|----------------------|-----|------|-------|--------------------------|--------|
| mm   |        | mm   | mm   | mm                   | mm  |      | mm    |                          |        |
| 4,0  | M5     | 0,50 | 11   | 6                    | 55  | 3    | 4,50  | 54 802 050 <sup>1)</sup> | 108,10 |
| 4,8  | M6     | 0,75 | 13   | 6                    | 55  | 3    | 5,25  | 54 802 060 <sup>1)</sup> | 111,30 |
| 6,0  | M8     | 1,00 | 18   | 6                    | 60  | 3    | 7,00  | 54 802 080               | 119,10 |
| 8,0  | M10    | 1,25 | 21   | 8                    | 70  | 3    | 8,75  | 54 802 100               | 148,80 |
| 9,9  | M12    | 1,50 | 26   | 10                   | 75  | 4    | 10,50 | 54 802 122               | 170,90 |
| 9,9  | M12    | 1,25 | 26   | 10                   | 75  | 4    | 10,75 | 54 802 121               | 170,90 |
| 9,9  | M12    | 1,00 | 26   | 10                   | 75  | 4    | 11,00 | 54 802 120               | 170,90 |
| 11,6 | M14    | 1,50 | 30   | 12                   | 85  | 4    | 12,50 | 54 802 141               | 209,40 |
| 11,6 | M14    | 1,00 | 30   | 12                   | 85  | 4    | 13,00 | 54 802 140               | 209,40 |
| 12,0 | M16    | 1,50 | 34   | 12                   | 85  | 4    | 14,50 | 54 802 160               | 215,00 |
| 14,0 | M18    | 1,50 | 40   | 14                   | 90  | 4    | 16,50 | 54 802 180               | 256,80 |
| 16,0 | M20    | 1,50 | 42   | 16                   | 90  | 4    | 18,50 | 54 802 200               | 262,30 |

|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ● |
| Cast iron             | ● |
| Non ferrous metals    | ● |
| Heat resistant alloys | ● |
| Hardened materials    | ● |

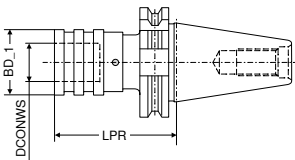
- 1) DIN 6535 HA Shank / Without Through Coolant

**Please Note:** G, UNF, NPT, BSF, BSW, Pg and UN also available in the main catalogue.

Quick change tap chuck with length compensation

- ▲ With length compensation under tension and compression (LZD)

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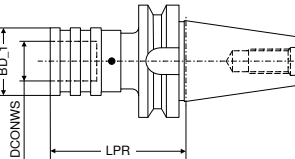
A

| Adapter | cutting range | SZID | LPR | BD_1 | DCONWS | LZD±<br>mm | Article no. | EUR    |
|---------|---------------|------|-----|------|--------|------------|-------------|--------|
| SK 30   | M3 - M12      | 01   | 60  | 38   | 19     | 9          | 83 428 312  | 264,30 |
| SK 30   | M6 - M20      | 02   | 101 | 55   | 31     | 15         | 83 428 320  | 301,00 |
| SK 40   | M3 - M12      | 01   | 60  | 38   | 19     | 9          | 83 428 412  | 205,50 |
| SK 40   | M6 - M20      | 02   | 100 | 55   | 31     | 15         | 83 428 420  | 221,20 |
| SK 50   | M3 - M12      | 01   | 62  | 38   | 19     | 9          | 83 428 512  | 305,10 |
| SK 50   | M6 - M20      | 02   | 83  | 55   | 31     | 15         | 83 428 520  | 332,40 |

Quick change tap chuck with length compensation

- ▲ With length compensation under tension and compression (LZD)

WNT \ Standard



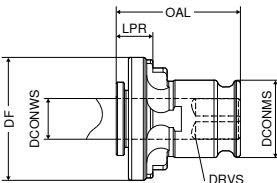
A

| Adapter | cutting range | SZID | LPR | BD_1 | DCONWS | LZD±<br>mm | Article no. | EUR    |
|---------|---------------|------|-----|------|--------|------------|-------------|--------|
| BT 30   | M3 - M12      | 01   | 63  | 38   | 19     | 9          | 83 528 312  | 224,40 |
| BT 30   | M6 - M20      | 02   | 96  | 55   | 31     | 15         | 83 528 320  | 285,20 |
| BT 40   | M3 - M12      | 01   | 68  | 38   | 19     | 9          | 83 528 412  | 179,40 |
| BT 40   | M6 - M20      | 02   | 93  | 55   | 31     | 15         | 83 528 420  | 189,80 |
| BT 50   | M3 - M12      | 01   | 80  | 38   | 19     | 9          | 83 528 512  | 303,00 |
| BT 50   | M6 - M20      | 02   | 102 | 55   | 31     | 15         | 83 528 520  | 349,10 |

Quick change tap adapter

- ▲ Normal version without overload clutch
- ▲ For mounting taps
- ▲ For right-hand and left-hand threads

WNT \ Standard



A

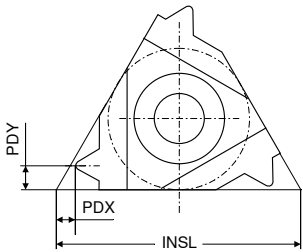
| SZID | DCONWS | DRVS | DIN 371   | DIN 374 / 376 | DF | DCONMS | OAL  | LPR | Article no. | EUR   |
|------|--------|------|-----------|---------------|----|--------|------|-----|-------------|-------|
|      | mm     | mm   |           |               | mm | mm     | mm   | mm  |             |       |
| 01   | 3,5    | 2,7  | M3        |               | 30 | 19     | 28,5 | 7   | 83 610 100  | 20,55 |
| 01   | 4,5    | 3,4  | M4        |               | 30 | 19     | 28,5 | 7   | 83 610 101  | 20,55 |
| 01   | 4,0    | 3,0  | M3,5      |               | 30 | 19     | 28,5 | 7   | 83 610 102  | 20,55 |
| 01   | 2,8    | 2,1  | M2 - M2,6 |               | 30 | 19     | 28,5 | 7   | 83 610 103  | 20,55 |
| 01   | 5,5    | 4,3  |           | M7            | 30 | 19     | 28,5 | 7   | 83 610 104  | 20,55 |
| 01   | 6,0    | 4,9  | M4,5 - M6 | M8            | 30 | 19     | 28,5 | 7   | 83 610 105  | 20,55 |
| 01   | 7,0    | 5,5  | M7        | M10           | 30 | 19     | 28,5 | 7   | 83 610 106  | 20,55 |
| 01   | 8,0    | 6,2  | M8        | M11           | 30 | 19     | 28,5 | 7   | 83 610 107  | 20,55 |
| 01   | 9,0    | 7,0  | M9        | M12           | 30 | 19     | 28,5 | 7   | 83 610 108  | 20,55 |
| 01   | 10,0   | 8,0  | M10       |               | 30 | 19     | 28,5 | 7   | 83 610 109  | 20,55 |
| 01   | 11,0   | 9,0  |           | M14           | 30 | 19     | 28,5 | 7   | 83 610 110  | 20,55 |
| 02   | 6,0    | 4,9  | M4,5 - M6 |               | 46 | 31     | 46,0 | 11  | 83 610 200  | 28,41 |
| 02   | 7,0    | 5,5  | M7        |               | 46 | 31     | 46,0 | 11  | 83 610 201  | 28,41 |
| 02   | 8,0    | 6,2  | M8        |               | 46 | 31     | 46,0 | 11  | 83 610 202  | 28,41 |
| 02   | 9,0    | 7,0  | M9        |               | 46 | 31     | 46,0 | 11  | 83 610 203  | 28,41 |
| 02   | 10,0   | 8,0  | M10       |               | 46 | 31     | 46,0 | 11  | 83 610 204  | 28,41 |
| 02   | 11,0   | 9,0  |           | M14           | 46 | 31     | 46,0 | 11  | 83 610 205  | 28,41 |
| 02   | 12,0   | 9,0  |           | M16           | 46 | 31     | 46,0 | 11  | 83 610 206  | 28,41 |
| 02   | 14,0   | 11,0 |           | M18           | 46 | 31     | 46,0 | 11  | 83 610 207  | 28,41 |
| 02   | 16,0   | 12,0 |           | M20           | 46 | 31     | 46,0 | 11  | 83 610 208  | 28,41 |
| 02   | 18,0   | 14,5 |           | M22 - M24     | 46 | 31     | 46,0 | 11  | 83 610 209  | 28,41 |

Right hand external thread turning insert

- ▲ Full profile
- ▲ CCN7525 grade with sintered chip breaker for universal application



WNT \ Performance



| Designation | TP   | INSL | PDX | PDY |
|-------------|------|------|-----|-----|
|             | mm   | mm   | mm  | mm  |
| 16 ER 0,35  | 0,35 | 16   | 0,8 | 0,4 |
| 16 ER 0,4   | 0,40 | 16   | 0,7 | 0,4 |
| 16 ER 0,5   | 0,50 | 16   | 0,6 | 0,6 |
| 16 ER 0,7   | 0,70 | 16   | 0,6 | 0,6 |
| 16 ER 0,75  | 0,75 | 16   | 0,6 | 0,6 |
| 16 ER 0,8   | 0,80 | 16   | 0,6 | 0,6 |
| 16 ER 1,0   | 1,00 | 16   | 0,7 | 0,7 |
| 16 ER 1,25  | 1,25 | 16   | 0,8 | 0,9 |
| 16 ER 1,5   | 1,50 | 16   | 0,8 | 1,0 |
| 16 ER 1,75  | 1,75 | 16   | 0,9 | 1,2 |
| 16 ER 2,0   | 2,00 | 16   | 1,0 | 1,3 |
| 16 ER 2,5   | 2,50 | 16   | 1,1 | 1,5 |
| 16 ER 3,0   | 3,00 | 16   | 1,2 | 1,6 |
| 22 ER 3,5   | 3,50 | 22   | 1,6 | 2,3 |
| 22 ER 4,0   | 4,00 | 22   | 1,6 | 2,3 |
| 22 ER 4,5   | 4,50 | 22   | 1,7 | 2,4 |
| 22 ER 5,0   | 5,00 | 22   | 1,7 | 2,5 |
| 22 ER 5,5   | 5,50 | 22   | 1,7 | 2,6 |
| 22 ER 6,0   | 6,00 | 22   | 1,9 | 2,7 |

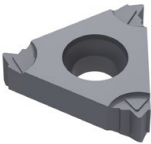
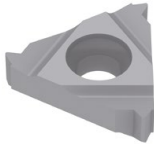
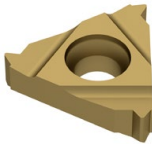


| Designation | TPI | INSL | PDX | PDY |
|-------------|-----|------|-----|-----|
|             | 1/" | mm   | mm  | mm  |
| 16 ER 11    | 11  | 16   | 1,1 | 1,5 |
| 16 ER 12    | 12  | 16   | 1,1 | 1,4 |
| 16 ER 14    | 14  | 16   | 1,0 | 1,2 |
| 16 ER 16    | 16  | 16   | 0,9 | 1,1 |
| 16 ER 19    | 19  | 16   | 0,8 | 1,0 |
| 16 ER 20    | 20  | 16   | 0,8 | 0,9 |
| 16 ER 26    | 26  | 16   | 0,7 | 0,7 |
| 16 ER 28    | 28  | 16   | 0,6 | 0,7 |

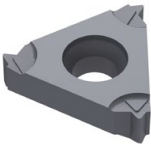
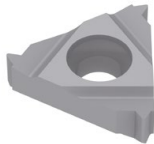
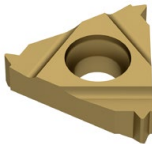


| Designation | TPI | INSL | PDX | PDY |
|-------------|-----|------|-----|-----|
|             | 1/" | mm   | mm  | mm  |
| 16 ER 8     | 8   | 16   | 1,1 | 1,5 |
| 16 ER 8     | 8   | 16   | 1,1 | 1,1 |
| 16 ER 11    | 11  | 16   | 1,1 | 1,5 |
| 16 ER 12    | 12  | 16   | 1,1 | 1,4 |
| 16 ER 14    | 14  | 16   | 1,0 | 1,2 |
| 16 ER 16    | 16  | 16   | 0,9 | 1,1 |
| 16 ER 18    | 18  | 16   | 0,8 | 1,0 |
| 16 ER 20    | 20  | 16   | 0,8 | 0,9 |
| 16 ER 24    | 24  | 16   | 0,7 | 0,8 |
| 16 ER 28    | 28  | 16   | 0,6 | 0,7 |
| 16 ER 32    | 32  | 16   | 0,6 | 0,6 |

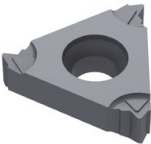
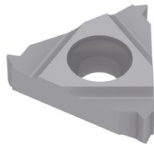
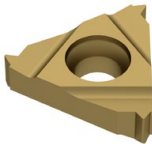
|                       |   |   |   |
|-----------------------|---|---|---|
| Steel                 | ● | ○ | ● |
| Stainless steel       | ○ | ● | ● |
| Cast iron             | ● | ○ | ● |
| Non ferrous metals    | ● | ○ | ○ |
| Heat resistant alloys |   | ○ | ● |



| ER          | ER          | ER          |
|-------------|-------------|-------------|
| Article no. | Article no. | Article no. |
|             |             |             |
|             |             |             |
|             | 71 220 734  | 15,36       |
|             | 71 220 736  | 15,36       |
| 71 220 140  | 71 220 740  | 11,65       |
| 71 220 141  | 71 220 741  | 12,33       |
| 71 220 142  | 71 220 742  | 11,65       |
| 71 220 143  | 71 220 743  | 11,65       |
| 71 220 144  | 71 220 744  | 11,35       |
| 71 220 146  | 71 220 746  | 11,35       |
| 71 220 148  | 71 220 748  | 11,35       |
| 71 220 150  | 71 220 750  | 11,35       |
| 71 220 152  | 71 220 752  | 11,35       |
| 71 220 154  | 71 220 754  | 11,35       |
| 71 220 156  | 71 220 756  | 11,35       |
| 71 220 170  | 71 220 770  | 17,48       |
| 71 220 172  | 71 220 772  | 18,08       |
| 71 220 174  | 71 220 774  | 19,52       |
| 71 220 176  | 71 220 776  | 19,52       |
| 71 220 178  |             |             |
| 71 220 180  | 71 220 780  | 19,52       |



| ER          | ER          | ER          |
|-------------|-------------|-------------|
| Article no. | Article no. | Article no. |
|             |             |             |
|             |             |             |
| 71 228 166  | 71 228 766  | 13,02       |
| 71 228 164  | 71 228 764  | 15,66       |
| 71 228 162  | 71 228 762  | 13,02       |
| 71 228 160  | 71 228 760  | 15,66       |
| 71 228 156  | 71 228 756  | 13,02       |
|             | 71 228 754  | 16,04       |
|             | 71 228 748  | 16,04       |
| 71 228 146  | 71 228 746  | 14,38       |



| ER          | ER          | ER          |
|-------------|-------------|-------------|
| Article no. | Article no. | Article no. |
|             |             |             |
|             |             |             |
| 71 264 174  |             | 71 264 974  |
|             |             | 16,04       |
| 71 264 168  |             |             |
| 71 264 164  | 71 264 764  | 14,38       |
| 71 264 160  | 71 264 760  | 14,38       |
| 71 264 158  | 71 264 758  | 13,78       |
| 71 264 156  | 71 264 756  | 14,38       |
| 71 264 154  | 71 264 754  | 13,78       |
| 71 264 152  | 71 264 752  | 14,38       |
|             | 71 264 748  | 15,66       |
|             | 71 264 746  | 16,87       |



# LEGENDARY PERFORMANCE



# DRAGONSKIN





Application

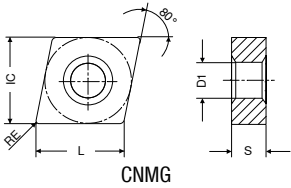
- ▲ Finishing to light roughing
  - ▲ Steel
  - ▲ Universal chip breaker
  - ▲ Low cutting forces
- ▲ Ideally suited to general turning
  - ▲ Draw turning
  - ▲ For chip breaking problems

Turning guide (Main catalogue 2019)

|                        |         |                                |         |
|------------------------|---------|--------------------------------|---------|
| Cutting Data           | 144–159 | Chip breakers                  | 168–175 |
| ISO designation system | 178–183 | Grade overview and description | 186+187 |

CNMG / DNMG / VNMG / WNMG

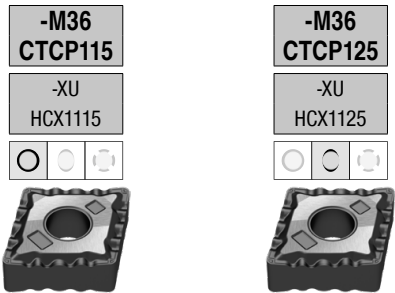
| Designation | L    | S    | D1   | IC    |
|-------------|------|------|------|-------|
|             | mm   | mm   | mm   | mm    |
| CNMG 1204.. | 12,9 | 4,76 | 5,16 | 12,70 |
| DNMG 1506.. | 15,5 | 6,35 | 5,16 | 12,70 |
| VNMG 1604.. | 16,6 | 4,76 | 3,81 | 9,52  |
| WNMG 0804.. | 8,6  | 4,76 | 5,16 | 12,70 |



CNMG



CERATIZIT \ Performance



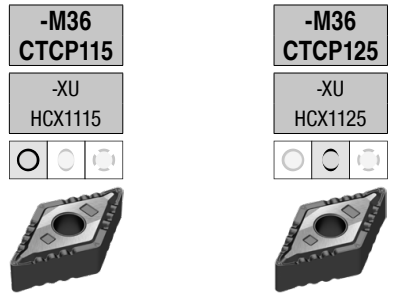
| ISO      | RE  | Article no. |       | Article no. |       |
|----------|-----|-------------|-------|-------------|-------|
|          | mm  |             | EUR   |             | EUR   |
| 120404EN | 0,4 | 76 290 328  | 10,31 | 76 290 528  | 10,31 |
| 120408EN | 0,8 | 76 290 330  | 10,31 | 76 290 530  | 10,31 |
| 120412EN | 1,2 | 76 290 332  | 10,31 | 76 290 532  | 10,31 |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ○ | ○ |
| Cast iron             | ○ | ○ |
| Non ferrous metals    |   |   |
| Heat resistant alloys |   |   |

DNMG



CERATIZIT \ Performance



| ISO      | RE  | Article no. |       | Article no. |       |
|----------|-----|-------------|-------|-------------|-------|
|          | mm  |             | EUR   |             | EUR   |
| 150604EN | 0,4 | 76 291 328  | 14,40 | 76 291 528  | 14,40 |
| 150608EN | 0,8 | 76 291 330  | 14,40 | 76 291 530  | 14,40 |
| 150612EN | 1,2 | 76 291 332  | 14,40 | 76 291 532  | 14,40 |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ○ | ○ |
| Cast iron             | ○ | ○ |
| Non ferrous metals    |   |   |
| Heat resistant alloys |   |   |

CERATIZIT -M36 (-XU) chip breaker

New and exclusive to CERATIZIT: The new -M36 (-XU) chip breaker is for close contour machining and general turning with varying depth of cut ideally up to light roughing and covers a very large machining range.

In Europe-wide market testing the -M36 (-XU) showed itself as a problem solver for materials and applications where perfect chip breaking is required.

The -M36 (-XU) focus is on long chipping materials and guarantees highest process reliability.

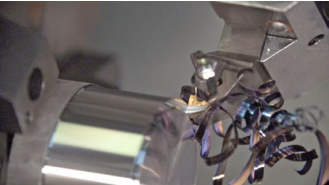
Advantages/Benefits

- ▲ Optimum process reliability for turning centers and unmanned production
  - ▲ Secure transport of chips and small space requirement for swarf
- ▲ Reduced downtime and tooling costs
  - ▲ Minimized risk of injury from stringing swarf

Field test reports

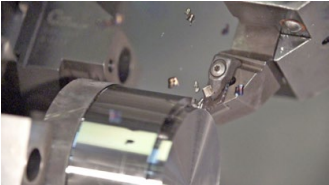
Steel CK60 1.1221 AISI 1060

Competitor

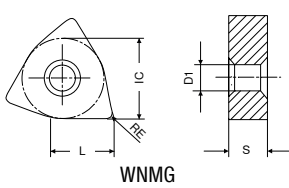
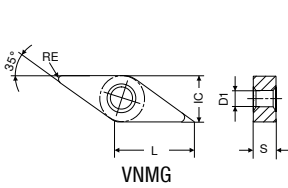
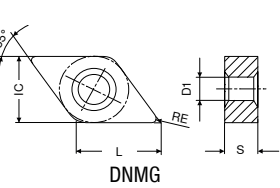


v<sub>c</sub> = 160 m/min  
a<sub>p</sub> = 5.0 mm  
f = 0.35 mm/U

CERATIZIT Dragonskin CTCP125 (HCX1125) -M36 (-XU)



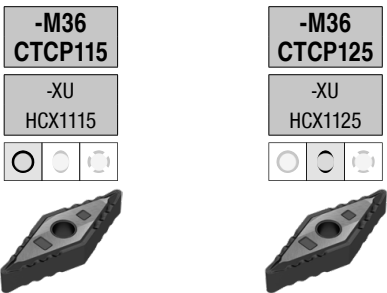
v<sub>c</sub> = 160 m/min  
a<sub>p</sub> = 5.0 mm  
f = 0.35 mm/U



VNMG



CERATIZIT \ Performance



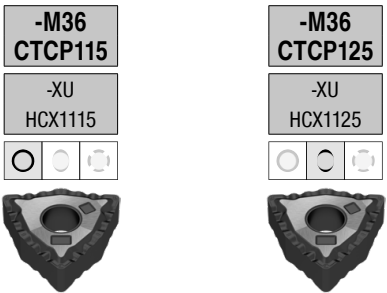
| ISO      | RE  | Article no. |       | Article no. |       |
|----------|-----|-------------|-------|-------------|-------|
|          | mm  |             | EUR   |             | EUR   |
| 160404EN | 0,4 | 76 294 316  | 18,49 | 76 294 516  | 18,49 |
| 160408EN | 0,8 | 76 294 318  | 18,49 | 76 294 518  | 18,49 |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ○ | ○ |
| Cast iron             | ○ | ○ |
| Non ferrous metals    |   |   |
| Heat resistant alloys |   |   |

WNMG



CERATIZIT \ Performance



| ISO      | RE  | Article no. |       | Article no. |       |
|----------|-----|-------------|-------|-------------|-------|
|          | mm  |             | EUR   |             | EUR   |
| 080404EN | 0,4 | 76 295 316  | 11,29 | 76 295 516  | 11,29 |
| 080408EN | 0,8 | 76 295 318  | 11,29 | 76 295 518  | 11,29 |
| 080412EN | 1,2 | 76 295 320  | 11,29 | 76 295 520  | 11,29 |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ○ | ○ |
| Cast iron             | ○ | ○ |
| Non ferrous metals    |   |   |
| Heat resistant alloys |   |   |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

v<sub>c</sub> = (See Individual v<sub>c</sub> Charts)  
π = 3.142  
D = Diameter





# LEGENDARY PERFORMANCE

## DRAGONSKIN

The Dragonskin grade for application on Stainless Steel

Field Test Results

Flange (X2CrNiMo 18-14-3 / 1.4435)  
Turning and Facing  
Cutting Data:  
v<sub>c</sub> = 160 m/min  
a<sub>p</sub> = 2.50 mm  
f = 0.27 mm/U

Spacing Bush (X5CrNi 15-10 / 1.4301)  
Turning  
Cutting Data:  
v<sub>c</sub> = 220 m/min  
a<sub>p</sub> = 3.00 mm  
f = 0.35 mm/U

Competitor – Tool Life: 4 parts



CERATIZIT: CTPM125 (HCN2125) /  
-M60 (-NM26) – Tool Life: 6 parts



Competitor – Tool Life: 50 parts



CERATIZIT: CTPM125 (HCN2125) /  
-M60 (-NM26) – Tool Life: 65 parts

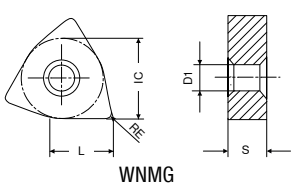
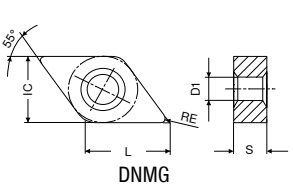
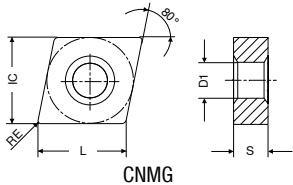


Turning guide (Main catalogue 2019)

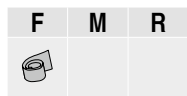
|                        |         |                                |         |
|------------------------|---------|--------------------------------|---------|
| Cutting Data           | 144–159 | Chip breakers                  | 168–175 |
| ISO designation system | 178–183 | Grade overview and description | 186+187 |

CNMG / DNMG / WNMG

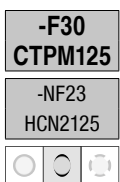
| Designation | L    | S    | D1   | IC    |
|-------------|------|------|------|-------|
|             | mm   | mm   | mm   | mm    |
| CNMG 1204.. | 12,9 | 4,76 | 5,16 | 12,70 |
| DNMG 1104.. | 11,6 | 4,76 | 3,81 | 9,52  |
| DNMG 1506.. | 15,5 | 6,35 | 5,16 | 12,70 |
| WNMG 0604.. | 6,5  | 4,76 | 3,81 | 9,52  |
| WNMG 0804.. | 8,6  | 4,76 | 5,16 | 12,70 |



CNMG



CERATIZIT \ Performance

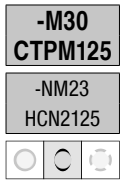


| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 120404EN | 0,4 | 75 010 280  | 10,28 |
| 120408EN | 0,8 | 75 010 230  | 10,28 |

CNMG



CERATIZIT \ Performance

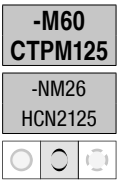


| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 120408EN | 0,8 | 75 011 230  | 10,28 |
| 120412EN | 1,2 | 75 011 232  | 10,28 |
| 120416EN | 1,6 | 75 011 234  | 10,28 |

CNMG

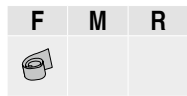


CERATIZIT \ Performance

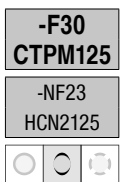


| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 120408EN | 0,8 | 75 012 230  | 10,28 |
| 120412EN | 1,2 | 75 012 232  | 10,28 |
| 120416EN | 1,6 | 75 012 234  | 10,28 |

DNMG



CERATIZIT \ Performance

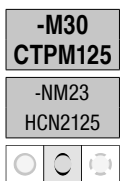


| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 110404EN | 0,4 | 75 013 204  | 10,97 |
| 110408EN | 0,8 | 75 013 206  | 10,97 |
| 150604EN | 0,4 | 75 013 228  | 14,40 |
| 150608EN | 0,8 | 75 013 230  | 14,40 |

DNMG



CERATIZIT \ Performance

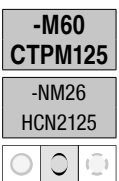


| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 110408EN | 0,8 | 75 014 206  | 10,97 |
| 110412EN | 1,2 | 75 014 208  | 10,97 |
| 150608EN | 0,8 | 75 014 230  | 14,40 |
| 150612EN | 1,2 | 75 014 232  | 14,40 |

DNMG

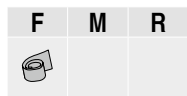


CERATIZIT \ Performance

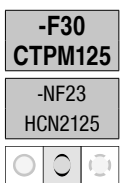


| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 150608EN | 0,8 | 75 015 230  | 14,40 |
| 150612EN | 1,2 | 75 015 232  | 14,40 |

WNMG



CERATIZIT \ Performance



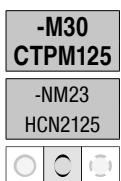
| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 060404EN | 0,4 | 75 024 204  | 8,96  |
| 060408EN | 0,8 | 75 024 206  | 8,96  |
| 080404EN | 0,4 | 75 024 216  | 11,28 |
| 080408EN | 0,8 | 75 024 218  | 11,28 |

|                       |   |
|-----------------------|---|
| Steel                 | ○ |
| Stainless steel       | ● |
| Cast iron             |   |
| Non ferrous metals    |   |
| Heat resistant alloys |   |

WNMG



CERATIZIT \ Performance



| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 060408EN | 0,8 | 75 025 206  | 8,96  |
| 060412EN | 1,2 | 75 025 208  | 8,96  |
| 080408EN | 0,8 | 75 025 218  | 11,28 |
| 080412EN | 1,2 | 75 025 220  | 11,28 |

|                       |   |
|-----------------------|---|
| Steel                 | ○ |
| Stainless steel       | ● |
| Cast iron             |   |
| Non ferrous metals    |   |
| Heat resistant alloys | ○ |

WNMG



CERATIZIT \ Performance



| ISO      | RE  | Article no. | EUR   |
|----------|-----|-------------|-------|
|          | mm  |             |       |
| 060408EN | 0,8 | 75 026 206  | 8,96  |
| 060412EN | 1,2 | 75 026 208  | 8,96  |
| 080408EN | 0,8 | 75 026 218  | 11,28 |
| 080412EN | 1,2 | 75 026 220  | 11,28 |

|                       |   |
|-----------------------|---|
| Steel                 | ○ |
| Stainless steel       | ● |
| Cast iron             |   |
| Non ferrous metals    |   |
| Heat resistant alloys | ○ |

Positive geometry for the machining of stainless steels



... the Dragonskin coating with the innovative technology

Turning guide (Main catalogue 2019)

|                        |         |                                |         |
|------------------------|---------|--------------------------------|---------|
| Cutting Data           | 144-159 | Chip breakers                  | 168-175 |
| ISO designation system | 178-183 | Grade overview and description | 186+187 |

CTPM125 (HCN2125) Dragonskin

The CTPM125 (HCN2125) for stainless steels is now also available with a positive geometry. The field of application of the newly developed chip breakers ranges from finishing through to light roughing giving excellent surface quality and tolerance accuracy. The scope of CTPM125 (HCN2125) covers ferritic, martensitic, austenitic stainless steels and duplex.

- ▲ -M25 (-PF23) for finishing, fine geometry for maximum surface quality and precision
- ▲ -M55 (-PF26) universal geometry for lightly interrupted cut, low cutting forces

Advantages

- ▲ Reduced edge build-up
- ▲ Perfect match of cutting tool material and chip breaker
- ▲ Application in all stainless steels and in alloy steels

Benefits

- ▲ Highest surface quality, finest tolerances of the workpiece
- ▲ Maximum service life, wide range of applications
- ▲ Reduced inventory, versatility

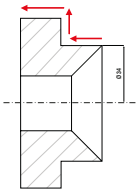
Field test reports

Bush 1.4301 /X5CrNi18-10) / AISI 304  
External longitudinal and face turning

|                   |                                           |
|-------------------|-------------------------------------------|
| Competitor:       | CERATIZIT: CTPM125 (HCN2125) -M25 (-PF23) |
| $v_c$ = 100 m/min | $v_c$ = 150 m/min                         |
| $a_p$ = 0.20 mm   | $a_p$ = 0.20 mm                           |
| $f$ = 0.15 mm/U   | $f$ = 0.18 mm/U                           |
| Emulsion          | Emulsion                                  |

Quantity: 150 parts

Tool life: 300 parts



+100 %

Seal 1.2083 (X40Cr14 tempered) / AISI 420  
External longitudinal and face turning;  
Internal turning

$v_c$  = 45 m/min  
 $a_p$  = 1.00 mm  
 $f$  = 0.15 mm/U  
Emulsion

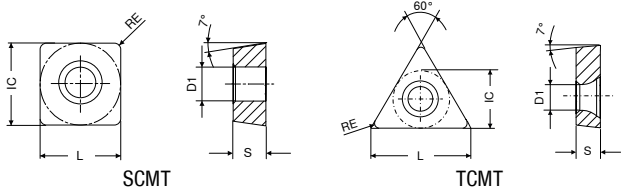
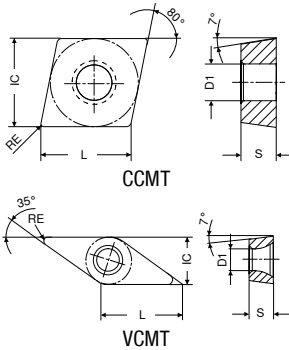
Competitor Tool Life: 14 mins  
CERATIZIT CTPM125 (HCN2125) -M55 (-PF26) Tool Life: 150 parts



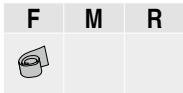
+78 %

CCMT / TCMT / DCMT / VCMT / SCMT

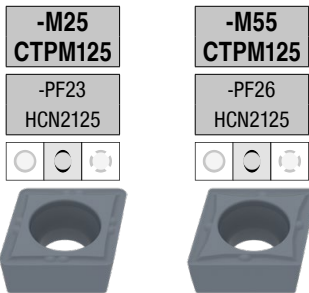
| Designation | L     | S    | D1  | IC    |
|-------------|-------|------|-----|-------|
|             | mm    | mm   | mm  | mm    |
| CCMT 0602.. | 6,40  | 2,38 | 2,8 | 6,35  |
| CCMT 09T3.. | 9,70  | 3,97 | 4,4 | 9,52  |
| CCMT 1204.. | 12,90 | 4,76 | 5,5 | 12,70 |
| DCMT 0702.. | 7,75  | 2,38 | 2,8 | 6,35  |
| DCMT 11T3.. | 11,60 | 3,97 | 4,4 | 9,52  |
| SCMT 09T3.. | 9,52  | 3,97 | 4,4 | 9,52  |
| SCMT 1204.. | 12,70 | 4,76 | 5,5 | 12,70 |
| TCMT 0902.. | 9,60  | 2,38 | 2,5 | 5,56  |
| TCMT 1102.. | 11,00 | 2,38 | 2,8 | 6,35  |
| TCMT 16T3.. | 16,50 | 3,97 | 4,4 | 9,52  |
| VCMT 1604.. | 16,60 | 4,76 | 4,4 | 9,52  |



CCMT

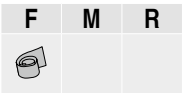


CERATIZIT \ Performance

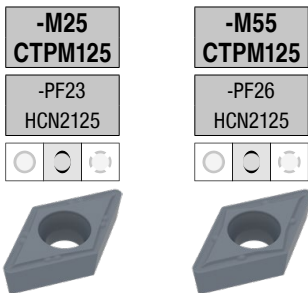


| ISO                   | RE  | Article no. | EUR  |
|-----------------------|-----|-------------|------|
|                       | mm  |             |      |
| 060204EN              | 0,4 | 75 210 204  | 7,00 |
| 09T304EN              | 0,4 | 75 210 216  | 8,73 |
| 09T308EN              | 0,8 | 75 210 218  | 8,73 |
| 120404EN              | 0,4 |             |      |
| 120408EN              | 0,8 |             |      |
| Steel                 |     |             |      |
| Stainless steel       |     |             |      |
| Cast iron             |     |             |      |
| Non ferrous metals    |     |             |      |
| Heat resistant alloys |     |             |      |

DCMT

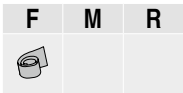


CERATIZIT \ Performance

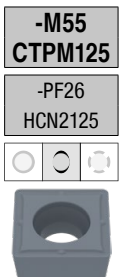


| ISO                   | RE  | Article no. | EUR  |
|-----------------------|-----|-------------|------|
|                       | mm  |             |      |
| 070202EN              | 0,2 | 75 213 202  | 7,00 |
| 070204EN              | 0,4 | 75 213 204  | 7,00 |
| 070208EN              | 0,8 |             |      |
| 11T302EN              | 0,2 | 75 213 214  | 9,82 |
| 11T304EN              | 0,4 | 75 213 216  | 9,84 |
| 11T308EN              | 0,8 | 75 213 218  | 9,84 |
| Steel                 |     |             |      |
| Stainless steel       |     |             |      |
| Cast iron             |     |             |      |
| Non ferrous metals    |     |             |      |
| Heat resistant alloys |     |             |      |

SCMT

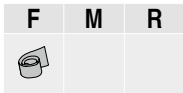


CERATIZIT \ Performance

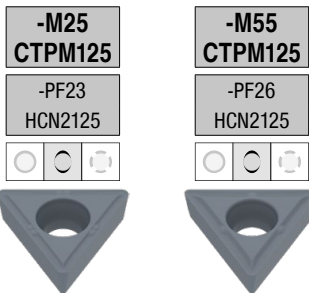


| ISO                   | RE  | Article no. | EUR   |
|-----------------------|-----|-------------|-------|
|                       | mm  |             |       |
| 09T308EN              | 0,8 | 75 216 206  | 8,73  |
| 120408EN              | 0,8 | 75 216 218  | 12,29 |
| Steel                 |     |             |       |
| Stainless steel       |     |             |       |
| Cast iron             |     |             |       |
| Non ferrous metals    |     |             |       |
| Heat resistant alloys |     |             |       |

TCMT

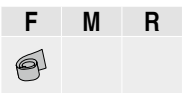


CERATIZIT \ Performance

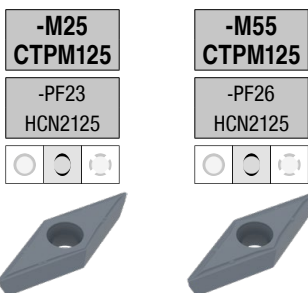


| ISO                   | RE  | Article no. | EUR  |
|-----------------------|-----|-------------|------|
|                       | mm  |             |      |
| 090204EN              | 0,4 |             |      |
| 110204EN              | 0,4 | 75 217 216  | 6,88 |
| 16T304EN              | 0,4 | 75 217 228  | 9,94 |
| 16T308EN              | 0,8 | 75 217 230  | 9,94 |
| Steel                 |     |             |      |
| Stainless steel       |     |             |      |
| Cast iron             |     |             |      |
| Non ferrous metals    |     |             |      |
| Heat resistant alloys |     |             |      |

VCMT



CERATIZIT \ Performance



| ISO                   | RE  | Article no. | EUR   |
|-----------------------|-----|-------------|-------|
|                       | mm  |             |       |
| 160404EN              | 0,4 | 75 219 228  | 14,40 |
| 160408EN              | 0,8 |             |       |
| Steel                 |     |             |       |
| Stainless steel       |     |             |       |
| Cast iron             |     |             |       |
| Non ferrous metals    |     |             |       |
| Heat resistant alloys |     |             |       |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

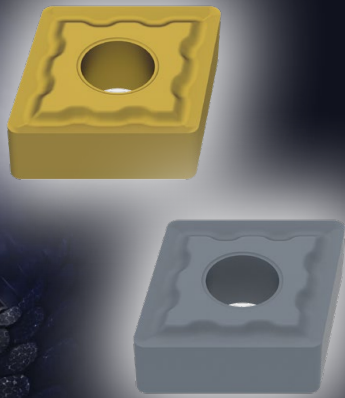
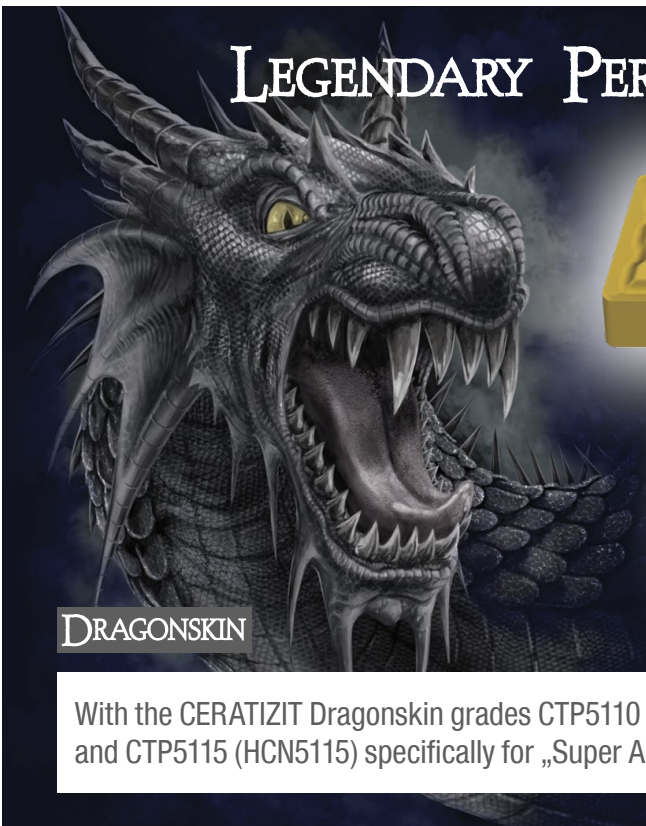
Speed Calculation

$$RPM = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
 $D$  = Diameter



# LEGENDARY PERFORMANCE



## DRAGONSKIN

With the CERATIZIT Dragonskin grades CTP5110 (HCN5110) and CTP5115 (HCN5115) specifically for „Super Alloys“.

## Turning Titanium and Heat Resistant Alloys

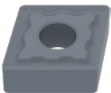
### Chip breaker -M34

The chip breaker -M34 was produced specifically for application on "Super alloys". As during machining, extreme heat is produced, special attention was paid to reducing heat generation. Extremely sharp cutting edges optimise the cutting action and reduce cutting forces.

In order to machine these alloys economically, use cutting depths up to  $a_p = 4,5\text{ mm}$  (depending on the selected insert type).

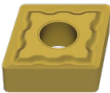
### CTP5110 (HCN5110) and CTP5115 (HCN5115)

Very hard cutting materials of the ISO K10 and ISO K15 class, paired with new, TiAlN coatings (PVD procedure) provide for the enormously high achievements of the CTP5110 (HCN5110) and CTP5115 (HCN5115) inserts.



**CTP5110**  
(HCN5110)

- ▲ specifically for Titanium and Titanium Alloys
- ▲ very hard and abrasion resistant substrate
- ▲ high wear resistance coating



**CTP5115**  
(HCN5115)

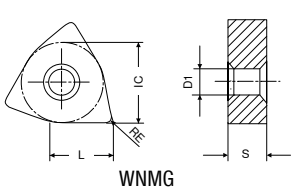
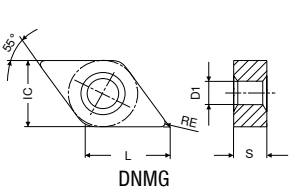
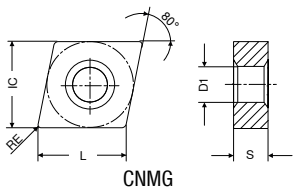
- ▲ specifically for super alloys such as Inconel, Hastelloy etc.
- ▲ substrate with high edge stability
- ▲ friction reducing coating

Turning guide (Main catalogue 2019)

|                        |         |                                |         |
|------------------------|---------|--------------------------------|---------|
| Cutting Data           | 144-159 | Chip breakers                  | 168-175 |
| ISO designation system | 178-183 | Grade overview and description | 186+187 |

### CNMG / WNMG / DNMG

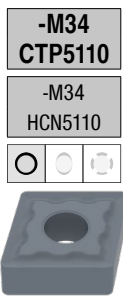
| Designation | L    | S    | D1   | IC   |
|-------------|------|------|------|------|
|             | mm   | mm   | mm   | mm   |
| CNMG 1204.. | 12,9 | 4,76 | 5,16 | 12,7 |
| DNMG 1504.. | 15,5 | 4,76 | 5,16 | 12,7 |
| DNMG 1506.. | 15,5 | 6,35 | 5,16 | 12,7 |
| WNMG 0804.. | 8,6  | 4,76 | 5,16 | 12,7 |



### CNMG

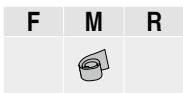


CERATIZIT \ Performance

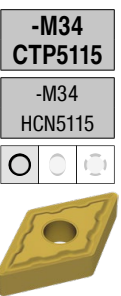


| ISO                   | RE  | Article no. | EUR  | Article no. | EUR  |
|-----------------------|-----|-------------|------|-------------|------|
|                       | mm  |             |      |             |      |
| 120404EN              | 0,4 | 75 003 428  | 9,68 | 75 003 528  | 9,68 |
| 120408EN              | 0,8 | 75 003 430  | 9,68 | 75 003 530  | 9,68 |
| 120412EN              | 1,2 | 75 003 432  | 9,68 | 75 003 532  | 9,68 |
| 120416EN              | 1,6 |             |      | 75 003 534  | 9,68 |
| Steel                 |     |             |      |             |      |
| Stainless steel       |     | ○           |      | ○           |      |
| Cast iron             |     |             |      |             |      |
| Non ferrous metals    |     |             |      |             |      |
| Heat resistant alloys |     | ●           |      | ●           |      |

### DNMG



CERATIZIT \ Performance

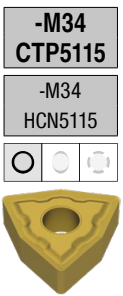


| ISO                   | RE  | Article no. | EUR   | Article no. | EUR   |
|-----------------------|-----|-------------|-------|-------------|-------|
|                       | mm  |             |       |             |       |
| 150404EN              | 0,4 | 75 004 416  | 13,89 | 75 004 516  | 13,89 |
| 150408EN              | 0,8 | 75 004 418  | 13,89 | 75 004 518  | 13,89 |
| 150412EN              | 1,2 | 75 004 420  | 13,89 | 75 004 520  | 13,89 |
| 150608EN              | 0,8 | 75 004 430  | 15,21 | 75 004 530  | 15,21 |
| 150612EN              | 1,2 | 75 004 432  | 15,21 | 75 004 532  | 15,21 |
| Steel                 |     |             |       |             |       |
| Stainless steel       |     | ○           |       | ○           |       |
| Cast iron             |     |             |       |             |       |
| Non ferrous metals    |     |             |       |             |       |
| Heat resistant alloys |     | ●           |       | ●           |       |

### WNMG



CERATIZIT \ Performance



| ISO                   | RE  | Article no. | EUR   | Article no. | EUR   |
|-----------------------|-----|-------------|-------|-------------|-------|
|                       | mm  |             |       |             |       |
| 080408EN              | 0,8 | 75 008 418  | 11,78 | 75 008 518  | 11,78 |
| 080412EN              | 1,2 | 75 008 420  | 11,78 | 75 008 520  | 11,78 |
| Steel                 |     |             |       |             |       |
| Stainless steel       |     | ○           |       | ○           |       |
| Cast iron             |     |             |       |             |       |
| Non ferrous metals    |     |             |       |             |       |
| Heat resistant alloys |     | ●           |       | ●           |       |



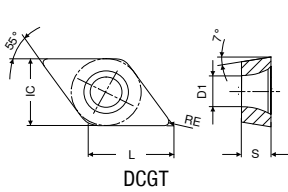
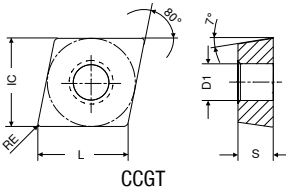
## Placing your order is quick and easy

### Customer Service Centre

You can reach our Customer Service Centre Monday to Friday from 8:00 am – 6:30 pm. Just call and you will be helped immediately by one competent person with no holding time, who will directly answer your questions and get your order processed.

CCGT / DCGT

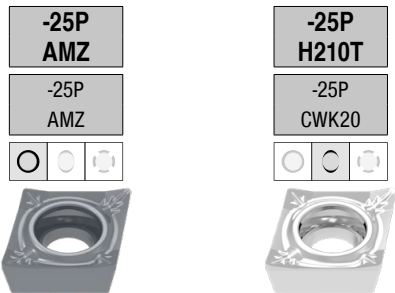
| Designation | D1  | IC    | S    | L     |
|-------------|-----|-------|------|-------|
|             | mm  | mm    | mm   | mm    |
| CCGT 0602.. | 2,8 | 6,35  | 2,38 | 6,40  |
| CCGT 09T3.. | 4,4 | 9,52  | 3,97 | 9,70  |
| CCGT 1204.. | 5,5 | 12,70 | 4,76 | 12,90 |
| DCGT 0702.. | 2,8 | 6,35  | 2,38 | 7,75  |
| DCGT 11T3.. | 4,4 | 9,52  | 3,97 | 11,60 |



CCGT

| F | M | R |
|---|---|---|
|   |   |   |

CERATIZIT \ Performance

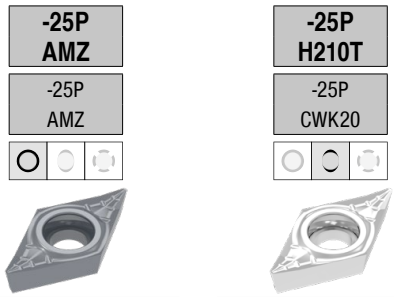


| ISO                     | RE  | Article no. |       | Article no. |       |
|-------------------------|-----|-------------|-------|-------------|-------|
|                         |     |             | EUR   |             | EUR   |
| 060202FN                | 0,2 | 70 248 556  | 11,68 | 70 248 636  | 9,82  |
| 060204FN                | 0,4 | 70 248 558  | 11,68 | 70 248 638  | 9,82  |
| 09T302FN                | 0,2 | 70 248 539  | 11,98 | 70 248 639  | 10,28 |
| 09T304FN                | 0,4 | 70 248 560  | 11,98 | 70 248 640  | 10,28 |
| 09T308FN                | 0,8 | 70 248 541  | 11,98 | 70 248 641  | 10,28 |
| 120402FN                | 0,2 |             |       | 70 248 643  | 11,98 |
| 120404FN                | 0,4 | 70 248 562  | 15,30 | 70 248 642  | 11,98 |
| 120408FN                | 0,8 | 70 248 564  | 15,30 | 70 248 644  | 11,98 |
| Steel ○                 |     |             |       |             |       |
| Stainless steel ○       |     |             |       |             |       |
| Cast iron ○ ○           |     |             |       |             |       |
| Non ferrous metals ● ●  |     |             |       |             |       |
| Heat resistant alloys ○ |     |             |       |             |       |

DCGT

| F | M | R |
|---|---|---|
|   |   |   |

CERATIZIT \ Performance

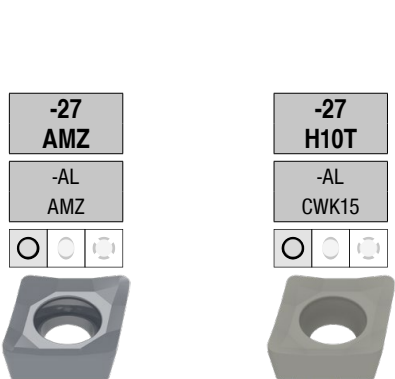


| ISO                     | RE  | Article no. |       | Article no. |       |
|-------------------------|-----|-------------|-------|-------------|-------|
|                         |     |             | EUR   |             | EUR   |
| 070202FN                | 0,2 | 70 263 552  | 10,58 | 70 263 632  | 8,85  |
| 070204FN                | 0,4 | 70 263 554  | 10,58 | 70 263 634  | 8,85  |
| 11T302FN                | 0,2 | 70 263 535  | 12,79 | 70 263 635  | 10,97 |
| 11T304FN                | 0,4 | 70 263 556  | 12,79 | 70 263 636  | 10,97 |
| 11T308FN                | 0,8 | 70 263 558  | 12,79 | 70 263 638  | 10,97 |
| Steel ○                 |     |             |       |             |       |
| Stainless steel ○       |     |             |       |             |       |
| Cast iron ○ ○           |     |             |       |             |       |
| Non ferrous metals ● ●  |     |             |       |             |       |
| Heat resistant alloys ○ |     |             |       |             |       |

CCGT

| F | M | R |
|---|---|---|
|   |   |   |

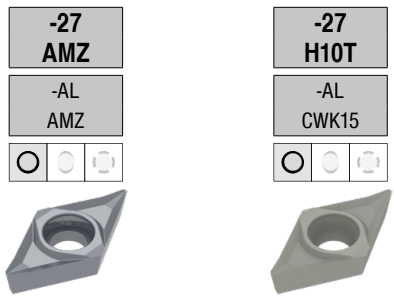
CERATIZIT \ Performance



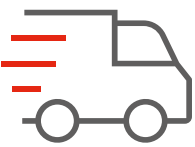
| ISO                     | RE  | Article no. |       | Article no. |       |
|-------------------------|-----|-------------|-------|-------------|-------|
|                         |     |             | EUR   |             | EUR   |
| 060202FN                | 0,2 | 70 254 450  | 11,18 | 70 254 600  | 9,20  |
| 060204FN                | 0,4 | 70 254 452  | 11,18 | 70 254 602  | 9,20  |
| 09T302FN                | 0,2 | 70 254 454  | 11,48 | 70 254 604  | 9,82  |
| 09T304FN                | 0,4 | 70 254 456  | 11,48 | 70 254 606  | 9,82  |
| 09T308FN                | 0,8 | 70 254 458  | 11,48 | 70 254 608  | 9,82  |
| 120402FN                | 0,2 | 70 254 460  | 14,30 | 70 254 610  | 11,48 |
| 120404FN                | 0,4 | 70 254 462  | 14,30 | 70 254 612  | 11,48 |
| 120408FN                | 0,8 | 70 254 464  | 14,30 | 70 254 614  | 11,48 |
| Steel ○                 |     |             |       |             |       |
| Stainless steel ○       |     |             |       |             |       |
| Cast iron ○ ○           |     |             |       |             |       |
| Non ferrous metals ● ●  |     |             |       |             |       |
| Heat resistant alloys ○ |     |             |       |             |       |

| F | M | R |
|---|---|---|
|   |   |   |

CERATIZIT \ Performance



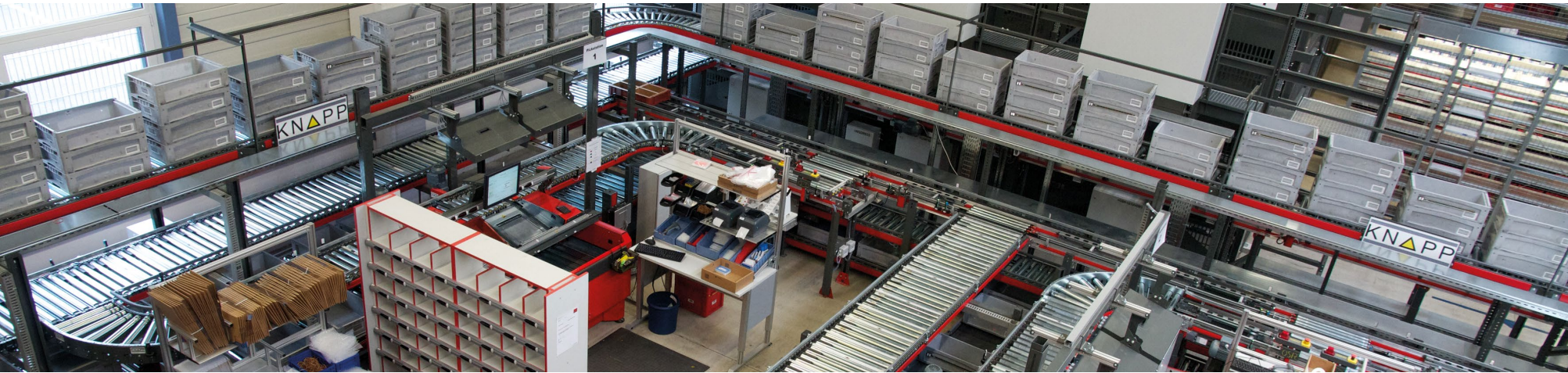
| ISO                     | RE  | Article no. |       | Article no. |       |
|-------------------------|-----|-------------|-------|-------------|-------|
|                         |     |             | EUR   |             | EUR   |
| 070202FN                | 0,2 | 70 260 450  | 10,16 | 70 260 600  | 8,36  |
| 070204FN                | 0,4 | 70 260 452  | 10,16 | 70 260 602  | 8,36  |
| 11T302FN                | 0,2 | 70 260 454  | 12,29 | 70 260 604  | 10,47 |
| 11T304FN                | 0,4 | 70 260 456  | 12,29 | 70 260 606  | 10,47 |
| 11T308FN                | 0,8 | 70 260 458  | 12,29 | 70 260 608  | 10,47 |
| Steel ○                 |     |             |       |             |       |
| Stainless steel ○       |     |             |       |             |       |
| Cast iron ○ ○           |     |             |       |             |       |
| Non ferrous metals ● ●  |     |             |       |             |       |
| Heat resistant alloys ○ |     |             |       |             |       |



Your tool is ready!

High product availability thanks to state-of-the-art logistics

Why own stock? We take care of that for you! With the cutting-edge logistics center of the cutting tools industry, we guarantee that your order will be delivered promptly.



Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

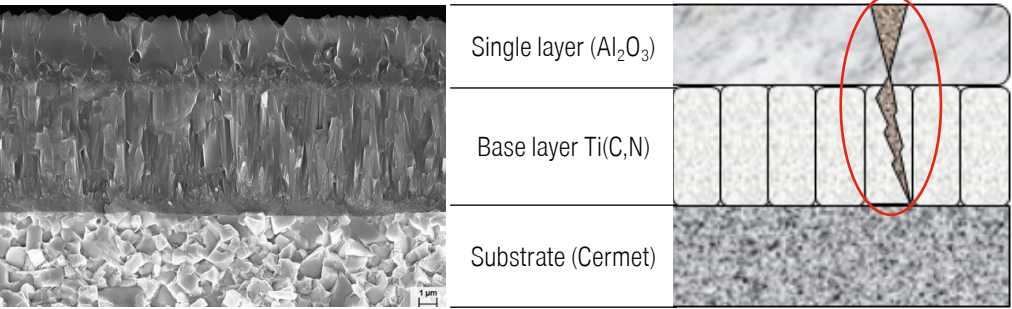
Speed  
Calculation

$$RPM = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
 $D$  = Diameter

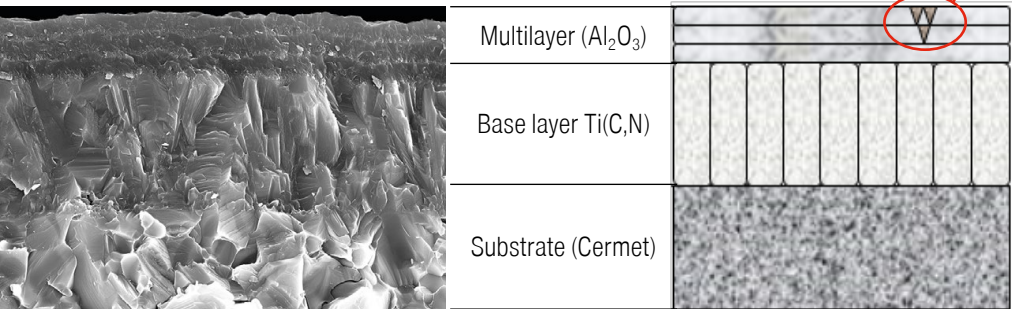


Unique multilayer coating ensures tremendous process safety  
Mono-Layer Technology (TWC410)



**i** The monolayer structure allows cracks to penetrate to the base substrate.

New Multi-Layer Technology CTEP110 (DCC1110)



**i** Due to the multilayer coating structure, the formation of cracks between the layers is stopped.

Turning Inserts – Cermet Grade CTEP110 (DCC1110)

The new, more powerful CTEP110 (DCC1110) grade replaces the TWC410 and TWC10 grades in our cermet range. The combination of the latest CVD coating technology and proven cermet substrate produces a very high wear resistance with unprecedented toughness. This offers significant advantages in terms of performance and service life of the inserts compared to the TWC410 and TWC10 grades.

Advantages/Benefits

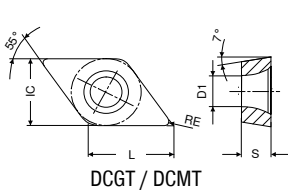
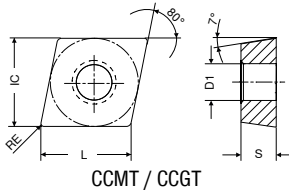
- ▲ Combination of the proven cermet substrate and the latest PVD coating technology
- ▲ Unique multilayer nano coating
- ▲ Combines very high wear resistance and unprecedented toughness
- ▲ Optimized chip breakers

Turning guide (Main catalogue 2019)

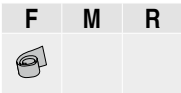
|                        |         |                                |         |
|------------------------|---------|--------------------------------|---------|
| Cutting Data           | 144-159 | Chip breakers                  | 168-175 |
| ISO designation system | 178-183 | Grade overview and description | 186+187 |

CCMT / CCGT / DCGT / DCMT

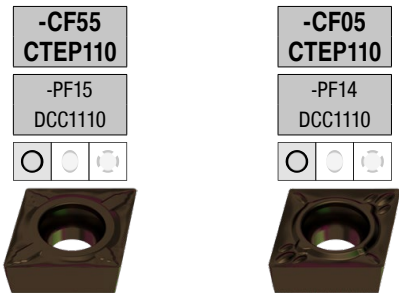
| Designation | L     | S    | D1  | IC    |
|-------------|-------|------|-----|-------|
|             | mm    | mm   | mm  | mm    |
| CC.T 0602.. | 6,40  | 2,38 | 2,8 | 6,35  |
| CC.T 09T3.. | 9,70  | 3,97 | 4,4 | 9,52  |
| CCMT 1204.. | 12,90 | 4,76 | 5,5 | 12,70 |
| DC.T 0702.. | 7,75  | 2,38 | 2,8 | 6,35  |
| DC.T 11T3.. | 11,60 | 3,97 | 4,4 | 9,52  |



CCMT / CCGT

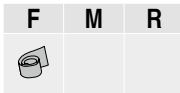


CERATIZIT \ Performance

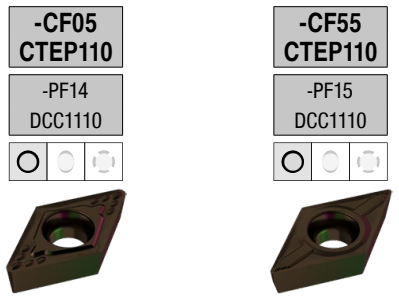


| ISO                   | RE  | CCMT        |       | CCGT        |       |
|-----------------------|-----|-------------|-------|-------------|-------|
|                       |     | Article no. | EUR   | Article no. | EUR   |
|                       | mm  |             |       |             |       |
| 060202EN              | 0,2 |             |       | 76 247 002  | 12,47 |
| 060204EN              | 0,4 | 76 248 004  | 6,79  | 76 247 004  | 12,47 |
| 09T302EN              | 0,2 |             |       | 76 247 014  | 13,29 |
| 09T304EN              | 0,4 | 76 248 016  | 8,71  | 76 247 016  | 13,29 |
| 09T308EN              | 0,8 | 76 248 018  | 8,71  | 76 247 018  | 13,29 |
| 120404EN              | 0,4 | 76 248 028  | 12,29 |             |       |
| Steel                 |     | ●           |       | ●           |       |
| Stainless steel       |     | ○           |       | ○           |       |
| Cast iron             |     | ○           |       | ○           |       |
| Non ferrous metals    |     |             |       |             |       |
| Heat resistant alloys |     |             |       |             |       |

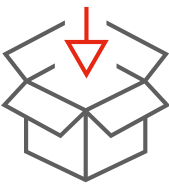
DCGT / DCMT



CERATIZIT \ Performance



| ISO                   | RE  | DCGT        |       | DCMT        |      |
|-----------------------|-----|-------------|-------|-------------|------|
|                       |     | Article no. | EUR   | Article no. | EUR  |
|                       | mm  |             |       |             |      |
| 070202EN              | 0,2 | 76 245 002  | 12,47 | 76 246 002  | 7,08 |
| 070204EN              | 0,4 | 76 245 004  | 12,47 | 76 246 004  | 7,08 |
| 11T302EN              | 0,2 | 76 245 014  | 16,52 |             |      |
| 11T304EN              | 0,4 | 76 245 016  | 16,52 | 76 246 016  | 9,82 |
| 11T308EN              | 0,8 | 76 245 018  | 16,52 | 76 246 018  | 9,82 |
| Steel                 |     | ●           |       | ●           |      |
| Stainless steel       |     | ○           |       | ○           |      |
| Cast iron             |     | ○           |       | ○           |      |
| Non ferrous metals    |     |             |       |             |      |
| Heat resistant alloys |     |             |       |             |      |



There are no minimum order quantities

From single items to large orders!

No matter which tool you need, we promise you quick and uncomplicated delivery. Even if you only order one item! We do not have minimum order quantities.





# THE REVOLUTION IN TURNING

## High Dynamic Turning with FreeTurn Tools



### Uncompromising turning with complete freedom

High Dynamic Turning, or HDT for short, from CERATIZIT has turned conventional turning methods completely upside down. This new turning technology combined with the dynamic FreeTurn tooling, means that in the future it will be possible to carry out all traditional turning operations such as roughing, finishing, contour turning, face turning and longitudinal turning with just one tool. HDT is therefore a completely uncompromising method of turning.

#### Simple structure – Stable Unit



patent pending

- ▲ **360°** degrees of freedom
- ▲ **200%** higher productivity
- ▲ **100%** less tool changes
- ▲ **90%** less free travel
- ▲ **66%** tool saving
- ▲ **40%** higher feed rates

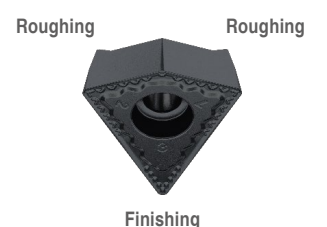
#### Variable approach angles

- ▲ can be changed during the machining process
- ▲ feed rates can be optimally adapted
- ▲ outstanding chip control
- ▲ for dynamic turning in all directions, pulling cut and pressing cut



#### One tool for different turning operations

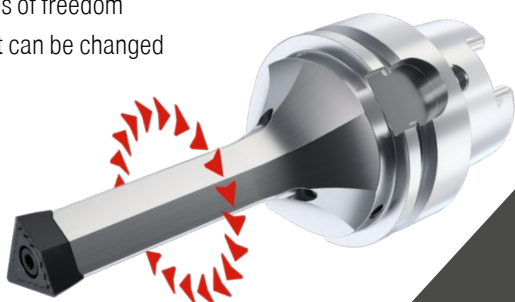
- ▲ turning of complex profiles with only one tool
- ▲ enormous reduction of tool types
- ▲ massive reduction of tool changes



#### You will benefit from unique characteristics

##### 360° of freedom

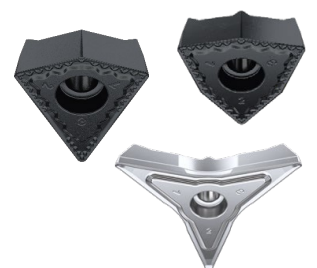
- ▲ FreeTurn sits in the milling spindle to utilize its 360 degrees of freedom
- ▲ cutting edge of insert can be changed mid process



#### Custom indexable inserts

One indexable insert with several cutting edges can consist of different

- ▲ cutting angles
- ▲ corner radii
- ▲ chip breakers
- ▲ coatings
- ▲ cutting material





# ECOCUT

## The Original Multi Function Tool, New and Improved

The trend in machining is unmistakable: Workpieces are becoming increasingly complex and technically challenging. Production often requires a variety of tools, which can not be economically accommodated with the existing turret locations. The answer to this challenge from CERATIZIT is the multi-function tool EcoCut.

*EcoCut guide (Main catalogue 2019)*

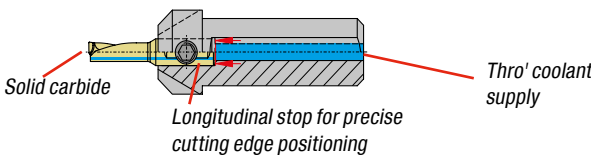
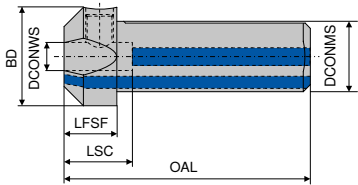
|                         |       |                                  |       |
|-------------------------|-------|----------------------------------|-------|
| Cutting Data            | 15-22 | Chip breakers                    | 23+24 |
| Application information | 25-29 | Application and Grade Comparison | 30+31 |





EcoCut – Adapter Mini

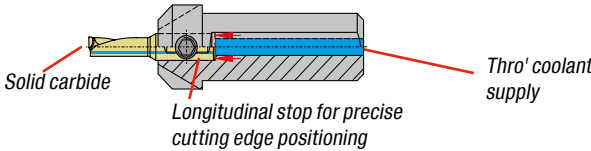
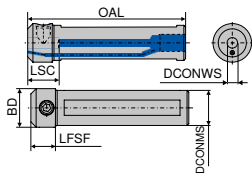
CERATIZIT \ Performance



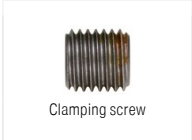
| Designation   | DCONWS | DCONMS | BD | OAL  | LFSF | LSC | Article no. |        |
|---------------|--------|--------|----|------|------|-----|-------------|--------|
|               | mm     | mm     | mm | mm   | mm   | mm  |             | EUR    |
| EC-ADX16-04   | 4      | 16,00  | 22 | 59,0 | 14   | 18  | 70 800 716  | 179,36 |
| EC-ADX12-04-E | 4      | 19,05  | 25 | 63,5 | 14   | 18  | 70 800 719  | 179,36 |
| EC-ADX20-04   | 4      | 20,00  | 25 | 64,0 | 14   | 18  | 70 800 720  | 179,36 |
| EC-ADX16-06   | 6      | 16,00  | 22 | 59,0 | 14   | 18  | 70 800 976  | 169,92 |
| EC-ADX12-06-E | 6      | 19,05  | 25 | 63,5 | 14   | 18  | 70 800 986  | 169,92 |
| EC-ADX20-06   | 6      | 20,00  | 25 | 64,0 | 14   | 18  | 70 800 996  | 169,92 |
| EC-ADX16-08   | 8      | 16,00  | 22 | 59,0 | 14   | 18  | 70 800 978  | 169,92 |
| EC-ADX12-08-E | 8      | 19,05  | 25 | 63,5 | 14   | 18  | 70 800 988  | 169,92 |
| EC-ADX20-08   | 8      | 20,00  | 25 | 64,0 | 14   | 18  | 70 800 998  | 169,92 |

EcoCut – Mini adapter with coolant connection thread

CERATIZIT \ Performance



| Designation | DCONWS | DCONMS | BD   | OAL | LFSF | LSC | Article no. |        |
|-------------|--------|--------|------|-----|------|-----|-------------|--------|
|             | mm     | mm     | mm   | mm  | mm   | mm  | Thread      | EUR    |
| ECA 16-04   | 4      | 16,00  | 20,0 | 75  | 14   | 18  | G 1/8       | 95,76  |
| ECA 0750-04 | 4      | 19,05  | 20,0 | 100 | 14   | 18  | G 1/8       | 97,76  |
| ECA 20-04   | 4      | 20,00  | 19,6 | 90  | 14   | 18  | G 1/8       | 97,76  |
| ECA 22-04   | 4      | 22,00  | 21,6 | 110 | 14   | 18  | G 1/8       | 100,70 |
| ECA 25-04   | 4      | 25,00  | 24,6 | 110 | 14   | 18  | G 1/8       | 101,65 |
| ECA 1000-04 | 4      | 25,40  | 25,0 | 110 | 14   | 18  | G 1/8       | 101,65 |
| ECA 16-06   | 6      | 16,00  | 22,0 | 75  | 14   | 18  | G 1/8       | 90,72  |
| ECA 0750-06 | 6      | 19,05  | 22,0 | 100 | 14   | 18  | G 1/8       | 92,61  |
| ECA 20-06   | 6      | 20,00  | 22,0 | 90  | 14   | 18  | G 1/8       | 92,61  |
| ECA 22-06   | 6      | 22,00  | 21,6 | 110 | 14   | 18  | G 1/8       | 95,40  |
| ECA 25-06   | 6      | 25,00  | 24,6 | 110 | 14   | 18  | G 1/8       | 96,30  |
| ECA 1000-06 | 6      | 25,40  | 25,0 | 110 | 14   | 18  | G 1/8       | 96,30  |
| ECA 16-08   | 8      | 16,00  | 22,0 | 75  | 14   | 18  | G 1/8       | 90,72  |
| ECA 0750-08 | 8      | 19,05  | 22,0 | 100 | 14   | 18  | G 1/8       | 92,61  |
| ECA 20-08   | 8      | 20,00  | 22,0 | 90  | 14   | 18  | G 1/8       | 92,61  |
| ECA 22-08   | 8      | 22,00  | 21,6 | 110 | 14   | 18  | G 1/8       | 95,40  |
| ECA 25-08   | 8      | 25,00  | 24,6 | 110 | 14   | 18  | G 1/8       | 96,30  |
| ECA 1000-08 | 8      | 25,40  | 25,0 | 110 | 14   | 18  | G 1/8       | 96,30  |

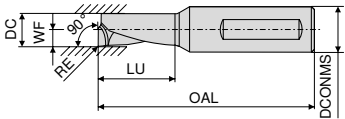


| Spare parts<br>DCONWS | Article no.         |            |
|-----------------------|---------------------|------------|
|                       | EUR                 |            |
| 4                     | M5x10 ISO 4026 2,98 | 70 950 867 |
| 6                     | M8x1x8 - SW4 2,68   | 70 950 123 |
| 8                     | M8x1x8 - SW4 2,68   | 70 950 123 |



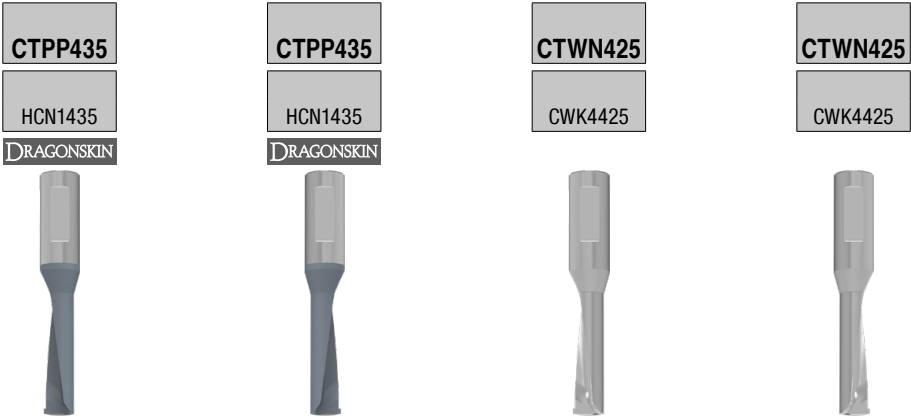
EcoCut – Mini

▲ Drilling and turning tool for small diameters



| Designation           | DC  | DCONMS | OAL | LU    | WF   | RE  |
|-----------------------|-----|--------|-----|-------|------|-----|
|                       | mm  | mm     | mm  | mm    | mm   | mm  |
| ECM 02 R/L 2,25D      | 2,0 | 4      | 28  | 4,50  | 1,00 | 0,1 |
| ECM 02 R/L 2,25D AL   | 2,0 | 4      | 28  | 4,50  | 1,00 | 0,1 |
| ECM 02 R/L 4,00D      | 2,0 | 4      | 31  | 8,00  | 1,00 | 0,1 |
| ECM 02 R/L 4,00D AL   | 2,0 | 4      | 31  | 8,00  | 1,00 | 0,1 |
| ECM 02,5 R/L 2,25D    | 2,5 | 4      | 29  | 5,63  | 1,25 | 0,1 |
| ECM 02,5 R/L 2,25D AL | 2,5 | 4      | 29  | 5,63  | 1,25 | 0,1 |
| ECM 02,5 R/L 4,00D    | 2,5 | 4      | 33  | 10,00 | 1,25 | 0,1 |
| ECM 02,5 R/L 4,00D AL | 2,5 | 4      | 33  | 10,00 | 1,25 | 0,1 |
| ECM 03 R/L 2,25D      | 3,0 | 4      | 31  | 6,75  | 1,50 | 0,1 |
| ECM 03 R/L 2,25D AL   | 3,0 | 4      | 31  | 6,75  | 1,50 | 0,1 |
| ECM 03 R/L 4,00D      | 3,0 | 4      | 35  | 12,00 | 1,50 | 0,1 |
| ECM 03 R/L 4,00D AL   | 3,0 | 4      | 35  | 12,00 | 1,50 | 0,1 |
| ECM 03,5 R/L 2,25D    | 3,5 | 4      | 32  | 7,88  | 1,75 | 0,1 |
| ECM 03,5 R/L 2,25D AL | 3,5 | 4      | 32  | 7,88  | 1,75 | 0,1 |
| ECM 03,5 R/L 4,00D    | 3,5 | 4      | 37  | 14,00 | 1,75 | 0,1 |
| ECM 03,5 R/L 4,00D AL | 3,5 | 4      | 37  | 14,00 | 1,75 | 0,1 |
| ECM 04 R/L 2,25D      | 4,0 | 6      | 35  | 9,00  | 2,00 | 0,2 |
| ECM 04 R/L 2,25D AL   | 4,0 | 6      | 35  | 9,00  | 2,00 | 0,2 |
| ECM 04 R/L 4,00D      | 4,0 | 6      | 41  | 16,00 | 2,00 | 0,2 |
| ECM 04 R/L 4,00D AL   | 4,0 | 6      | 41  | 16,00 | 2,00 | 0,2 |
| ECM 05 R/L 2,25D      | 5,0 | 6      | 37  | 11,25 | 2,50 | 0,2 |
| ECM 05 R/L 2,25D AL   | 5,0 | 6      | 37  | 11,25 | 2,50 | 0,2 |
| ECM 05 R/L 4,00D      | 5,0 | 6      | 45  | 20,00 | 2,50 | 0,2 |
| ECM 05 R/L 4,00D AL   | 5,0 | 6      | 45  | 20,00 | 2,50 | 0,2 |
| ECM 06 R/L 2,25D      | 6,0 | 8      | 38  | 13,50 | 3,00 | 0,2 |
| ECM 06 R/L 2,25D AL   | 6,0 | 8      | 38  | 13,50 | 3,00 | 0,2 |
| ECM 06 R/L 4,00D      | 6,0 | 8      | 49  | 24,00 | 3,00 | 0,2 |
| ECM 06 R/L 4,00D AL   | 6,0 | 8      | 49  | 24,00 | 3,00 | 0,2 |
| ECM 07 R/L 2,25D      | 7,0 | 8      | 42  | 15,75 | 3,50 | 0,2 |
| ECM 07 R/L 2,25D AL   | 7,0 | 8      | 42  | 15,75 | 3,50 | 0,2 |
| ECM 07 R/L 4,00D      | 7,0 | 8      | 53  | 28,00 | 3,50 | 0,2 |
| ECM 07 R/L 4,00D AL   | 7,0 | 8      | 53  | 28,00 | 3,50 | 0,2 |
| ECM 08 R/L 2,25D      | 8,0 | 8      | 45  | 18,00 | 4,00 | 0,2 |
| ECM 08 R/L 2,25D AL   | 8,0 | 8      | 45  | 18,00 | 4,00 | 0,2 |
| ECM 08 R/L 4,00D      | 8,0 | 8      | 57  | 32,00 | 4,00 | 0,2 |
| ECM 08 R/L 4,00D AL   | 8,0 | 8      | 57  | 32,00 | 4,00 | 0,2 |

|                       |   |   |   |   |
|-----------------------|---|---|---|---|
| Steel                 | ● | ● |   |   |
| Stainless steel       | ● | ● |   |   |
| Cast iron             | ○ | ○ | ○ | ○ |
| Non ferrous metals    |   |   | ● | ● |
| Heat resistant alloys | ● | ● |   |   |



| Solid carbide<br>Left-hand |       | Solid carbide<br>Right-hand |       | Solid carbide<br>Left-hand |            | Solid carbide<br>Right-hand |            |
|----------------------------|-------|-----------------------------|-------|----------------------------|------------|-----------------------------|------------|
| Article no.                |       | Article no.                 |       | Article no.                |            | Article no.                 |            |
|                            | EUR   |                             | EUR   |                            | EUR        |                             | EUR        |
| 805 320                    | 50,96 | 70 804 320                  | 48,41 | 70 805 420                 | 42,68      | 70 804 420                  | 42,68      |
| 805 321                    | 53,46 | 70 804 321                  | 50,79 |                            | 70 805 421 | 44,75                       | 70 804 421 |
| 805 325                    | 52,52 | 70 804 325                  | 49,89 | 70 805 425                 | 43,97      | 70 804 425                  | 43,97      |
| 805 326                    | 55,12 | 70 804 326                  | 52,36 | 70 805 426                 | 46,14      | 70 804 426                  | 46,14      |
| 805 330                    | 54,18 | 70 804 330                  | 51,47 | 70 805 430                 | 45,35      | 70 804 430                  | 45,35      |
| 805 331                    | 56,89 | 70 804 331                  | 54,05 | 70 805 431                 | 47,62      | 70 804 431                  | 47,62      |
| 805 335                    | 56,26 | 70 804 335                  | 53,45 | 70 805 435                 | 47,13      | 70 804 435                  | 47,13      |
| 805 336                    | 59,07 | 70 804 336                  | 56,12 | 70 805 436                 | 49,50      | 70 804 436                  | 49,50      |
| 805 300                    | 59,75 | 70 804 300                  | 53,78 | 70 805 450                 | 47,38      | 70 804 450                  | 47,38      |
| 805 301                    | 62,72 | 70 804 301                  | 56,45 | 70 805 451                 | 49,75      | 70 804 451                  | 49,75      |
| 805 302                    | 61,82 | 70 804 302                  | 55,64 | 70 805 452                 | 48,71      | 70 804 452                  | 48,71      |
| 805 303                    | 64,68 | 70 804 303                  | 58,21 | 70 805 453                 | 51,08      | 70 804 453                  | 51,08      |
| 805 306                    | 63,42 | 70 804 306                  | 57,08 | 70 805 456                 | 50,36      | 70 804 456                  | 50,36      |
| 805 312                    | 66,62 | 70 804 312                  | 59,96 | 70 805 462                 | 52,64      | 70 804 462                  | 52,64      |
| 805 308                    | 65,37 | 70 804 308                  | 58,83 | 70 805 458                 | 51,91      | 70 804 458                  | 51,91      |
| 805 314                    | 68,81 | 70 804 314                  | 61,93 | 70 805 464                 | 54,29      | 70 804 464                  | 54,29      |
| 805 310                    | 67,54 | 70 804 310                  | 60,79 | 70 805 460                 | 53,36      | 70 804 460                  | 53,36      |
| 805 316                    | 70,75 | 70 804 316                  | 63,68 | 70 805 466                 | 55,94      | 70 804 466                  | 55,94      |

## EcoCut – Classic 1.5xD

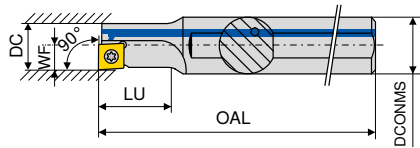
▲ Drilling and turning tool

**Scope of supply:**

Toolholder with 1 clamping screw + 2 spare screws and screwdriver



**CERATIZIT** \ Performance



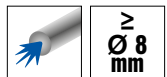
| Designation        | DC | DCONMS | OAL | LU   | WF   | torque moment<br>Nm | Insert        | Article no. |        | Article no. |        |
|--------------------|----|--------|-----|------|------|---------------------|---------------|-------------|--------|-------------|--------|
|                    | mm | mm     | mm  | mm   | mm   |                     |               | EUR         | EUR    |             |        |
| ECC 08 L 1,5D 04   | 8  | 12     | 80  | 12,0 | 4,0  | 0,4                 | XC.T 0401..EL | 70 805 008  | 143,19 | 70 804 008  | 143,19 |
| ECC 08 R 1,5D 04   | 8  | 12     | 80  | 12,0 | 4,0  | 0,4                 | XC.T 0401..ER |             | 143,19 |             | 143,19 |
| ECC 10 R/L 1,5D 05 | 10 | 12     | 90  | 15,0 | 5,0  | 0,7                 | XC.T 0502..   | 70 805 010  | 143,19 | 70 804 010  | 143,19 |
| ECC 12 R/L 1,5D 06 | 12 | 16     | 100 | 18,0 | 6,0  | 1,0                 | XC.T 0602..   | 70 805 012  | 145,53 | 70 804 012  | 145,53 |
| ECC 14 R/L 1,5D 07 | 14 | 16     | 110 | 21,0 | 7,0  | 1,2                 | XC.T 0703..   | 70 805 014  | 149,04 | 70 804 014  | 149,04 |
| ECC 16 R/L 1,5D 08 | 16 | 20     | 125 | 24,0 | 8,0  | 2,2                 | XC.T 0803..   | 70 805 016  | 151,38 | 70 804 016  | 151,38 |
| ECC 18 R/L 1,5D 09 | 18 | 25     | 135 | 27,0 | 9,0  | 2,2                 | XC.T 09T3..   | 70 805 018  | 174,60 | 70 804 018  | 174,60 |
| ECC 20 R/L 1,5D 10 | 20 | 25     | 150 | 30,0 | 10,0 | 3,2                 | XC.T 10T3..   | 70 805 020  | 196,83 | 70 804 020  | 196,83 |
| ECC 25 R/L 1,5D 13 | 25 | 32     | 180 | 37,5 | 12,5 | 5,0                 | XC.T 1304..   | 70 805 025  | 226,98 | 70 804 025  | 226,98 |
| ECC 32 R/L 1,5D 17 | 32 | 40     | 200 | 48,0 | 16,0 | 5,0                 | XC.T 1705..   | 70 805 032  | 257,31 | 70 804 032  | 257,31 |

## EcoCut – Classic 2.25xD

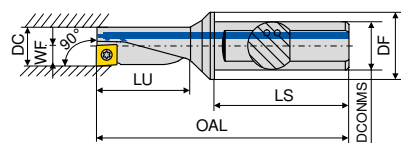
▲ Drilling and turning tool

**Scope of supply:**

Toolholder with 1 clamping screw + 2 spare screws and screwdriver

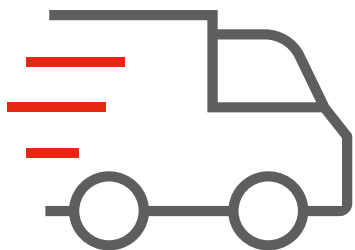


**CERATIZIT \ Performance**



| Designation         | DC | DCONMS | OAL   | LU   | LS | WF   | torque moment<br>Nm | Insert        | Article no. |        | Article no. |        |
|---------------------|----|--------|-------|------|----|------|---------------------|---------------|-------------|--------|-------------|--------|
|                     | mm | mm     | mm    | mm   | mm | mm   |                     |               | EUR         | EUR    |             |        |
| ECC 08 L 2,25D 04   | 8  | 10     | 60,0  | 18,0 | 38 | 4,0  | 0,4                 | XC.T 0401..EL | 70 805 108  | 213,03 | 70 804 108  | 213,03 |
| ECC 08 R 2,25D 04   | 8  | 10     | 60,0  | 18,0 | 38 | 4,0  | 0,4                 | XC.T 0401..ER |             | 213,03 |             | 213,03 |
| ECC 10 R/L 2,25D 05 | 10 | 12     | 69,5  | 22,5 | 42 | 5,0  | 0,7                 | XC.T 0502..   | 70 805 110  | 213,03 | 70 804 110  | 213,03 |
| ECC 12 R/L 2,25D 06 | 12 | 16     | 78,0  | 27,0 | 45 | 6,0  | 1,0                 | XC.T 0602..   | 70 805 112  | 218,88 | 70 804 112  | 218,88 |
| ECC 14 R/L 2,25D 07 | 14 | 16     | 83,5  | 31,5 | 45 | 7,0  | 1,2                 | XC.T 0703..   | 70 805 114  | 223,65 | 70 804 114  | 223,65 |
| ECC 16 R/L 2,25D 08 | 16 | 20     | 94,0  | 36,0 | 50 | 8,0  | 2,2                 | XC.T 0803..   | 70 805 116  | 228,33 | 70 804 116  | 228,33 |
| ECC 18 R/L 2,25D 09 | 18 | 25     | 109,5 | 40,5 | 56 | 9,0  | 2,2                 | XC.T 09T3..   | 70 805 118  | 251,55 | 70 804 118  | 251,55 |
| ECC 20 R/L 2,25D 10 | 20 | 25     | 111,0 | 45,0 | 56 | 10,0 | 3,2                 | XC.T 10T3..   | 70 805 120  | 273,78 | 70 804 120  | 273,78 |
| ECC 25 R/L 2,25D 13 | 25 | 32     | 129,0 | 56,5 | 60 | 12,5 | 5,0                 | XC.T 1304..   | 70 805 125  | 317,88 | 70 804 125  | 317,88 |
| ECC 32 R/L 2,25D 17 | 32 | 40     | 158,0 | 72,0 | 70 | 16,0 | 5,0                 | XC.T 1705..   | 70 805 132  | 357,39 | 70 804 132  | 357,39 |

|                   |                                                                                       |       |             |                |                                                                                       |            |                |
|-------------------|---------------------------------------------------------------------------------------|-------|-------------|----------------|---------------------------------------------------------------------------------------|------------|----------------|
| Spare parts<br>DC |  | Key D | Article no. |                |  |            | Clamping screw |
|                   |                                                                                       |       | Article no. |                | Article no.                                                                           |            |                |
|                   |                                                                                       |       | EUR         |                | EUR                                                                                   |            |                |
| 8                 | T06 - IP                                                                              | 9,35  | 80 950 123  | M1,8x3,6 - IP  | 3,31                                                                                  | 70 950 862 |                |
| 10                | T06 - IP                                                                              | 9,35  | 80 950 123  | M2x4,3 - IP    | 2,95                                                                                  | 70 950 863 |                |
| 12                | T07 - IP                                                                              | 9,20  | 80 950 124  | M2,2x5 - IP    | 2,86                                                                                  | 70 950 856 |                |
| 14                | T08 - IP                                                                              | 9,18  | 80 950 125  | M2,5x6 - IP    | 3,68                                                                                  | 70 950 857 |                |
| 16 - 18           | T09 - IP                                                                              | 10,12 | 80 950 126  | M3x7 - IP      | 2,83                                                                                  | 70 950 819 |                |
| 20                | T15 - IP                                                                              | 10,70 | 80 950 128  | M3,5x8,6 - IP  | 2,83                                                                                  | 70 950 859 |                |
| 25 - 32           | T20 - IP                                                                              | 11,29 | 80 950 129  | M4,5x10,5 - IP | 2,83                                                                                  | 70 950 864 |                |



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## Speed Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

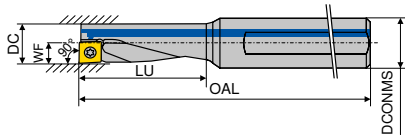
$v_c =$  (See Individual  $v_c$  Charts)  
 $\pi = 3.142$   
 $D =$  Diameter



- ▲ Drilling and turning tool
- ▲ vibration-damped

**Scope of supply:**

Toolholder with 1 clamping screw + 2 spare screws and screwdriver



heavy metal  
Left-hand



heavy metal  
Right-hand

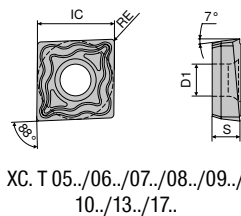
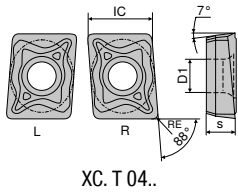
| Designation           | DC | DCONMS | OAL | LU | WF   | Insert        | Article no. |          | Article no. |          |
|-----------------------|----|--------|-----|----|------|---------------|-------------|----------|-------------|----------|
|                       | mm | mm     | mm  | mm | mm   |               |             | EUR      |             | EUR      |
| ECC 08 L 3,00D 04 H   | 8  | 12     | 80  | 24 | 4,0  | XC.T 0401..EL | 70 805 608  | 525,33   | 70 804 608  | 525,33   |
| ECC 08 R 3,00D 04 H   | 8  | 12     | 80  | 24 | 4,0  | XC.T 0401..ER |             | 527,67   |             | 527,67   |
| ECC 10 R/L 3,00D 05 H | 10 | 12     | 85  | 30 | 5,0  | XC.T 0502..   | 70 805 610  | 527,67   | 70 804 610  | 527,67   |
| ECC 12 R/L 3,00D 06 H | 12 | 16     | 95  | 36 | 6,0  | XC.T 0602..   | 70 805 612  | 569,52   | 70 804 612  | 569,52   |
| ECC 14 R/L 3,00D 07 H | 14 | 16     | 100 | 42 | 7,0  | XC.T 0703..   | 70 805 614  | 582,75   | 70 804 614  | 582,75   |
| ECC 16 R/L 3,00D 08 H | 16 | 20     | 110 | 48 | 8,0  | XC.T 0803..   | 70 805 616  | 639,00   | 70 804 616  | 639,00   |
| ECC 18 R/L 3,00D 09 H | 18 | 25     | 125 | 54 | 9,0  | XC.T 09T3..   | 70 805 618  | 773,55   | 70 804 618  | 773,55   |
| ECC 20 R/L 3,00D 10 H | 20 | 25     | 130 | 60 | 10,0 | XC.T 10T3..   | 70 805 620  | 789,21   | 70 804 620  | 789,21   |
| ECC 25 R/L 3,00D 13 H | 25 | 32     | 150 | 75 | 12,5 | XC.T 1304..   | 70 805 625  | 1.005,30 | 70 804 625  | 1.005,30 |
| ECC 32 R/L 3,00D 17 H | 32 | 40     | 185 | 96 | 16,0 | XC.T 1705..   | 70 805 632  | 1.315,80 | 70 804 632  | 1.315,80 |

**Spare parts**  
**DC**

|         |  |          |       |            |                |      |            |
|---------|--|----------|-------|------------|----------------|------|------------|
| 8       |  | T06 - IP | 9,35  | 80 950 123 | M1,8x3,6 - IP  | 3,31 | 70 950 862 |
| 10      |  | T06 - IP | 9,35  | 80 950 123 | M2x4,3 - IP    | 2,95 | 70 950 863 |
| 12      |  | T07 - IP | 9,20  | 80 950 124 | M2,2x5 - IP    | 2,86 | 70 950 856 |
| 14      |  | T08 - IP | 9,18  | 80 950 125 | M2,5x6 - IP    | 3,68 | 70 950 857 |
| 16 - 18 |  | T09 - IP | 10,12 | 80 950 126 | M3x7 - IP      | 2,83 | 70 950 819 |
| 20      |  | T15 - IP | 10,70 | 80 950 128 | M3,5x8,6 - IP  | 2,83 | 70 950 859 |
| 25 - 32 |  | T20 - IP | 11,29 | 80 950 129 | M4,5x10,5 - IP | 2,83 | 70 950 864 |

# XCNT

| Designation | S    | D1   | IC   |
|-------------|------|------|------|
|             | mm   | mm   | mm   |
| XCNT 0401.. | 1.80 | 2.10 | 4.5  |
| XCNT 0502.. | 2.10 | 2.25 | 5.8  |
| XCNT 0602.. | 2.38 | 2.50 | 6.5  |
| XCNT 0703.. | 3.18 | 2.80 | 7.6  |
| XCNT 0803.. | 3.18 | 3.40 | 8.5  |
| XCNT 09T3.. | 3.97 | 3.40 | 9.6  |
| XCNT 10T3.. | 3.97 | 4.40 | 10.6 |
| XCNT 1304.. | 4.76 | 5.30 | 13.5 |
| XCNT 1705.. | 5.56 | 5.30 | 17.5 |



# XCNT

**CERATIZIT \ Performance**



XCNT



XCNT



XCNT



XCNT

| ISO      | RE  | Article no. |       | Article no.              |       | Article no. |       | Article no. |       |
|----------|-----|-------------|-------|--------------------------|-------|-------------|-------|-------------|-------|
|          | mm  |             | EUR   |                          | EUR   |             | EUR   |             | EUR   |
| 040102EL | 0,2 | 70 386 720  | 13,93 | 70 386 750<br>70 386 752 | 14,54 | 70 386 820  | 13,93 | 70 386 920  | 13,93 |
| 040102ER | 0,2 | 70 386 722  | 13,93 |                          |       | 70 386 822  | 13,93 | 70 386 922  | 13,93 |
| 040104EL | 0,4 | 70 386 700  | 13,93 |                          |       | 70 386 800  | 13,93 | 70 386 900  | 13,93 |
| 040104ER | 0,4 | 70 386 702  | 13,93 |                          |       | 70 386 802  | 13,93 | 70 386 902  | 13,93 |
| 050202EN | 0,2 | 70 386 723  | 13,93 | 70 386 753               | 14,54 | 70 386 823  | 13,93 | 70 386 923  | 13,93 |
| 050204EN | 0,4 | 70 386 703  | 13,93 |                          |       | 70 386 803  | 13,93 | 70 386 903  | 13,93 |
| 060202EN | 0,2 | 70 386 724  | 13,93 | 70 386 754               | 14,54 | 70 386 824  | 13,93 | 70 386 924  | 13,93 |
| 060204EN | 0,4 | 70 386 704  | 13,93 |                          |       | 70 386 804  | 13,93 | 70 386 904  | 13,93 |
| 070304EN | 0,4 | 70 386 705  | 13,93 | 70 386 755               | 14,54 | 70 386 805  | 13,93 | 70 386 905  | 13,93 |
| 080304EN | 0,4 | 70 386 706  | 14,14 | 70 386 756               | 14,76 | 70 386 806  | 14,14 | 70 386 906  | 14,14 |
| 09T304EN | 0,4 | 70 386 707  | 14,35 | 70 386 757               | 15,07 | 70 386 807  | 14,35 | 70 386 907  | 14,35 |
| 10T304EN | 0,4 | 70 386 708  | 15,07 | 70 386 758               | 15,69 | 70 386 808  | 15,07 | 70 386 908  | 15,07 |
| 10T308EN | 0,8 | 70 386 738  | 15,07 | 70 386 788               | 15,69 | 70 386 838  | 15,07 | 70 386 938  | 15,07 |
| 130404EN | 0,4 | 70 386 710  | 17,24 | 70 386 760               | 18,05 | 70 386 810  | 17,24 | 70 386 910  | 17,24 |
| 130408EN | 0,8 | 70 386 740  | 17,24 | 70 386 790               | 18,05 | 70 386 840  | 17,24 | 70 386 940  | 17,24 |
| 170508EN | 0,8 | 70 386 712  | 18,17 | 70 386 762               | 19,10 | 70 386 812  | 18,17 | 70 386 912  | 18,17 |

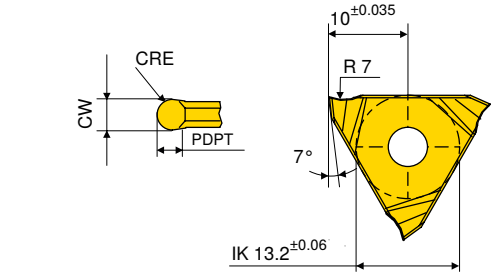
|                       |   |   |   |   |
|-----------------------|---|---|---|---|
| Steel                 | ● | ● | ● | ● |
| Stainless steel       | ○ | ○ | ○ | ● |
| Cast iron             | ● | ● | ● | ○ |
| Non ferrous metals    |   |   |   | ○ |
| Heat resistant alloys |   |   |   | ● |

Radial TX insert for corner recessing

▲ Full radius for cutting width 0.5–5.0 mm

CERATIZIT \ Performance

CWX500



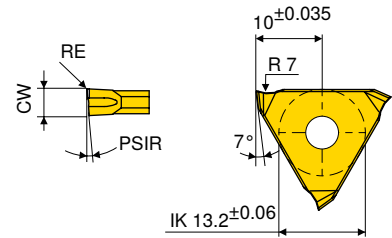
| Designation    | CRE | CW <sup>+/-0,05</sup> | PDPT | for tool holder | Neutral     |                           |
|----------------|-----|-----------------------|------|-----------------|-------------|---------------------------|
|                |     |                       |      |                 | Article no. |                           |
| TX N 0010.20.2 | 1,0 | 2                     | 0,7  | R/L ... 2       | 73 304 204  | <a href="#">EUR 25,62</a> |
| TX N 0015.30.3 | 1,5 | 3                     | 1,0  | R/L ... 3       | 73 304 206  | <a href="#">27,35</a>     |
| TX N 0020.40.4 | 2,0 | 4                     | 1,2  | R/L ... 4       | 73 304 208  | <a href="#">27,13</a>     |
| TX N 0025.50.4 | 2,5 | 5                     | 1,5  | R/L ... 4       | 73 304 210  | <a href="#">27,56</a>     |

TX Insert for parting

▲ Cutting depth 5.0 mm  
▲ Cutting width 1.99–2.79 mm

CERATIZIT \ Performance

CWX500

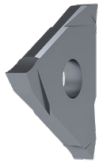
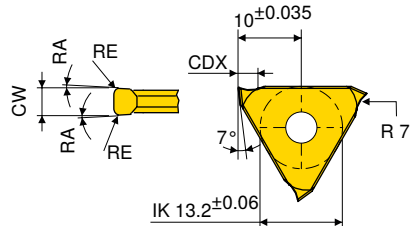


| Designation    | CW <sup>-0,05</sup> | PSIR | RE  | for tool holder         | Right-hand  |                           |
|----------------|---------------------|------|-----|-------------------------|-------------|---------------------------|
|                |                     |      |     |                         | Article no. |                           |
| TX R 0518.00.1 | 1,99                | 5    | 0,1 | R/L 207 ... / 780 ... 1 | 73 301 204  | <a href="#">EUR 24,53</a> |
| TX R 0521.00.2 | 2,29                | 5    | 0,1 | R/L 207 ... / 780 ... 2 | 73 301 206  | <a href="#">24,53</a>     |
| TX R 0526.00.2 | 2,79                | 5    | 0,1 | R/L 207 ... / 780 ... 2 | 73 301 208  | <a href="#">24,97</a>     |

TX insert for fine and copy turning

CERATIZIT \ Performance

CWX500



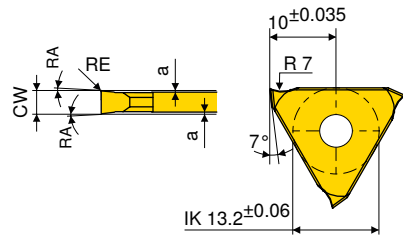
| Designation    | CW <sup>-0,03</sup> | RE  | RA | for tool holder                   | Neutral     |                           |
|----------------|---------------------|-----|----|-----------------------------------|-------------|---------------------------|
|                |                     |     |    |                                   | Article no. |                           |
| TX N 0150.02.1 | 1,5                 | 0,2 | 3  | R/L 207 ... / 738 ... / 660 ... 1 | 73 303 204  | <a href="#">EUR 20,75</a> |
| TX N 0200.02.1 | 2,0                 | 0,2 | 3  | R/L 207 ... / 738 ... / 660 ... 1 | 73 303 206  | <a href="#">20,75</a>     |
| TX N 0200.04.1 | 2,0                 | 0,4 | 3  | R/L 207 ... / 738 ... / 660 ... 1 | 73 303 208  | <a href="#">21,52</a>     |
| TX N 0300.06.2 | 3,0                 | 0,6 | 3  | R/L 207 ... / 738 ... / 660 ... 2 | 73 303 212  | <a href="#">21,83</a>     |
| TX N 0300.08.2 | 3,0                 | 0,8 | 3  | R/L 207 ... / 738 ... / 660 ... 2 | 73 303 214  | <a href="#">21,83</a>     |
| TX N 0300.02.2 | 3,0                 | 0,2 | 3  | R/L 207 ... / 738 ... / 660 ... 2 | 73 303 210  | <a href="#">21,52</a>     |
| TX N 0400.02.3 | 4,0                 | 0,2 | 3  | R/L 207 ... / 738 ... / 660 ... 3 | 73 303 216  | <a href="#">22,06</a>     |
| TX N 0400.12.3 | 4,0                 | 1,2 | 3  | R/L 207 ... / 738 ... / 660 ... 3 | 73 303 220  | <a href="#">22,06</a>     |
| TX N 0400.08.3 | 4,0                 | 0,8 | 3  | R/L 207 ... / 738 ... / 660 ... 3 | 73 303 218  | <a href="#">22,06</a>     |

TX insert for circlip grooves

▲ For circlip grooves according to DIN 471 / 472

CERATIZIT \ Performance

CWX500

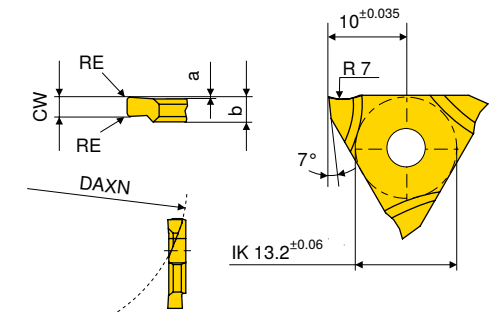


| Designation    | S <sub>2</sub><br>mm | CW <sup>-0,05</sup> | RA | a <sup>+/-0.02</sup><br>mm | RE  | for tool holder | Neutral     |                           |
|----------------|----------------------|---------------------|----|----------------------------|-----|-----------------|-------------|---------------------------|
|                |                      |                     |    |                            |     |                 | Article no. |                           |
| TX N 0050.00.1 | 0,50                 | 0,57                | 1  | 0,07                       | 0,1 | R/L ... 1       | 73 300 204  | <a href="#">EUR 16,75</a> |
| TX N 0060.00.1 | 0,60                 | 0,67                | 1  | 0,07                       | 0,1 | R/L ... 1       | 73 300 206  | <a href="#">16,75</a>     |
| TX N 0070.00.1 | 0,70                 | 0,77                | 1  | 0,08                       | 0,1 | R/L ... 1       | 73 300 208  | <a href="#">16,75</a>     |
| TX N 0080.00.1 | 0,80                 | 0,87                | 1  | 0,08                       | 0,1 | R/L ... 1       | 73 300 210  | <a href="#">16,75</a>     |
| TX N 0090.00.1 | 0,90                 | 0,97                | 1  | 0,08                       | 0,1 | R/L ... 1       | 73 300 212  | <a href="#">16,75</a>     |
| TX N 0100.00.1 | 1,00                 | 1,07                | 1  | 0,09                       | 0,1 | R/L ... 1       | 73 300 214  | <a href="#">16,75</a>     |
| TX N 0110.00.1 | 1,10                 | 1,24                | 3  | 0,15                       | 0,1 | R/L ... 1       | 73 300 216  | <a href="#">16,75</a>     |
| TX N 0130.00.1 | 1,30                 | 1,44                | 3  | 0,15                       | 0,1 | R/L ... 1       | 73 300 218  | <a href="#">16,75</a>     |
| TX N 0160.00.1 | 1,60                 | 1,74                | 3  | 0,20                       | 0,1 | R/L ... 1       | 73 300 220  | <a href="#">16,75</a>     |
| TX N 0185.00.1 | 1,85                 | 1,99                | 3  | 0,20                       | 0,1 | R/L ... 1       | 73 300 222  | <a href="#">16,75</a>     |
| TX N 0215.00.2 | 2,15                 | 2,29                | 3  | 0,20                       | 0,1 | R/L ... 2       | 73 300 224  | <a href="#">16,75</a>     |
| TX N 0265.00.2 | 2,65                 | 2,79                | 3  | 0,20                       | 0,1 | R/L ... 2       | 73 300 226  | <a href="#">16,75</a>     |
| TX N 0315.00.3 | 3,15                 | 3,29                | 3  | 0,20                       | 0,1 | R/L ... 3       | 73 300 228  | <a href="#">17,62</a>     |
| TX N 0415.00.4 | 4,15                 | 4,29                | 3  | 0,20                       | 0,1 | R/L ... 4       | 73 300 230  | <a href="#">17,72</a>     |
| TX N 0515.00.4 | 5,15                 | 5,29                | 3  | 0,20                       | 0,1 | R/L ... 4       | 73 300 232  | <a href="#">18,26</a>     |

TX insert for axial grooving

▲ Up to cutting depth 3.5 mm  
▲ Cutting width 1.5–5.0 mm  
▲ Groove-Ø external D<sub>a</sub> ≥ 20 mm

CERATIZIT \ Performance



Illustrations show right-hand versions

| Designation     | CW  | b<br>mm | CDX | a<br>mm | DAXN | RE  | for tool holder |
|-----------------|-----|---------|-----|---------|------|-----|-----------------|
|                 |     |         |     |         |      |     |                 |
| TX R/L 2015.2.2 | 1,5 | 2,7     | 2,0 | 0,2     | 20   | 0,2 | R/L 207 ... 2   |
| TX R/L 3020.2.2 | 2,0 | 2,7     | 3,0 | 0,2     | 30   | 0,2 | R/L 207 ... 2   |
| TX R/L 3030.2.3 | 3,0 | 3,7     | 3,0 | 0,2     | 30   | 0,2 | R/L 207 ... 3   |
| TX R/L 3040.2.4 | 4,0 | 4,3     | 3,5 | 0,2     | 30   | 0,2 | R/L 207 ... 4   |
| TX R/L 3050.2.4 | 5,0 | 5,3     | 3,5 | 0,2     | 30   | 0,2 | R/L 207 ... 4   |

CWX500

CWX500



| Left-hand   |                           | Right-hand  |                       |
|-------------|---------------------------|-------------|-----------------------|
| Article no. |                           | Article no. |                       |
| 73 306 204  | <a href="#">EUR 24,43</a> | 73 305 204  | <a href="#">24,43</a> |
| 73 306 206  | <a href="#">24,43</a>     | 73 305 206  | <a href="#">24,43</a> |
| 73 306 208  | <a href="#">24,64</a>     | 73 305 208  | <a href="#">24,64</a> |
| 73 306 210  | <a href="#">24,97</a>     | 73 305 210  | <a href="#">24,97</a> |
| 73 306 212  | <a href="#">25,07</a>     | 73 305 212  | <a href="#">25,07</a> |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

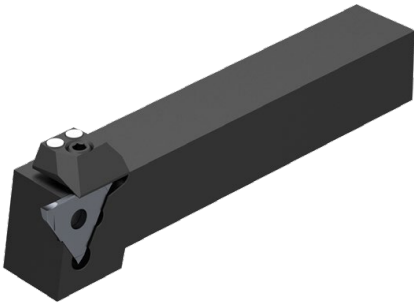
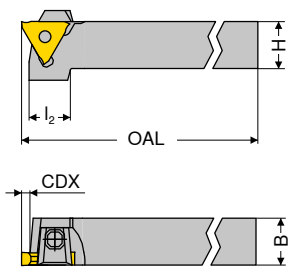
v<sub>c</sub> = (See Individual v<sub>c</sub> Charts)  
π = 3.142  
D = Diameter



MonoClamp – Radial/Axial TX Grooving Holder 0°, 6 mm cutting depth

- ▲ For radial and axial grooving
- ▲ Cutting width 0.5 – 6.3 mm

CERATIZIT \ Performance



Illustrations show right-hand versions

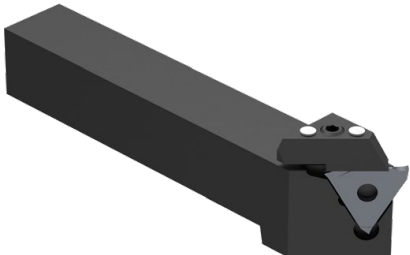
| Designation  | H  | B  | OAL | l <sub>2</sub> | CDX | for grooving inserts | Right-hand  |        |
|--------------|----|----|-----|----------------|-----|----------------------|-------------|--------|
|              |    |    |     |                |     |                      | Article no. | EUR    |
| R 207.1212.1 | 12 | 12 | 100 | 24             | 4   | TX R/N/L ...1        | 73 500 112  | 104,80 |
| R 207.1616.1 | 16 | 16 | 125 | 22             | 4   | TX R/N/L ...1        | 73 500 116  | 93,42  |
| R 207.2020.1 | 20 | 20 | 125 | 21             | 4   | TX R/N/L ...1        | 73 500 120  | 72,45  |
| R 207.2525.1 | 25 | 25 | 150 |                | 4   | TX R/N/L ...1        | 73 500 125  | 76,02  |
| R 207.3232.1 | 32 | 32 | 170 |                | 4   | TX R/N/L ...1        | 73 500 132  | 88,71  |
| R 207.1212.2 | 12 | 12 | 100 | 24             | 6   | TX R/N/L ...2        | 73 500 212  | 104,80 |
| R 207.1616.2 | 16 | 16 | 125 | 22             | 6   | TX R/N/L ...2        | 73 500 216  | 93,42  |
| R 207.2020.2 | 20 | 20 | 125 | 21             | 6   | TX R/N/L ...2        | 73 500 220  | 72,45  |
| R 207.2525.2 | 25 | 25 | 150 |                | 6   | TX R/N/L ...2        | 73 500 225  | 76,02  |
| R 207.3232.2 | 32 | 32 | 170 |                | 6   | TX R/N/L ...2        | 73 500 232  | 88,71  |
| R 207.1212.3 | 12 | 12 | 100 | 24             | 6   | TX R/N/L ...3        | 73 500 312  | 104,80 |
| R 207.1616.3 | 16 | 16 | 125 | 22             | 6   | TX R/N/L ...3        | 73 500 316  | 93,42  |
| R 207.2020.3 | 20 | 20 | 125 | 21             | 6   | TX R/N/L ...3        | 73 500 320  | 72,45  |
| R 207.2525.3 | 25 | 25 | 150 |                | 6   | TX R/N/L ...3        | 73 500 325  | 76,02  |
| R 207.3232.3 | 32 | 32 | 170 |                | 6   | TX R/N/L ...3        | 73 500 332  | 88,71  |
| R 207.1616.4 | 16 | 16 | 125 | 22             | 6   | TX R/N/L ...4        | 73 500 416  | 93,42  |
| R 207.2020.4 | 20 | 20 | 125 | 21             | 6   | TX R/N/L ...4        | 73 500 420  | 72,45  |
| R 207.2525.4 | 25 | 25 | 150 |                | 6   | TX R/N/L ...4        | 73 500 425  | 76,02  |
| R 207.3232.4 | 32 | 32 | 170 |                | 6   | TX R/N/L ...4        | 73 500 432  | 88,71  |

|                      |                                                                                       |       |                                                                                       |             |                                                                                       |                |                                                                                       |             |        |      |            |
|----------------------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------|-------------|--------|------|------------|
|                      |  | Key I |  | right hand  |  | Clamping screw |  | Guide pin   |        |      |            |
| Spare parts          | Article no.                                                                           |       |                                                                                       | Article no. |                                                                                       | Article no.    |                                                                                       | Article no. |        |      |            |
|                      | EUR                                                                                   |       |                                                                                       | EUR         |                                                                                       | EUR            |                                                                                       | EUR         |        |      |            |
| for grooving inserts |                                                                                       |       |                                                                                       |             |                                                                                       |                |                                                                                       |             |        |      |            |
| TX R/N/L ...1        | SW3                                                                                   | 2,21  | 70 950 176                                                                            | 20,97       | 73 950 020                                                                            | M6x20          | 4,30                                                                                  | 73 950 028  | Ø 4x18 | 0,39 | 73 950 030 |
| TX R/N/L ...2        | SW3                                                                                   | 2,21  | 70 950 176                                                                            | 20,97       | 73 950 020                                                                            | M6x20          | 4,30                                                                                  | 73 950 028  | Ø 4x18 | 0,39 | 73 950 030 |
| TX R/N/L ...3        | SW3                                                                                   | 2,21  | 70 950 176                                                                            | 20,97       | 73 950 020                                                                            | M6x20          | 4,30                                                                                  | 73 950 028  | Ø 4x18 | 0,39 | 73 950 030 |
| TX R/N/L ...4        | SW3                                                                                   | 2,21  | 70 950 176                                                                            | 23,28       | 73 950 022                                                                            | M6x20          | 4,30                                                                                  | 73 950 028  | Ø 4x18 | 0,39 | 73 950 030 |

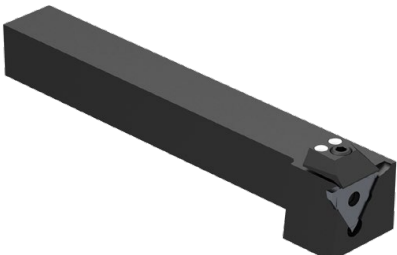
Left hand tooling and the rest of the comprehensive TX range are available in the main catalogue.



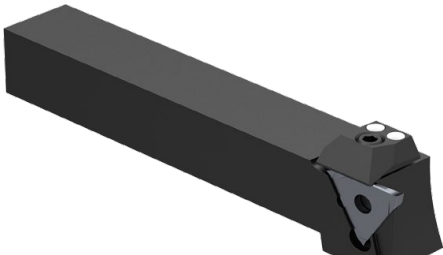
TX – Boring Bar



TX – 45° Tool Holder



TX – 90° Tool Holder  
6 mm cutting depth



TX – 0° Tool Holder  
8 mm cutting depth

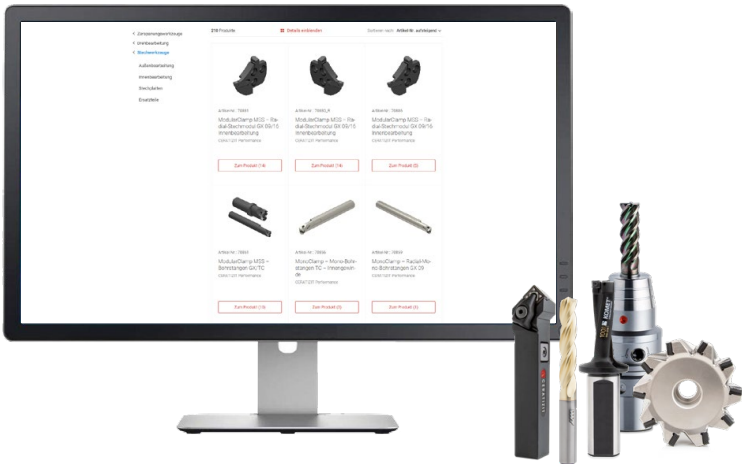
Grooving Tools guide (Main catalogue 2019)

Cutting Data 100–109 Chip Breakers Overview 121–124

It couldn't be easier

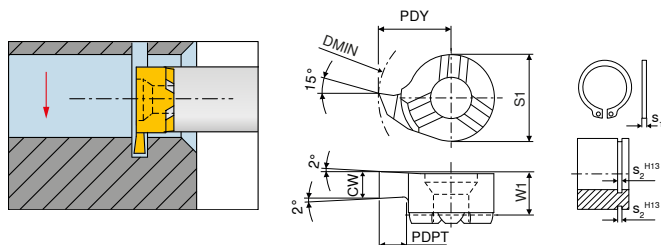
Ordering via the Online Shop

In the Online Shop you can select and order your tool with a mouse click, 24 hours a day, 7 days a week. All your transactions including those in the past can be viewed clearly and easily in the online shop. Register and use our Service: [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com)



## MiniCut – Grooving insert

WNT \ Performance



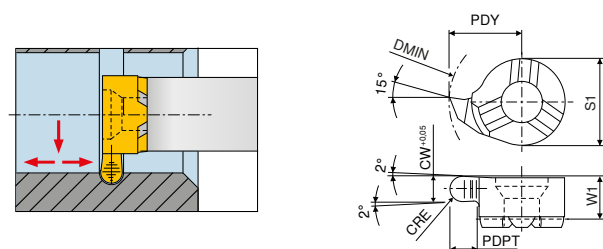
CWX500



| Size                    | Designation       | DMMIN | CW   | PDPT | W1  | Right-hand  |        |      |            |            |       |
|-------------------------|-------------------|-------|------|------|-----|-------------|--------|------|------------|------------|-------|
|                         |                   |       |      |      |     | Article no. |        |      |            |            |       |
|                         |                   |       |      |      |     | S1          | S2 H13 | PDY  | S1         | EUR        |       |
|                         |                   | mm    | mm   | mm   | mm  | mm          | mm     | mm   | mm         |            |       |
| 08                      | 8,00. R.0.73.1,0  | 8     | 0,73 | 1,0  | 3,3 | 0,6         | 0,7    | 4,8  | 6          | 73 310 073 | 15,65 |
|                         | 8,00. R.0.83.1,0  | 8     | 0,83 | 1,0  | 3,3 | 0,7         | 0,8    | 4,8  | 6          | 73 310 083 | 15,65 |
|                         | 8,00. R.0.93.1,0  | 8     | 0,93 | 1,0  | 3,3 | 0,8         | 0,9    | 4,8  | 6          | 73 310 093 | 15,65 |
|                         | 8,00. R.1.00.1,0  | 8     | 1,00 | 1,0  | 3,3 |             |        | 4,8  | 6          | 73 310 110 | 15,65 |
|                         | 8,00. R.1.20.1,0  | 8     | 1,20 | 1,0  | 3,3 | 1,0         | 1,1    | 4,8  | 6          | 73 310 112 | 15,65 |
|                         | 8,00. R.1.40.1,0  | 8     | 1,40 | 1,0  | 3,3 | 1,2         | 1,3    | 4,8  | 6          | 73 310 114 | 15,65 |
|                         | 8,00. R.1.50.1,0  | 8     | 1,50 | 1,0  | 3,3 |             |        | 4,8  | 6          | 73 310 115 | 15,65 |
|                         | 8,00. R.1.70.1,0  | 8     | 1,70 | 1,0  | 3,3 | 1,5         | 1,6    | 4,8  | 6          | 73 310 117 | 15,65 |
| 8,00. R.2.00.1,0        | 8                 | 2,00  | 1,0  | 3,3  |     |             | 4,8    | 6    | 73 310 120 | 15,65      |       |
| 11                      | 11,00. R.0.73.1,2 | 11    | 0,73 | 1,2  | 4,2 | 0,6         | 0,7    | 6,7  | 8          | 73 310 373 | 15,65 |
|                         | 11,00. R.0.83.1,3 | 11    | 0,83 | 1,3  | 4,2 | 0,7         | 0,8    | 6,7  | 8          | 73 310 383 | 15,65 |
|                         | 11,00. R.0.93.1,5 | 11    | 0,93 | 1,5  | 4,2 | 0,8         | 0,9    | 6,7  | 8          | 73 310 393 | 15,65 |
|                         | 11,00. R.1.00.2,3 | 11    | 1,00 | 2,3  | 4,2 |             |        | 6,7  | 8          | 73 310 310 | 15,65 |
|                         | 11,00. R.1.20.2,3 | 11    | 1,20 | 2,3  | 4,2 | 1,0         | 1,1    | 6,7  | 8          | 73 310 312 | 15,65 |
|                         | 11,00. R.1.40.2,3 | 11    | 1,40 | 2,3  | 4,2 | 1,2         | 1,3    | 6,7  | 8          | 73 310 314 | 15,65 |
|                         | 11,00. R.1.50.2,3 | 11    | 1,50 | 2,3  | 4,2 |             |        | 6,7  | 8          | 73 310 315 | 15,65 |
|                         | 11,00. R.1.70.2,3 | 11    | 1,70 | 2,3  | 4,2 | 1,5         | 1,6    | 6,7  | 8          | 73 310 317 | 15,65 |
|                         | 11,00. R.2.00.2,3 | 11    | 2,00 | 2,3  | 4,2 |             |        | 6,7  | 8          | 73 310 320 | 15,65 |
| 11,00. R.2.50.2,3       | 11                | 2,50  | 2,3  | 4,2  |     |             | 6,7    | 8    | 73 310 325 | 15,65      |       |
| 11,00. R.3.00.2,3       | 11                | 3,00  | 2,3  | 4,2  |     |             | 6,7    | 8    | 73 310 330 | 15,65      |       |
| 14                      | 14,00. R.0.73.1,2 | 14    | 0,73 | 1,2  | 5,3 | 0,6         | 0,7    | 9,0  | 9          | 73 310 573 | 15,65 |
|                         | 14,00. R.0.83.1,3 | 14    | 0,83 | 1,3  | 5,3 | 0,7         | 0,8    | 9,0  | 9          | 73 310 583 | 15,65 |
|                         | 14,00. R.0.93.1,5 | 14    | 0,93 | 1,5  | 5,3 | 0,8         | 0,9    | 9,0  | 9          | 73 310 593 | 15,65 |
|                         | 14,00. R.1.20.4,0 | 14    | 1,20 | 4,0  | 5,3 | 1,0         | 1,1    | 9,0  | 9          | 73 310 512 | 15,65 |
|                         | 14,00. R.1.40.4,0 | 14    | 1,40 | 4,0  | 5,3 | 1,2         | 1,3    | 9,0  | 9          | 73 310 514 | 15,65 |
|                         | 14,00. R.1.50.4,0 | 14    | 1,50 | 4,0  | 5,3 |             |        | 9,0  | 9          | 73 310 515 | 15,65 |
|                         | 14,00. R.1.70.4,0 | 14    | 1,70 | 4,0  | 5,3 | 1,5         | 1,6    | 9,0  | 9          | 73 310 517 | 15,65 |
|                         | 14,00. R.2.00.4,0 | 14    | 2,00 | 4,0  | 5,3 |             |        | 9,0  | 9          | 73 310 520 | 15,65 |
|                         | 14,00. R.2.50.4,0 | 14    | 2,50 | 4,0  | 5,3 |             |        | 9,0  | 9          | 73 310 525 | 15,65 |
| 14,00. R.3.00.4,0       | 14                | 3,00  | 4,0  | 5,3  |     |             | 9,0    | 9    | 73 310 530 | 15,65      |       |
| 16                      | 16,00. R.0.73.1,2 | 16    | 0,73 | 1,2  | 5,4 | 0,6         | 0,7    | 10,2 | 11         | 73 310 773 | 18,96 |
|                         | 16,00. R.0.83.1,3 | 16    | 0,83 | 1,3  | 5,4 | 0,7         | 0,8    | 10,2 | 11         | 73 310 783 | 18,96 |
|                         | 16,00. R.0.93.1,5 | 16    | 0,93 | 1,5  | 5,4 | 0,8         | 0,9    | 10,2 | 11         | 73 310 793 | 18,96 |
|                         | 16,00. R.1.20.4,3 | 16    | 1,20 | 4,3  | 5,4 | 1,0         | 1,1    | 10,2 | 11         | 73 310 712 | 17,20 |
|                         | 16,00. R.1.40.4,3 | 16    | 1,40 | 4,3  | 5,4 | 1,2         | 1,3    | 10,2 | 11         | 73 310 714 | 17,20 |
|                         | 16,00. R.1.50.4,3 | 16    | 1,50 | 4,3  | 5,4 |             |        | 10,2 | 11         | 73 310 715 | 17,20 |
|                         | 16,00. R.1.70.4,3 | 16    | 1,70 | 4,3  | 5,4 | 1,5         | 1,6    | 10,2 | 11         | 73 310 717 | 17,20 |
|                         | 16,00. R.2.00.4,3 | 16    | 2,00 | 4,3  | 5,4 |             |        | 10,2 | 11         | 73 310 720 | 17,20 |
|                         | 16,00. R.2.50.4,3 | 16    | 2,50 | 4,3  | 5,4 |             |        | 10,2 | 11         | 73 310 725 | 17,20 |
|                         | 16,00. R.3.00.4,3 | 16    | 3,00 | 4,3  | 5,4 |             |        | 10,2 | 11         | 73 310 730 | 17,20 |
|                         | 16,00. R.3.50.4,3 | 16    | 3,50 | 4,3  | 5,4 |             |        | 10,2 | 11         | 73 310 735 | 17,20 |
| 16,00. R.4.00.4,3       | 16                | 4,00  | 4,3  | 5,4  |     |             | 10,2   | 11   | 73 310 740 | 17,20      |       |
| Steel ●                 |                   |       |      |      |     |             |        |      |            |            |       |
| Stainless steel ●       |                   |       |      |      |     |             |        |      |            |            |       |
| Cast iron ●             |                   |       |      |      |     |             |        |      |            |            |       |
| Non ferrous metals ●    |                   |       |      |      |     |             |        |      |            |            |       |
| Heat resistant alloys ● |                   |       |      |      |     |             |        |      |            |            |       |
| Hardened materials ●    |                   |       |      |      |     |             |        |      |            |            |       |

## MiniCut – Full radius grooving and turning insert

WNT \ Performance



CWX500



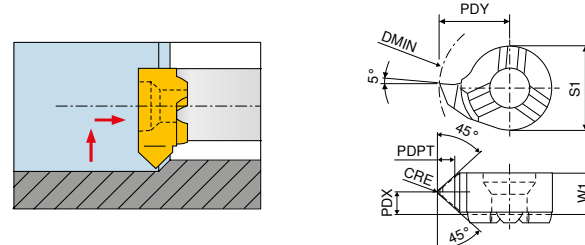
| Size                  | Designation       | DMIN | CW  | PDPT | W1  | PDY  | S1 | CRE | Right-hand  |       |
|-----------------------|-------------------|------|-----|------|-----|------|----|-----|-------------|-------|
|                       |                   |      |     |      |     |      |    |     | Article no. |       |
|                       |                   |      |     |      |     |      |    |     | mm          | EUR   |
| 08                    | 8,00. R.0,80.1,0  | 8    | 0,8 | 1,0  | 3,3 | 4,8  | 6  | 0,4 | 73 318 008  | 18,51 |
|                       | 8,00. R.1,20.1,0  | 8    | 1,2 | 1,0  | 3,3 | 4,8  | 6  | 0,6 | 73 318 012  | 18,51 |
|                       | 8,00. R.1,80.1,0  | 8    | 1,8 | 1,0  | 3,3 | 4,8  | 6  | 0,9 | 73 318 018  | 18,51 |
|                       |                   |      |     |      |     |      |    |     |             |       |
| 11                    | 11,00. R.0,80.2,3 | 11   | 0,8 | 2,3  | 4,2 | 6,7  | 8  | 0,4 | 73 318 308  | 19,07 |
|                       | 11,00. R.1,20.2,3 | 11   | 1,2 | 2,3  | 4,2 | 6,7  | 8  | 0,6 | 73 318 312  | 19,07 |
|                       | 11,00. R.1,80.2,3 | 11   | 1,8 | 2,3  | 4,2 | 6,7  | 8  | 0,9 | 73 318 318  | 19,07 |
|                       | 11,00. R.2,00.2,3 | 11   | 2,0 | 2,3  | 4,2 | 6,7  | 8  | 1,0 | 73 318 320  | 19,07 |
|                       | 11,00. R.3,00.2,3 | 11   | 3,0 | 2,3  | 4,2 | 6,7  | 8  | 1,5 | 73 318 330  | 19,07 |
| 14                    | 14,00. R.1,20.4,0 | 14   | 1,2 | 4,0  | 5,3 | 9,0  | 9  | 0,6 | 73 318 512  | 19,95 |
|                       | 14,00. R.1,80.4,0 | 14   | 1,8 | 4,0  | 5,3 | 9,0  | 9  | 0,9 | 73 318 518  | 19,95 |
|                       | 14,00. R.2,00.4,0 | 14   | 2,0 | 4,0  | 5,3 | 9,0  | 9  | 1,0 | 73 318 520  | 19,95 |
|                       | 14,00. R.2,20.4,0 | 14   | 2,2 | 4,0  | 5,3 | 9,0  | 9  | 1,1 | 73 318 522  | 19,95 |
|                       | 14,00. R.3,00.4,0 | 14   | 3,0 | 4,0  | 5,3 | 9,0  | 9  | 1,5 | 73 318 530  | 19,95 |
| 16                    | 16,00. R.1,80.4,3 | 16   | 1,8 | 4,3  | 5,4 | 10,2 | 11 | 0,9 | 73 318 718  | 20,50 |
|                       | 16,00. R.2,20.4,3 | 16   | 2,2 | 4,3  | 5,4 | 10,2 | 11 | 1,1 | 73 318 722  | 20,50 |
|                       | 16,00. R.3,00.4,3 | 16   | 3,0 | 4,3  | 5,4 | 10,2 | 11 | 1,5 | 73 318 730  | 20,50 |
|                       | 16,00. R.4,00.4,3 | 16   | 4,0 | 4,3  | 5,4 | 10,2 | 11 | 2,0 | 73 318 740  | 20,50 |
| Steel                 |                   |      |     |      |     |      |    |     | ●           |       |
| Stainless steel       |                   |      |     |      |     |      |    |     | ●           |       |
| Cast iron             |                   |      |     |      |     |      |    |     | ●           |       |
| Non ferrous metals    |                   |      |     |      |     |      |    |     | ●           |       |
| Heat resistant alloys |                   |      |     |      |     |      |    |     | ●           |       |
| Hardened materials    |                   |      |     |      |     |      |    |     |             |       |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

## MiniCut – Internal turning and chamfering insert

WNT \ Performance



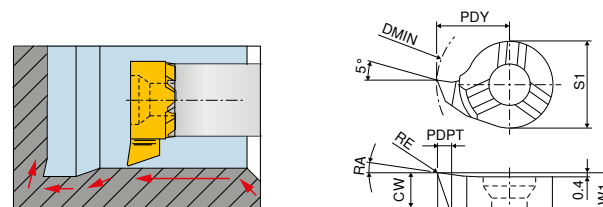
CWX500



| Size                  | Designation      | DMIN | PDPT | W1  | PDX | PDY | S1 | CRE | CDX | Right-hand |             |       |
|-----------------------|------------------|------|------|-----|-----|-----|----|-----|-----|------------|-------------|-------|
|                       |                  |      |      |     |     |     |    |     |     |            | Article no. |       |
|                       |                  | mm   | mm   | mm  | mm  | mm  | mm | mm  | mm  | mm         | EUR         |       |
| 08                    | 8,00. R .45°1,4  | 8    | 1,4  | 3,5 | 1,8 | 4,8 | 6  | 0,2 | 0,6 | 73 334 010 | 16,75       |       |
| 11                    | 11,00. R .45°1,5 | 11   | 1,5  | 4,3 | 2,2 | 6,7 | 8  | 0,2 | 1,0 |            | 73 334 310  | 16,75 |
| 14                    | 14,00. R .45°1,5 | 14   | 1,5  | 5,4 | 2,8 | 9,0 | 9  | 0,2 | 1,2 |            | 73 334 510  | 18,08 |
| Steel                 |                  |      |      |     |     |     |    |     |     |            | ●           |       |
| Stainless steel       |                  |      |      |     |     |     |    |     |     |            | ●           |       |
| Cast iron             |                  |      |      |     |     |     |    |     |     |            | ●           |       |
| Non ferrous metals    |                  |      |      |     |     |     |    |     |     |            | ●           |       |
| Heat resistant alloys |                  |      |      |     |     |     |    |     |     |            | ●           |       |
| Hardened materials    |                  |      |      |     |     |     |    |     |     |            |             |       |

## MiniCut – Insert for turning and profiling

## WNT \ Performance



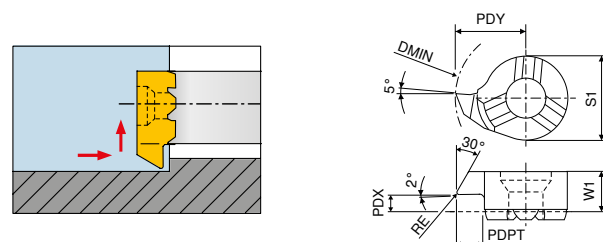
CWX500



| Size                  | Designation        | Right-hand  |     |     |      |    |     |      |      |    |            |       |
|-----------------------|--------------------|-------------|-----|-----|------|----|-----|------|------|----|------------|-------|
|                       |                    | Article no. |     |     |      |    |     |      |      |    |            | EUR   |
|                       |                    | DMIN        | CW  | W1  | PDY  | S1 | RE  | PDPT | PSIR | RA |            |       |
|                       |                    | mm          | mm  | mm  | mm   | mm | mm  | mm   | °    | °  |            |       |
| 08                    | 8,00. R .3,30.18°  | 7,8         | 3,3 | 3,5 | 4,65 | 6  | 0,2 | 0,6  | 18   | 8  | 73 322 033 | 17,52 |
| 11                    | 9,80. R .3,90.18°  | 9,8         | 3,9 | 4,2 | 5,50 | 8  | 0,2 | 1,0  | 18   | 8  | 73 322 139 | 17,52 |
|                       | 11,00. R .3,90.18° | 11,0        | 3,9 | 4,2 | 6,70 | 8  | 0,2 | 1,0  | 18   | 8  | 73 322 339 | 17,08 |
| 14                    | 14,00. R .5,00.18° | 13,8        | 5,0 | 5,1 | 8,70 | 9  | 0,2 | 1,5  | 18   | 8  | 73 322 550 | 17,08 |
| 16                    | 15,50. R .5,00.18° | 15,5        | 5,0 | 5,4 | 9,70 | 11 | 0,2 | 1,5  | 18   | 8  | 73 322 750 | 18,63 |
| Steel                 |                    |             |     |     |      |    |     |      |      |    |            | ●     |
| Stainless steel       |                    |             |     |     |      |    |     |      |      |    |            | ●     |
| Cast iron             |                    |             |     |     |      |    |     |      |      |    |            | ●     |
| Non ferrous metals    |                    |             |     |     |      |    |     |      |      |    |            | ●     |
| Heat resistant alloys |                    |             |     |     |      |    |     |      |      |    |            | ●     |
| Hardened materials    |                    |             |     |     |      |    |     |      |      |    |            |       |

## MiniCut – Back boring insert

WNT \ Performance



CWX500



|                       |                  |      |      |     |     |      |    |     |     | Right-hand  |
|-----------------------|------------------|------|------|-----|-----|------|----|-----|-----|-------------|
| Size                  | Designation      | DMIN | PDPT | W1  | PDX | PDY  | S1 | RE  | CDX | Article no. |
|                       |                  | mm   | mm   | mm  | mm  | mm   | mm | mm  | mm  |             |
| 08                    | 8,00. R .30°1,3  | 7,8  | 1,3  | 3,5 | 1,0 | 4,65 | 6  | 0,2 | 0,6 | 73 330 013  |
| 11                    | 11,00. R .30°2,3 | 11,0 | 2,3  | 4,3 | 1,6 | 6,70 | 8  | 0,2 | 1,0 | 73 330 323  |
| 14                    | 14,00. R .30°3,5 | 13,8 | 3,5  | 5,4 | 2,4 | 8,70 | 9  | 0,2 | 1,5 | 73 330 535  |
| Steel                 |                  |      |      |     |     |      |    |     |     | ●           |
| Stainless steel       |                  |      |      |     |     |      |    |     |     | ●           |
| Cast iron             |                  |      |      |     |     |      |    |     |     | ●           |
| Non ferrous metals    |                  |      |      |     |     |      |    |     |     | ●           |
| Heat resistant alloys |                  |      |      |     |     |      |    |     |     | ●           |
| Hardened materials    |                  |      |      |     |     |      |    |     |     |             |

### Speed Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

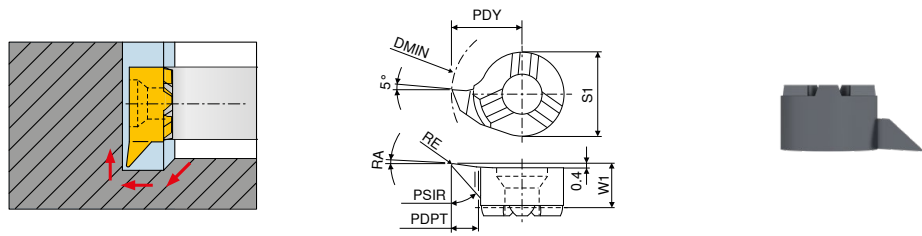
$v_c =$  (See Individual  $v_c$  Charts)  
 $\pi = 3.142$   
 $D =$  Diameter



MiniCut – Internal undercut insert

WNT \ Performance

CWX500

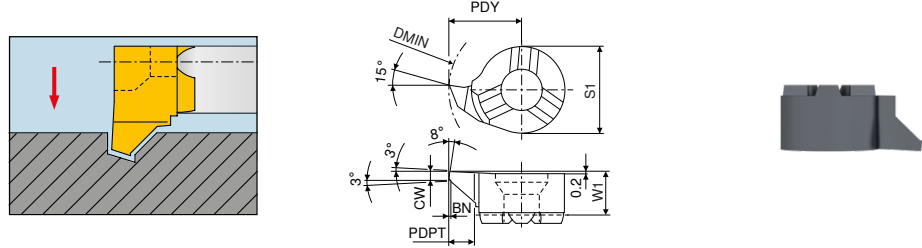


| Size                  | Designation      | DMIN | PDPT | W1  | PDY  | S1 | RE  | CDX | PSIR | RA | Right-hand  |       |
|-----------------------|------------------|------|------|-----|------|----|-----|-----|------|----|-------------|-------|
|                       |                  |      |      |     |      |    |     |     |      |    | Article no. | EUR   |
| 08                    | 8,00. R .30°1,0  | 7,8  | 1,0  | 3,5 | 4,65 | 6  | 0,2 | 0,4 | 30   | 3  | 73 326 010  | 20,38 |
|                       | 8,00. R .47°1,2  | 7,8  | 1,2  | 3,5 | 4,65 | 6  | 0,2 | 0,4 | 47   | 3  | 73 326 012  | 17,63 |
| 11                    | 11,00. R .30°2,3 | 11,0 | 2,3  | 4,2 | 6,70 | 8  | 0,2 | 0,6 | 30   | 3  | 73 326 423  | 19,83 |
|                       | 11,00. R .47°2,3 | 11,0 | 2,3  | 4,2 | 6,70 | 8  | 0,2 | 0,6 | 47   | 3  | 73 326 323  | 17,20 |
| 14                    | 13,70. R .47°3,0 | 13,7 | 3,0  | 5,3 | 8,70 | 9  | 0,2 | 0,8 | 47   | 3  | 73 326 530  | 17,63 |
|                       | 13,70. R .30°4,0 | 13,7 | 4,0  | 5,3 | 8,70 | 9  | 0,2 | 0,8 | 30   | 3  | 73 326 540  | 20,38 |
| Steel                 |                  |      |      |     |      |    |     |     |      |    |             | •     |
| Stainless steel       |                  |      |      |     |      |    |     |     |      |    |             | •     |
| Cast iron             |                  |      |      |     |      |    |     |     |      |    |             | •     |
| Non ferrous metals    |                  |      |      |     |      |    |     |     |      |    |             | •     |
| Heat resistant alloys |                  |      |      |     |      |    |     |     |      |    |             | •     |
| Hardened materials    |                  |      |      |     |      |    |     |     |      |    |             |       |

MiniCut – Insert for pregrooving and chamfering

WNT \ Performance

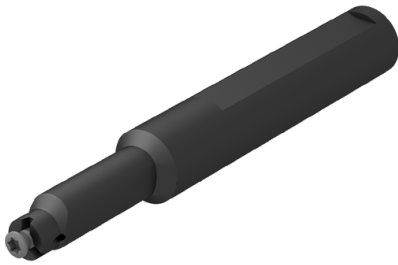
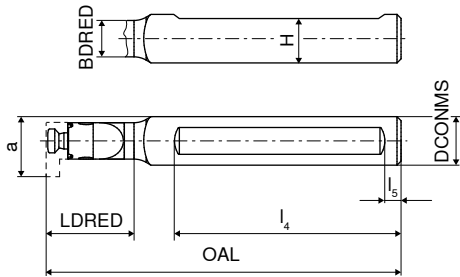
CWX500



| Size                  | Designation        | DMIN | CW | PDPT | W1  | PDY  | S1 | BN  | Right-hand  |       |
|-----------------------|--------------------|------|----|------|-----|------|----|-----|-------------|-------|
|                       |                    |      |    |      |     |      |    |     | Article no. | EUR   |
| 08                    | 8,00. R .1,00.45°  | 8    | 1  | 1,0  | 3,3 | 4,8  | 6  | 0,2 | 73 338 100  | 17,20 |
| 11                    | 11,00. R .1,00.45° | 11   | 1  | 1,5  | 4,2 | 6,7  | 8  | 0,2 | 73 338 315  | 17,20 |
| 14                    | 14,00. R .1,00.45° | 14   | 1  | 1,5  | 5,3 | 9,0  | 9  | 0,2 | 73 338 515  | 17,20 |
| 16                    | 16,00. R .1,00.45° | 16   | 1  | 1,5  | 5,4 | 10,2 | 11 | 0,2 | 73 338 715  | 17,20 |
| Steel                 |                    |      |    |      |     |      |    |     |             | •     |
| Stainless steel       |                    |      |    |      |     |      |    |     |             | •     |
| Cast iron             |                    |      |    |      |     |      |    |     |             | •     |
| Non ferrous metals    |                    |      |    |      |     |      |    |     |             | •     |
| Heat resistant alloys |                    |      |    |      |     |      |    |     |             | •     |
| Hardened materials    |                    |      |    |      |     |      |    |     |             |       |

MiniCut – Steel Tool holder

WNT \ Performance



| Size | Designation       | a    | DCONMS <sub>17</sub> | OAL | I <sub>4</sub> | LDRED | BDRED | H    | I <sub>5</sub> | Article no. |       |
|------|-------------------|------|----------------------|-----|----------------|-------|-------|------|----------------|-------------|-------|
|      |                   |      |                      |     |                |       |       |      |                | Article no. | EUR   |
| 08   | 8,00/16.N.12.1,0  | 7,8  | 16                   | 80  | 60             | 12    | 6     | 15,0 | 5              | 73 522 012  | 83,15 |
|      | 8,00/16.N.22.1,0  | 7,8  | 16                   | 90  | 60             | 22    | 6     | 15,0 | 5              | 73 522 122  | 95,32 |
| 11   | 11,00/16.N.16.2,3 | 10,7 | 16                   | 97  | 60             | 16    | 8     | 14,5 | 5              | 73 522 016  | 83,15 |
|      | 11,00/16.N.29.2,3 | 10,7 | 16                   | 110 | 60             | 29    | 8     | 14,5 | 5              | 73 522 129  | 95,32 |
| 14   | 14,00/16.N.18.4,0 | 13,8 | 16                   | 100 | 60             | 18    | 11    | 14,5 | 5              | 73 522 018  | 95,32 |
|      | 14,00/16.N.38.4,0 | 13,8 | 16                   | 120 | 60             | 38    | 11    | 14,5 | 5              | 73 522 138  | 95,32 |
| 16   | 16,00/16.N.22.4,3 | 15,7 | 16                   | 100 | 60             | 22    | 11    | 14,5 | 5              | 73 522 022  | 83,15 |
|      | 16,00/16.N.42.4,3 | 15,7 | 16                   | 120 | 60             | 42    | 11    | 14,5 | 5              | 73 522 142  | 95,32 |

Spare parts

| Size | Article no. |     |            | Article no. |      |            |
|------|-------------|-----|------------|-------------|------|------------|
|      | EUR         |     |            | EUR         |      |            |
| 08   | 7,02        | T08 | 80 950 110 | 3,15        | M2,6 | 73 082 002 |
| 11   | 8,23        | T10 | 80 950 112 | 3,15        | M3,5 | 73 082 003 |
| 14   | 8,35        | T15 | 80 950 113 | 3,15        | M4   | 73 082 004 |
| 16   | 8,96        | T20 | 80 950 114 | 3,15        | M5   | 73 082 005 |

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The new complete supplier in the field of machining

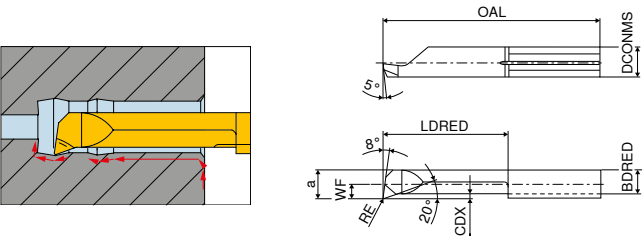
- ▲ Uniquely broad know-how in the field of machining
- ▲ Highly attractive, holistic service promise
- ▲ One of the largest product ranges on the market
- ▲ An enormously efficient distribution
- ▲ Leading expertise in future technologies from digitization to nanotechnology
- ▲ Deep industry expertise based on many years of experience
- ▲ All under one roof



UltraMini – Inserts for internal turning and profiling



WNT \ Performance



| Designation  | DCONMS <sub>h6</sub> | WF  | DMIN | a   | OAL | LDRED | CDX | BDRED | RE   | Standard tool holder |
|--------------|----------------------|-----|------|-----|-----|-------|-----|-------|------|----------------------|
|              | mm                   | mm  | mm   | mm  | mm  | mm    | mm  | mm    | mm   |                      |
| R 050.2-5    | 4                    |     | 2,0  | 1,7 | 19  | 5     | 0,1 | 1,5   | 0,05 | 645.00..-D           |
| R 050.2-10   | 4                    |     | 2,0  | 1,7 | 24  | 10    | 0,1 | 1,5   | 0,05 | 645.00..-D           |
| R 050.2-15   | 4                    |     | 2,0  | 1,7 | 29  | 15    | 0,1 | 1,5   | 0,05 | 645.00..-D           |
| R 050.3-10   | 4                    | 0,6 | 2,8  | 2,6 | 24  | 10    | 0,2 | 2,3   | 0,10 | 645.00..-D           |
| R 050.3-16   | 4                    | 0,6 | 2,8  | 2,6 | 30  | 16    | 0,2 | 2,3   | 0,10 | 645.00..-D           |
| R 050.3-20   | 4                    | 0,6 | 2,8  | 2,6 | 34  | 20    | 0,2 | 2,3   | 0,10 | 645.00..-D           |
| R 050.4-10   | 4                    | 1,5 | 4,0  | 3,5 | 24  | 10    | 0,3 | 3,0   | 0,10 | 645.00..-D           |
| R 050.4-16   | 4                    | 1,5 | 4,0  | 3,5 | 30  | 16    | 0,3 | 3,0   | 0,10 | 645.00..-D           |
| R 050.4-20   | 4                    | 1,5 | 4,0  | 3,5 | 34  | 20    | 0,3 | 3,0   | 0,10 | 645.00..-D           |
| R 050.4-24   | 4                    | 1,5 | 4,0  | 3,5 | 38  | 24    | 0,3 | 3,0   | 0,10 | 645.00..-D           |
| R 050.4-28   | 4                    | 1,5 | 4,0  | 3,5 | 42  | 28    | 0,3 | 3,0   | 0,10 | 645.00..-D           |
| R 050.5-10   | 5                    | 1,9 | 5,0  | 4,4 | 25  | 10    | 0,5 | 3,8   | 0,15 | 645.00..-D           |
| R 050.5-15   | 5                    | 1,9 | 5,0  | 4,4 | 30  | 15    | 0,5 | 3,8   | 0,15 | 645.00..-D           |
| R 050.5-20   | 5                    | 1,9 | 5,0  | 4,4 | 35  | 20    | 0,5 | 3,8   | 0,15 | 645.00..-D           |
| R 050.5-25   | 5                    | 1,9 | 5,0  | 4,4 | 40  | 25    | 0,5 | 3,8   | 0,15 | 645.00..-D           |
| R 050.5-30   | 5                    | 1,9 | 5,0  | 4,4 | 45  | 30    | 0,5 | 3,8   | 0,15 | 645.00..-D           |
| R 050.5-35   | 5                    | 1,9 | 5,0  | 4,4 | 50  | 35    | 0,5 | 3,8   | 0,15 | 645.00..-D           |
| R/L 050.5-40 | 5                    | 1,9 | 5,0  | 4,4 | 55  | 40    | 0,5 | 3,8   | 0,15 | 645.00..-D           |
| R 050.6-15   | 6                    | 2,3 | 6,0  | 5,3 | 30  | 15    | 0,5 | 4,5   | 0,15 | 676.00..-D           |
| R 050.6-22   | 6                    | 2,3 | 6,0  | 5,3 | 37  | 22    | 0,5 | 4,5   | 0,15 | 676.00..-D           |
| R 050.6-25   | 6                    | 2,3 | 6,0  | 5,3 | 40  | 25    | 0,5 | 4,5   | 0,15 | 676.00..-D           |
| R 050.6-30   | 6                    | 2,3 | 6,0  | 5,3 | 45  | 30    | 0,5 | 4,5   | 0,15 | 676.00..-D           |
| R 050.6-35   | 6                    | 2,3 | 6,0  | 5,3 | 50  | 35    | 0,5 | 4,5   | 0,15 | 676.00..-D           |
| R 050.6-42   | 6                    | 2,3 | 6,0  | 5,3 | 57  | 42    | 0,5 | 4,5   | 0,15 | 676.00..-D           |
| R 050.7-20   | 7                    | 2,8 | 6,8  | 6,3 | 35  | 20    | 0,6 | 5,5   | 0,15 | 676.00..-D           |
| R 050.7-25   | 7                    | 2,8 | 6,8  | 6,3 | 40  | 25    | 0,6 | 5,5   | 0,15 | 676.00..-D           |
| R 050.7-30   | 7                    | 2,8 | 6,8  | 6,3 | 45  | 30    | 0,6 | 5,5   | 0,15 | 676.00..-D           |
| R 050.7-35   | 7                    | 2,8 | 7,0  | 6,3 | 50  | 35    | 0,6 | 5,5   | 0,15 | 676.00..-D           |
| R 050.7-40   | 7                    | 2,8 | 7,0  | 6,3 | 55  | 40    | 0,6 | 5,5   | 0,15 | 676.00..-D           |
| R 050.7-45   | 7                    | 2,8 | 7,0  | 6,3 | 60  | 45    | 0,6 | 5,5   | 0,15 | 676.00..-D           |
| R 050.7-50   | 7                    | 2,8 | 7,0  | 6,3 | 65  | 50    | 0,6 | 5,5   | 0,15 | 676.00..-D           |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ● | ● |
| Cast iron             | ○ | ● |
| Non ferrous metals    | ○ | ● |
| Heat resistant alloys | ○ | ● |
| Hardened materials    |   |   |

TiN



TiAlN

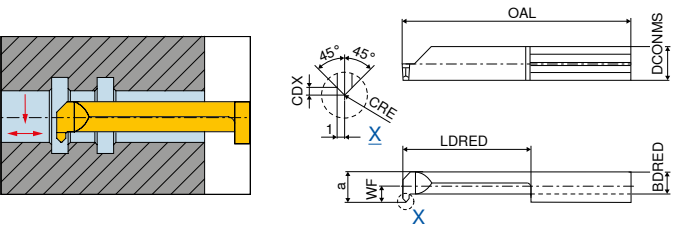


| Right-hand  |       | Right-hand  |       |
|-------------|-------|-------------|-------|
| Article no. |       | Article no. |       |
|             | EUR   |             | EUR   |
| 73 004 520  | 26,33 |             |       |
| 73 004 521  | 26,88 |             |       |
| 73 004 522  | 28,43 |             |       |
| 73 004 531  | 28,33 |             |       |
| 73 004 530  | 28,77 |             |       |
| 73 004 532  | 30,31 |             |       |
| 73 004 541  | 28,55 | 73 004 841  | 28,55 |
| 73 004 540  | 28,98 | 73 004 840  | 28,98 |
| 73 004 542  | 30,41 | 73 004 842  | 30,41 |
| 73 004 545  | 32,96 | 73 004 845  | 32,96 |
| 73 004 546  | 36,70 | 73 004 846  | 36,70 |
| 73 004 551  | 26,78 | 73 004 851  | 26,78 |
| 73 004 552  | 29,10 | 73 004 852  | 29,10 |
| 73 004 550  | 29,86 | 73 004 850  | 29,86 |
| 73 004 553  | 33,83 | 73 004 853  | 33,83 |
| 73 004 554  | 36,70 | 73 004 854  | 36,70 |
| 73 004 556  | 40,01 | 73 004 856  | 40,01 |
|             |       | 73 004 857  | 44,97 |
| 73 004 561  | 29,43 | 73 004 861  | 29,43 |
| 73 004 560  | 30,64 | 73 004 860  | 30,64 |
| 73 004 562  | 33,96 | 73 004 862  | 33,96 |
| 73 004 563  | 37,25 | 73 004 863  | 37,25 |
| 73 004 564  | 40,01 | 73 004 864  | 40,01 |
| 73 004 565  | 44,64 | 73 004 865  | 44,64 |
| 73 004 572  | 30,75 | 73 004 872  | 30,75 |
| 73 004 573  | 38,58 | 73 004 873  | 38,58 |
| 73 004 574  | 39,24 | 73 004 874  | 39,24 |
| 73 004 575  | 40,66 | 73 004 875  | 40,66 |
| 73 004 576  | 45,19 | 73 004 876  | 45,19 |
| 73 004 577  | 47,94 | 73 004 877  | 47,94 |
| 73 004 578  | 51,69 | 73 004 878  | 51,69 |

UltraMini – Inserts for internal turning and chamfering



WNT \ Performance



| Designation | DCONMS <sub>h6</sub> | WF  | DMIN | a   | OAL | LDRED | CDX | BDRED | CRE | Standard tool holder |
|-------------|----------------------|-----|------|-----|-----|-------|-----|-------|-----|----------------------|
|             | mm                   | mm  | mm   | mm  | mm  | mm    | mm  | mm    | mm  |                      |
| R 060.5-15  | 5                    | 1,9 | 5,0  | 4,4 | 30  | 15    | 0,7 | 3,3   | 0,2 | 645.00..-D           |
| R 060.5-20  | 5                    | 1,9 | 5,0  | 4,4 | 35  | 20    | 0,7 | 3,3   | 0,2 | 645.00..-D           |
| R 060.7-20  | 7                    | 2,7 | 6,8  | 6,3 | 35  | 20    | 0,7 | 3,8   | 0,2 | 676.00..-D           |

|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ● |
| Cast iron             | ○ |
| Non ferrous metals    | ○ |
| Heat resistant alloys | ○ |
| Hardened materials    |   |

TiN



| Right-hand  |       |
|-------------|-------|
| Article no. |       |
|             | EUR   |
| 73 006 551  | 26,88 |
| 73 006 550  | 28,43 |
| 73 006 570  | 31,52 |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
 $D$  = Diameter

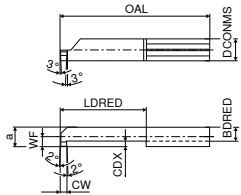
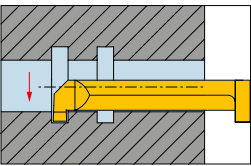


UltraMini – Inserts for Internal Grooving



WNT \ Performance

TiN



| Designation   | DCONMS <sub>h8</sub> | WF  | DMIN | a   | OAL | LDRED | CDX | BDRED | CW  | Standard tool holder | Right-hand  |       |
|---------------|----------------------|-----|------|-----|-----|-------|-----|-------|-----|----------------------|-------------|-------|
|               |                      |     |      |     |     |       |     |       |     |                      | Article no. | EUR   |
| R 004.0100-10 | 4                    | 1,5 | 4,0  | 3,5 | 24  | 10    | 0,8 | 2,4   | 1,0 | 645.00..-D           | 73 002 540  | 25,68 |
| R 004.0100-16 | 4                    | 1,5 | 4,0  | 3,5 | 30  | 16    | 0,8 | 2,4   | 1,0 | 645.00..-D           | 73 002 541  | 29,54 |
| R 004.0100-20 | 4                    | 1,5 | 4,0  | 3,5 | 34  | 20    | 0,8 | 2,4   | 1,0 | 645.00..-D           | 73 002 542  | 33,40 |
| R 005.0100-10 | 5                    | 1,9 | 5,0  | 4,4 | 25  | 10    | 1,0 | 3,3   | 1,0 | 645.00..-D           | 73 002 650  | 25,36 |
| R 005.0200-10 | 5                    | 1,9 | 5,0  | 4,4 | 25  | 10    | 1,0 | 3,3   | 2,0 | 645.00..-D           | 73 002 658  | 25,36 |
| R 005.0150-10 | 5                    | 1,9 | 5,0  | 4,4 | 25  | 10    | 1,0 | 3,3   | 1,5 | 645.00..-D           | 73 002 654  | 25,36 |
| R 005.0100-15 | 5                    | 1,9 | 5,0  | 4,4 | 30  | 15    | 1,0 | 3,3   | 1,0 | 645.00..-D           | 73 002 651  | 29,20 |
| R 005.0150-15 | 5                    | 1,9 | 5,0  | 4,4 | 30  | 15    | 1,0 | 3,3   | 1,5 | 645.00..-D           | 73 002 655  | 29,20 |
| R 005.0200-15 | 5                    | 1,9 | 5,0  | 4,4 | 30  | 15    | 1,0 | 3,3   | 2,0 | 645.00..-D           | 73 002 659  | 29,20 |
| R 005.0200-20 | 5                    | 1,9 | 5,0  | 4,4 | 35  | 20    | 1,0 | 3,3   | 2,0 | 645.00..-D           | 73 002 553  | 32,96 |
| R 005.0150-20 | 5                    | 1,9 | 5,0  | 4,4 | 35  | 20    | 1,0 | 3,3   | 1,5 | 645.00..-D           | 73 002 552  | 33,51 |
| R 005.0100-20 | 5                    | 1,9 | 5,0  | 4,4 | 35  | 20    | 1,0 | 3,3   | 1,0 | 645.00..-D           | 73 002 551  | 32,96 |
| R 005.0100-25 | 5                    | 1,9 | 5,0  | 4,4 | 40  | 25    | 1,0 | 3,3   | 1,0 | 645.00..-D           | 73 002 652  | 36,04 |
| R 005.0200-25 | 5                    | 1,9 | 5,0  | 4,4 | 40  | 25    | 1,0 | 3,3   | 2,0 | 645.00..-D           | 73 002 750  | 36,38 |
| R 005.0150-25 | 5                    | 1,9 | 5,0  | 4,4 | 40  | 25    | 1,0 | 3,3   | 1,5 | 645.00..-D           | 73 002 656  | 36,04 |
| R 005.0100-30 | 5                    | 1,9 | 5,0  | 4,4 | 45  | 30    | 1,0 | 3,3   | 1,0 | 645.00..-D           | 73 002 653  | 40,11 |
| R 005.0200-30 | 5                    | 1,9 | 5,0  | 4,4 | 45  | 30    | 1,0 | 3,3   | 2,0 | 645.00..-D           | 73 002 751  | 40,23 |
| R 005.0150-30 | 5                    | 1,9 | 5,0  | 4,4 | 45  | 30    | 1,0 | 3,3   | 1,5 | 645.00..-D           | 73 002 657  | 40,11 |
| R 005.0100-35 | 5                    | 1,9 | 5,0  | 4,4 | 50  | 35    | 1,0 | 3,3   | 1,0 | 645.00..-D           | 73 002 680  | 41,98 |
| R 006.0100-10 | 6                    | 2,3 | 6,0  | 5,3 | 25  | 10    | 1,8 | 3,4   | 1,0 | 676.00..-D           | 73 002 660  | 25,46 |
| R 006.0150-10 | 6                    | 2,3 | 6,0  | 5,3 | 25  | 10    | 1,8 | 3,4   | 1,5 | 676.00..-D           | 73 002 664  | 25,46 |
| R 006.0200-10 | 6                    | 2,3 | 6,0  | 5,3 | 25  | 10    | 1,8 | 3,4   | 2,0 | 676.00..-D           | 73 002 668  | 25,46 |
| R 006.0150-15 | 6                    | 2,3 | 6,0  | 5,3 | 30  | 15    | 1,8 | 3,4   | 1,5 | 676.00..-D           | 73 002 665  | 29,43 |
| R 006.0200-15 | 6                    | 2,3 | 6,0  | 5,3 | 30  | 15    | 1,8 | 3,4   | 2,0 | 676.00..-D           | 73 002 669  | 29,43 |
| R 006.0100-15 | 6                    | 2,3 | 6,0  | 5,3 | 30  | 15    | 1,8 | 3,4   | 1,0 | 676.00..-D           | 73 002 661  | 29,43 |
| R 006.0200-22 | 6                    | 2,3 | 6,0  | 5,3 | 37  | 22    | 1,8 | 3,4   | 2,0 | 676.00..-D           | 73 002 563  | 33,18 |
| R 006.0150-22 | 6                    | 2,3 | 6,0  | 5,3 | 37  | 22    | 1,8 | 3,4   | 1,5 | 676.00..-D           | 73 002 562  | 33,18 |
| R 006.0100-22 | 6                    | 2,3 | 6,0  | 5,3 | 37  | 22    | 1,8 | 3,4   | 1,0 | 676.00..-D           | 73 002 561  | 33,18 |
| R 006.0100-25 | 6                    | 2,3 | 6,0  | 5,3 | 40  | 25    | 1,8 | 3,4   | 1,0 | 676.00..-D           | 73 002 662  | 36,38 |
| R 006.0200-25 | 6                    | 2,3 | 6,0  | 5,3 | 40  | 25    | 1,8 | 3,4   | 2,0 | 676.00..-D           | 73 002 760  | 36,38 |
| R 006.0150-25 | 6                    | 2,3 | 6,0  | 5,3 | 40  | 25    | 1,8 | 3,4   | 1,5 | 676.00..-D           | 73 002 666  | 36,38 |
| R 006.0150-30 | 6                    | 2,3 | 6,0  | 5,3 | 45  | 30    | 1,8 | 3,4   | 1,5 | 676.00..-D           | 73 002 667  | 40,23 |
| R 006.0200-30 | 6                    | 2,3 | 6,0  | 5,3 | 45  | 30    | 1,8 | 3,4   | 2,0 | 676.00..-D           | 73 002 761  | 40,23 |
| R 006.0100-30 | 6                    | 2,3 | 6,0  | 5,3 | 45  | 30    | 1,8 | 3,4   | 1,0 | 676.00..-D           | 73 002 663  | 40,23 |
| R 006.0150-35 | 6                    | 2,3 | 6,0  | 5,3 | 50  | 35    | 1,8 | 3,4   | 1,5 | 676.00..-D           | 73 002 684  | 41,98 |
| R 006.0100-35 | 6                    | 2,3 | 6,0  | 5,3 | 50  | 35    | 1,8 | 3,4   | 1,0 | 676.00..-D           | 73 002 682  | 41,98 |
| R 006.0100-42 | 6                    | 2,3 | 6,0  | 5,3 | 57  | 42    | 1,8 | 3,4   | 1,0 | 676.00..-D           | 73 002 685  | 46,29 |
| R 007.0200-10 | 7                    | 2,7 | 6,8  | 6,3 | 25  | 10    | 2,5 | 3,8   | 2,0 | 676.00..-D           | 73 002 670  | 25,68 |
| R 007.0150-10 | 7                    | 2,7 | 6,8  | 6,3 | 25  | 10    | 2,5 | 3,8   | 1,5 | 676.00..-D           | 73 002 575  | 25,68 |
| R 007.0100-10 | 7                    | 2,7 | 6,8  | 6,3 | 25  | 10    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 570  | 25,68 |
| R 007.0150-15 | 7                    | 2,7 | 6,8  | 6,3 | 30  | 15    | 2,5 | 3,8   | 1,5 | 676.00..-D           | 73 002 576  | 29,75 |
| R 007.0200-15 | 7                    | 2,7 | 6,8  | 6,3 | 30  | 15    | 2,5 | 3,8   | 2,0 | 676.00..-D           | 73 002 671  | 29,75 |
| R 007.0100-15 | 7                    | 2,7 | 6,8  | 6,3 | 30  | 15    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 571  | 29,75 |
| R 007.0200-22 | 7                    | 2,7 | 6,8  | 6,3 | 37  | 22    | 2,5 | 3,8   | 2,0 | 676.00..-D           | 73 002 672  | 33,40 |
| R 007.0150-22 | 7                    | 2,7 | 6,8  | 6,3 | 37  | 22    | 2,5 | 3,8   | 1,5 | 676.00..-D           | 73 002 577  | 33,40 |
| R 007.0100-22 | 7                    | 2,7 | 6,8  | 6,3 | 37  | 22    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 572  | 33,40 |
| R 007.0150-25 | 7                    | 2,7 | 6,8  | 6,3 | 40  | 25    | 2,5 | 3,8   | 1,5 | 676.00..-D           | 73 002 578  | 36,81 |
| R 007.0200-25 | 7                    | 2,7 | 6,8  | 6,3 | 40  | 25    | 2,5 | 3,8   | 2,0 | 676.00..-D           | 73 002 673  | 36,81 |
| R 007.0100-25 | 7                    | 2,7 | 6,8  | 6,3 | 40  | 25    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 573  | 36,81 |
| R 007.0200-30 | 7                    | 2,7 | 6,8  | 6,3 | 45  | 30    | 2,5 | 3,8   | 2,0 | 676.00..-D           | 73 002 674  | 41,11 |
| R 007.0150-30 | 7                    | 2,7 | 6,8  | 6,3 | 45  | 30    | 2,5 | 3,8   | 1,5 | 676.00..-D           | 73 002 579  | 41,11 |
| R 007.0100-30 | 7                    | 2,7 | 6,8  | 6,3 | 45  | 30    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 574  | 41,11 |
| R 007.0200-35 | 7                    | 2,7 | 7,0  | 6,3 | 50  | 35    | 2,5 | 3,8   | 2,0 | 676.00..-D           | 73 002 692  | 42,33 |
| R 007.0150-35 | 7                    | 2,7 | 7,0  | 6,3 | 50  | 35    | 2,5 | 3,8   | 1,5 | 676.00..-D           | 73 002 690  | 42,33 |
| R 007.0100-35 | 7                    | 2,7 | 7,0  | 6,3 | 50  | 35    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 688  | 42,33 |
| R 007.0150-40 | 7                    | 2,7 | 7,0  | 6,3 | 55  | 40    | 2,5 | 3,8   | 1,5 | 676.00..-D           | 73 002 702  | 47,16 |
| R 007.0100-40 | 7                    | 2,7 | 7,0  | 6,3 | 55  | 40    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 700  | 47,16 |
| R 007.0100-45 | 7                    | 2,7 | 7,0  | 6,3 | 60  | 45    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 712  | 51,03 |
| R 007.0100-50 | 7                    | 2,7 | 7,0  | 6,3 | 65  | 50    | 2,5 | 3,8   | 1,0 | 676.00..-D           | 73 002 714  | 54,66 |

|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ● |
| Cast iron             | ○ |
| Non ferrous metals    | ○ |
| Heat resistant alloys | ○ |
| Hardened materials    | ○ |

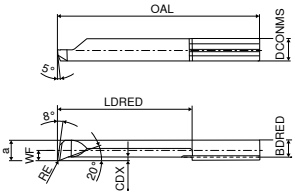
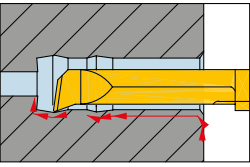
UltraMini – Inserts for internal turning and profiling

▲ with chip former



WNT \ Performance

TiAIN



| Designation | DCONMS <sub>h8</sub> | WF  | DMIN | a   | OAL | LDRED | CDX | BDRED | RE  | Standard tool holder | Right-hand  |       |
|-------------|----------------------|-----|------|-----|-----|-------|-----|-------|-----|----------------------|-------------|-------|
|             |                      |     |      |     |     |       |     |       |     |                      | Article no. | EUR   |
| R 050.4-10C | 4                    | 1,5 | 4    | 3,5 | 24  | 10    | 0,3 | 3,0   | 0,2 | 645.00..-D           | 73 016 410  | 24,58 |
| R 050.4-16C | 4                    | 1,5 | 4    | 3,5 | 30  | 16    | 0,3 | 3,0   | 0,2 | 645.00..-D           | 73 016 416  | 25,78 |
| R 050.4-20C | 4                    | 1,5 | 4    | 3,5 | 34  | 20    | 0,3 | 3,0   | 0,2 | 645.00..-D           | 73 016 420  | 29,54 |
| R 050.4-24C | 4                    | 1,5 | 4    | 3,5 | 38  | 24    | 0,3 | 3,0   | 0,2 | 645.00..-D           | 73 016 424  | 32,96 |
| R 050.4-28C | 4                    | 1,5 | 4    | 3,5 | 42  | 28    | 0,3 | 3,0   | 0,2 | 645.00..-D           | 73 016 428  | 36,70 |
| R 050.5-10C | 5                    | 1,9 | 5    | 4,4 | 25  | 10    | 0,5 | 3,8   | 0,2 | 645.00..-D           | 73 016 510  | 23,04 |
| R 050.5-15C | 5                    | 1,9 | 5    | 4,4 | 30  | 15    | 0,5 | 3,8   | 0,2 | 645.00..-D           | 73 016 515  | 24,58 |
| R 050.5-20C | 5                    | 1,9 | 5    | 4,4 | 35  | 20    | 0,5 | 3,8   | 0,2 | 645.00..-D           | 73 016 520  | 28,22 |
| R 050.5-25C | 5                    | 1,9 | 5    | 4,4 | 40  | 25    | 0,5 | 3,8   | 0,2 | 645.00..-D           | 73 016 525  | 31,96 |
| R 050.5-30C | 5                    | 1,9 | 5    | 4,4 | 45  | 30    | 0,5 | 3,8   | 0,2 | 645.00..-D           | 73 016 530  | 36,04 |
| R 050.5-35C | 5                    | 1,9 | 5    | 4,4 | 50  | 35    | 0,5 | 3,8   | 0,2 | 645.00..-D           | 73 016 535  | 40,01 |
| R 050.6-15C | 6                    | 2,3 | 6    | 5,3 | 30  | 15    | 0,5 | 4,5   | 0,2 | 676.00..-D           | 73 016 615  | 24,58 |
| R 050.6-22C | 6                    | 2,3 | 6    | 5,3 | 37  | 22    | 0,5 | 4,5   | 0,2 | 676.00..-D           | 73 016 622  | 28,22 |
| R 050.6-25C | 6                    | 2,3 | 6    | 5,3 | 40  | 25    | 0,5 | 4,5   | 0,2 | 676.00..-D           | 73 016 625  | 31,96 |
| R 050.6-30C | 6                    | 2,3 | 6    | 5,3 | 45  | 30    | 0,5 | 4,5   | 0,2 | 676.00..-D           | 73 016 630  | 36,04 |
| R 050.6-35C | 6                    | 2,3 | 6    | 5,3 | 50  | 35    | 0,5 | 4,5   | 0,2 | 676.00..-D           | 73 016 635  | 40,01 |
| R 050.6-42C | 6                    | 2,3 | 6    | 5,3 | 57  | 42    | 0,5 | 4,5   | 0,2 | 676.00..-D           | 73 016 642  | 44,64 |
| R 050.7-20C | 7                    | 2,8 | 7    | 6,3 | 35  | 20    | 0,6 | 5,5   | 0,2 | 676.00..-D           | 73 016 720  | 28,43 |
| R 050.7-25C | 7                    | 2,8 | 7    | 6,3 | 40  | 25    | 0,6 | 5,5   | 0,2 | 676.00..-D           | 73 016 725  | 32,29 |
| R 050.7-30C | 7                    | 2,8 | 7    | 6,3 | 45  | 30    | 0,6 | 5,5   | 0,2 | 676.00..-D           | 73 016 730  | 36,48 |
| R 050.7-35C | 7                    | 2,8 | 7    | 6,3 | 50  | 35    | 0,6 | 5,5   | 0,2 | 676.00..-D           | 73 016 735  | 40,66 |
| R 050.7-40C | 7                    | 2,8 | 7    | 6,3 | 55  | 40    | 0,6 | 5,5   | 0,2 | 676.00..-D           | 73 016 740  | 45,19 |
| R 050.7-45C | 7                    | 2,8 | 7    | 6,3 | 60  | 45    | 0,6 | 5,5   | 0,2 | 676.00..-D           | 73 016 745  | 47,94 |
| R 050.7-50C | 7                    | 2,8 | 7    | 6,3 | 65  | 50    | 0,6 | 5,5   | 0,2 | 676.00..-D           | 73 016 750  | 51,69 |

|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ● |
| Cast iron             | ● |
| Non ferrous metals    | ● |
| Heat resistant alloys | ● |
| Hardened materials    | ● |

UltraMini – Inserts for internal threading (Partial profile)



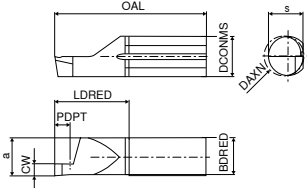
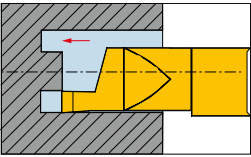
TiN

WNT \ Performance

UltraMini – Inserts for axial grooving



WNT \ Performance



TiN

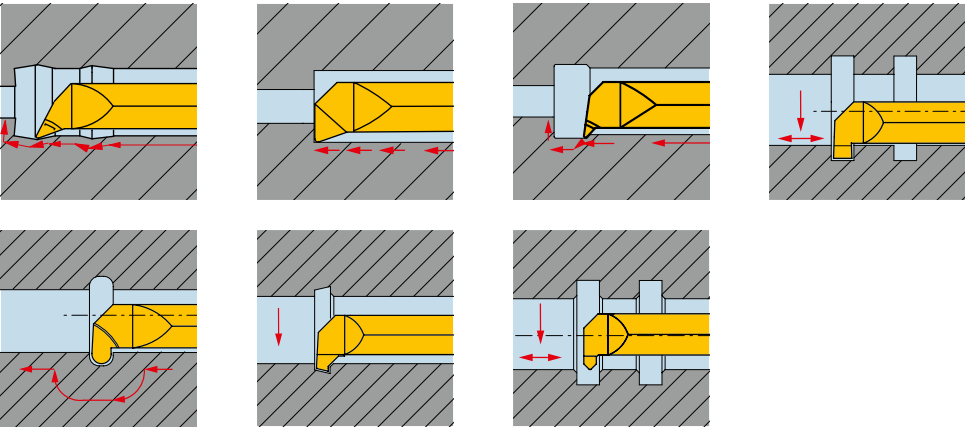


| Designation   | DCONMS <sub>g6</sub> |         | DAXN |         | OAL | LDRED | BDRED | PDPT | CW  | Standard tool holder | Right-hand  |       |
|---------------|----------------------|---------|------|---------|-----|-------|-------|------|-----|----------------------|-------------|-------|
|               | mm                   | a<br>mm | mm   | s<br>mm |     |       |       |      |     |                      | Article no. | EUR   |
| R 010.1006-10 | 6                    | 5,2     | 6    | 5,3     | 26  | 11    | 4,9   | 1,5  | 1,0 | 676.00.-D            | 73 050 561  | 31,30 |
| R 010.1506-10 | 6                    | 5,2     | 6    | 5,3     | 26  | 11    | 4,9   | 2,0  | 1,5 | 676.00.-D            | 73 050 563  | 31,30 |
| R 010.1008-10 | 7                    | 5,9     | 8    | 6,3     | 26  | 11    | 5,6   | 1,5  | 1,0 | 676.00.-D            | 73 050 571  | 32,07 |
| R 010.1008-30 | 7                    | 5,9     | 8    | 6,3     | 45  | 30    | 5,6   | 1,5  | 1,0 | 676.00.-D            | 73 050 771  | 36,04 |
| R 010.1008-20 | 7                    | 5,9     | 8    | 6,3     | 35  | 20    | 5,6   | 1,5  | 1,0 | 676.00.-D            | 73 050 671  | 34,28 |
| R 010.1508-20 | 7                    | 5,9     | 8    | 6,3     | 35  | 20    | 5,6   | 2,5  | 1,5 | 676.00.-D            | 73 050 673  | 34,28 |
| R 010.1508-30 | 7                    | 5,9     | 8    | 6,3     | 45  | 30    | 5,6   | 2,5  | 1,5 | 676.00.-D            | 73 050 773  | 36,04 |
| R 010.1508-10 | 7                    | 5,9     | 8    | 6,3     | 26  | 11    | 5,6   | 2,5  | 1,5 | 676.00.-D            | 73 050 573  | 32,07 |
| R 010.2008-20 | 7                    | 5,9     | 8    | 6,3     | 35  | 20    | 5,6   | 3,0  | 2,0 | 676.00.-D            | 73 050 675  | 34,28 |
| R 010.2008-30 | 7                    | 5,9     | 8    | 6,3     | 45  | 30    | 5,6   | 3,0  | 2,0 | 676.00.-D            | 73 050 775  | 36,04 |
| R 010.2008-10 | 7                    | 5,9     | 8    | 6,3     | 26  | 11    | 5,6   | 3,0  | 2,0 | 676.00.-D            | 73 050 575  | 32,07 |
| R 010.2508-20 | 7                    | 5,9     | 8    | 6,3     | 35  | 20    | 5,6   | 3,5  | 2,5 | 676.00.-D            | 73 050 677  | 34,28 |
| R 010.3008-20 | 7                    | 5,9     | 8    | 6,3     | 35  | 20    | 5,6   | 3,5  | 3,0 | 676.00.-D            | 73 050 679  | 34,28 |
| R 010.2508-30 | 7                    | 5,9     | 8    | 6,3     | 45  | 30    | 5,6   | 3,5  | 2,5 | 676.00.-D            | 73 050 777  | 36,04 |
| R 010.3008-10 | 7                    | 5,9     | 8    | 6,3     | 26  | 11    | 5,6   | 3,5  | 3,0 | 676.00.-D            | 73 050 579  | 32,07 |
| R 010.3008-30 | 7                    | 5,9     | 8    | 6,3     | 45  | 30    | 5,6   | 3,5  | 3,0 | 676.00.-D            | 73 050 779  | 36,04 |
| R 010.2508-10 | 7                    | 5,9     | 8    | 6,3     | 26  | 11    | 5,6   | 3,5  | 2,5 | 676.00.-D            | 73 050 577  | 32,07 |

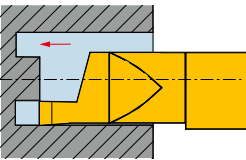
|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ● |
| Cast iron             | ○ |
| Non ferrous metals    | ○ |
| Heat resistant alloys | ○ |
| Hardened materials    | ○ |

Internal turning and profiling, grooving and chamfering

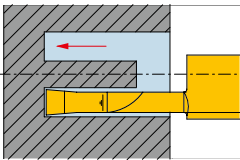
From Diameter 2.0 mm onwards up to a turning depth of 15.0 mm



Axial grooving

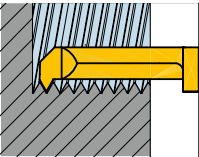


Minimum external diameter of groove 6.0 mm  
At 1.5 mm grooving width  
Up to 2.0 mm grooving depth



Minimum external diameter of groove 15.0 mm  
At 3.0 mm grooving width  
Up to 30.0 mm grooving depth

Thread turning



Turning of external threads from diameter 4.0 mm onwards

- ▲ Metric standard and fine thread
- ▲ Whitworth pipe threads

Miniature turning tools guide (Main catalogue 2019)

|                           |       |                                             |    |
|---------------------------|-------|---------------------------------------------|----|
| Cutting Data              | 59-61 | Broaching - Recommendations for Correct Use | 62 |
| Coatings and thread types | 63    |                                             |    |

The rest of the comprehensive UltraMini range is available in the main catalogue.

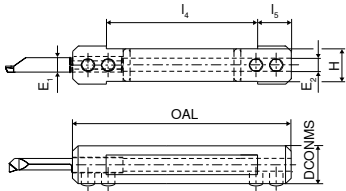
UltraMini – Standard tool holder for cutting inserts

- ▲ double ended
- ▲ Machining diameter from Ø 0.2 mm

Scope of supply:

Tool holder with allen key

WNT \ Performance



| Designation | Ø E <sub>1</sub><br>mm | Ø E <sub>2</sub><br>mm | DCONMS | OAL | I <sub>4</sub><br>mm | I <sub>5</sub><br>mm | H<br>mm | Article no. |        |
|-------------|------------------------|------------------------|--------|-----|----------------------|----------------------|---------|-------------|--------|
|             |                        |                        |        |     |                      |                      |         |             | EUR    |
| 645.0012-D  | 4                      | 5                      | 12     | 75  | 55                   | 10                   | 10,3    | 73 080 163  | 88,71  |
| 645.0016-D  | 4                      | 5                      | 16     | 75  | 55                   | 10                   | 14,0    | 73 080 164  | 93,11  |
| 645.0020-D  | 4                      | 5                      | 20     | 90  | 70                   | 10                   | 18,0    | 73 080 165  | 100,30 |
| 676.0016-D  | 6                      | 7                      | 16     | 75  | 55                   | 10                   | 14,0    | 73 080 166  | 93,11  |
| 676.0020-D  | 6                      | 7                      | 20     | 90  | 70                   | 10                   | 18,0    | 73 080 167  | 100,30 |



Clamping screw

Spare parts

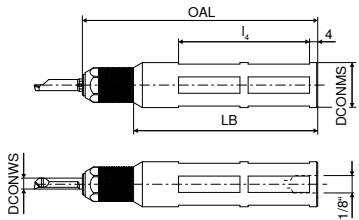
| Ø E <sub>1</sub> |      | EUR  |            |
|------------------|------|------|------------|
| 4                | M5x6 | 2,90 | 73 082 001 |
| 6                | M5x6 | 2,90 | 73 082 001 |

UltraMini – Quick change tool holder for cutting inserts

Scope of supply:

Tool holder, lock nut and clamping wedge

WNT \ Performance



| Designation     | DCONWS | DCONMS <sub>g6</sub> | OAL | LB | I <sub>4</sub><br>mm | Article no. |        |
|-----------------|--------|----------------------|-----|----|----------------------|-------------|--------|
|                 |        |                      |     |    |                      |             | EUR    |
| UM600H.0012.4   | 4      | 12,00                | 115 | 90 | 64                   | 73 089 124  | 226,50 |
| UM600H.0016.4   | 4      | 16,00                | 115 | 90 | 64                   | 73 089 164  | 205,50 |
| UM600H.001905.4 | 4      | 19,05                | 115 | 90 | 64                   | 73 089 194  | 220,20 |
| UM600H.0020.4   | 4      | 20,00                | 115 | 90 | 64                   | 73 089 204  | 217,00 |
| UM600H.0022.4   | 4      | 22,00                | 115 | 90 | 64                   | 73 089 224  | 221,20 |
| UM600H.0025.4   | 4      | 25,00                | 115 | 90 | 64                   | 73 089 254  | 225,50 |
| UM600H.00254.4  | 4      | 25,40                | 115 | 90 | 64                   | 73 089 264  | 229,70 |
| UM600H.0028.4   | 4      | 28,00                | 115 | 90 | 64                   | 73 089 284  | 229,70 |
| UM600H.0012.5   | 5      | 12,00                | 115 | 90 | 64                   | 73 089 125  | 226,50 |
| UM600H.0016.5   | 5      | 16,00                | 115 | 90 | 64                   | 73 089 165  | 205,50 |
| UM600H.001905.5 | 5      | 19,05                | 115 | 90 | 64                   | 73 089 195  | 220,20 |
| UM600H.0020.5   | 5      | 20,00                | 115 | 90 | 64                   | 73 089 205  | 217,00 |
| UM600H.0022.5   | 5      | 22,00                | 115 | 90 | 64                   | 73 089 225  | 221,20 |
| UM600H.0025.5   | 5      | 25,00                | 115 | 90 | 64                   | 73 089 255  | 225,50 |
| UM600H.00254.5  | 5      | 25,40                | 115 | 90 | 64                   | 73 089 265  | 229,70 |
| UM600H.0028.5   | 5      | 28,00                | 115 | 90 | 64                   | 73 089 285  | 229,70 |
| UM600H.0012.6   | 6      | 12,00                | 115 | 90 | 64                   | 73 089 126  | 226,50 |
| UM600H.0016.6   | 6      | 16,00                | 115 | 90 | 64                   | 73 089 166  | 205,50 |
| UM600H.001905.6 | 6      | 19,05                | 115 | 90 | 64                   | 73 089 196  | 220,20 |
| UM600H.0020.6   | 6      | 20,00                | 115 | 90 | 64                   | 73 089 206  | 217,00 |
| UM600H.0022.6   | 6      | 22,00                | 115 | 90 | 64                   | 73 089 226  | 221,20 |
| UM600H.0025.6   | 6      | 25,00                | 115 | 90 | 64                   | 73 089 256  | 225,50 |
| UM600H.00254.6  | 6      | 25,40                | 115 | 90 | 64                   | 73 089 266  | 229,70 |
| UM600H.0028.6   | 6      | 28,00                | 115 | 90 | 64                   | 73 089 286  | 229,70 |
| UM600H.0012.7   | 7      | 12,00                | 115 | 90 | 64                   | 73 089 127  | 226,50 |
| UM600H.0016.7   | 7      | 16,00                | 115 | 90 | 64                   | 73 089 167  | 205,50 |
| UM600H.001905.7 | 7      | 19,05                | 115 | 90 | 64                   | 73 089 197  | 220,20 |
| UM600H.0020.7   | 7      | 20,00                | 115 | 90 | 64                   | 73 089 207  | 217,00 |
| UM600H.0022.7   | 7      | 22,00                | 115 | 90 | 64                   | 73 089 227  | 221,20 |
| UM600H.0025.7   | 7      | 25,00                | 115 | 90 | 64                   | 73 089 257  | 225,50 |
| UM600H.00254.7  | 7      | 25,40                | 115 | 90 | 64                   | 73 089 267  | 229,70 |
| UM600H.0028.7   | 7      | 28,00                | 115 | 90 | 64                   | 73 089 287  | 229,70 |

Avoid pulling cuts. When using thro' coolant supply, tighten using key!



Lock nut UM600H



Clamping wedge UM600H

Spare parts

| DCONWS |    |       |            |       |            |
|--------|----|-------|------------|-------|------------|
|        |    | EUR   |            | EUR   |            |
| 4      | M4 | 50,65 | 73 950 104 | 32,61 | 73 950 111 |
| 5      | M5 | 50,65 | 73 950 105 | 32,61 | 73 950 111 |
| 6      | M6 | 50,65 | 73 950 106 | 32,61 | 73 950 111 |
| 7      | M7 | 50,65 | 73 950 107 | 32,61 | 73 950 111 |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

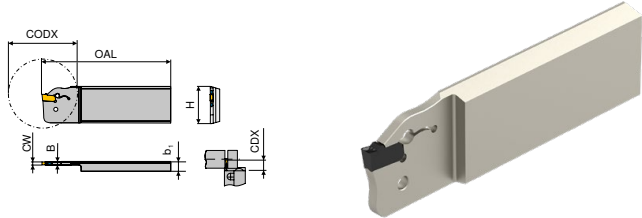
$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
D = Diameter



MonoClamp – Radial Blade SX reinforced

CERATIZIT \ Performance

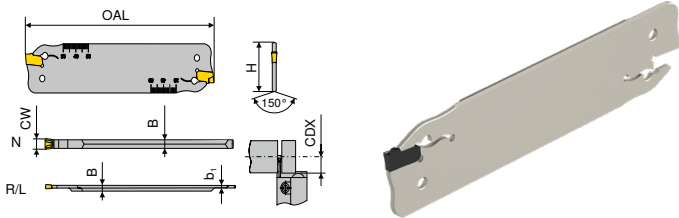


| Designation     | CW | H  | B   | OAL | b <sub>1</sub> | CODX | CDX | for grooving inserts | R/L/N | Article no.              | EUR   |
|-----------------|----|----|-----|-----|----------------|------|-----|----------------------|-------|--------------------------|-------|
|                 | mm | mm | mm  | mm  | mm             | mm   | mm  |                      |       |                          |       |
| XLCF L 2608-SX2 | 2  | 26 | 1,5 | 110 | 8              | 44   | 22  | SX .2..              | L     | 70 879 212 <sup>1)</sup> | 67,75 |
| XLCF L 2608-SX3 | 3  | 26 | 2,5 | 110 | 8              | 44   | 22  | SX .3..              | L     | 70 879 213 <sup>1)</sup> | 67,75 |
| XLCF L 3208-SX3 | 3  | 32 | 2,5 | 110 | 8              | 66   | 33  | SX .3..              | L     | 70 879 203               | 63,70 |
| XLCF L 3208-SX4 | 4  | 32 | 3,4 | 110 | 8              | 66   | 33  | SX .4..              | L     | 70 879 204               | 63,70 |
| XLCF R 2608-SX2 | 2  | 26 | 1,5 | 110 | 8              | 44   | 22  | SX .2..              | R     | 70 879 012 <sup>1)</sup> | 67,75 |
| XLCF R 2608-SX3 | 3  | 26 | 2,5 | 110 | 8              | 44   | 22  | SX .3..              | R     | 70 879 013 <sup>1)</sup> | 67,75 |
| XLCF R 3208-SX3 | 3  | 32 | 2,5 | 110 | 8              | 66   | 33  | SX .3..              | R     | 70 879 003               | 63,70 |
| XLCF R 3208-SX4 | 4  | 32 | 3,4 | 110 | 8              | 66   | 33  | SX .4..              | R     | 70 879 004               | 63,70 |

1) can be used in both directions

MonoClamp – Radial Blade SX Standard

CERATIZIT \ Performance



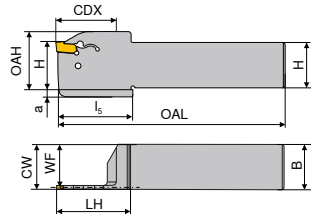
| Designation     | CW | H  | B   | OAL | b <sub>1</sub> | CDX | for grooving inserts | R/L/N | Article no. | EUR   |
|-----------------|----|----|-----|-----|----------------|-----|----------------------|-------|-------------|-------|
|                 | mm | mm | mm  | mm  | mm             | mm  |                      |       |             |       |
| XLCF L 2602-SX2 | 2  | 26 | 2,4 | 110 | 1,5            | 25  | SX .2..              | L     | 70 884 212  | 44,25 |
| XLCF L 3202-SX2 | 2  | 32 | 2,4 | 150 | 1,5            | 25  | SX .2..              | L     | 70 884 202  | 46,30 |
| XLCF R 2602-SX2 | 2  | 26 | 2,4 | 110 | 1,5            | 25  | SX .2..              | R     | 70 884 012  | 44,25 |
| XLCF R 3202-SX2 | 2  | 32 | 2,4 | 150 | 1,5            | 25  | SX .2..              | R     | 70 884 002  | 46,30 |
| XLCF N 2603-SX3 | 3  | 26 | 2,4 | 110 |                | 35  | SX .3..              | N     | 70 884 113  | 44,25 |
| XLCF N 3203-SX3 | 3  | 32 | 2,4 | 150 |                | 50  | SX .3..              | N     | 70 884 103  | 46,30 |
| XCLF N 2604-SX4 | 4  | 26 | 3,2 | 110 |                | 40  | SX .4..              | N     | 70 884 114  | 44,25 |
| XLCF N 3204-SX4 | 4  | 32 | 3,2 | 150 |                | 50  | SX .4..              | N     | 70 884 104  | 46,30 |
| XLCF N 3205-SX5 | 5  | 32 | 4,2 | 150 |                | 55  | SX .5..              | N     | 70 884 105  | 46,30 |
| XLCF N 3206-SX6 | 6  | 32 | 5,2 | 150 |                | 60  | SX .6..              | N     | 70 884 106  | 46,30 |

Spare parts  
OAL

| Article no. | EUR   |            |
|-------------|-------|------------|
| 110         |       |            |
| 110         |       |            |
| 150         |       |            |
| 150         |       |            |
| SX 4-6      | 24,42 | 70 950 837 |
| SX 2-3      | 23,93 | 70 950 836 |
| SX 2-3      | 23,93 | 70 950 836 |
| SX 4-6      | 24,42 | 70 950 837 |

MonoClamp – Radial Monoholder SX

CERATIZIT \ Performance



Illustrations show right-hand versions

| Designation              | H  | B  | CW | WF   | OAL | LH | l <sub>5</sub> | OAH | CDX | a  | for grooving inserts | Left-hand Article no. | EUR    | Right-hand Article no. | EUR    |
|--------------------------|----|----|----|------|-----|----|----------------|-----|-----|----|----------------------|-----------------------|--------|------------------------|--------|
|                          | mm | mm | mm | mm   | mm  | mm | mm             | mm  | mm  | mm |                      |                       |        |                        |        |
| E16 R/L 0026-1616K-K-SX2 | 16 | 16 | 2  | 15,2 | 125 | 33 | 33             | 26  | 26  | 4  | SX .2..              | 70 846 21601          | 90,72  | 70 846 21600           | 90,72  |
| E20 R/L 0026-2020K-K-SX2 | 20 | 20 | 2  | 19,2 | 125 | 33 | 33             | 31  | 26  | 5  | SX .2..              | 70 846 22001          | 106,47 | 70 846 22000           | 106,47 |
| E16 R/L 0026-1616K-K-SX3 | 16 | 16 | 3  | 14,8 | 125 | 33 | 33             | 26  | 26  | 4  | SX .3..              | 70 846 31601          | 90,72  | 70 846 31600           | 90,72  |
| E20 R/L 0026-2020K-K-SX3 | 20 | 20 | 3  | 18,8 | 125 | 31 | 33             | 31  | 26  | 5  | SX .3..              | 70 846 32001          | 106,47 | 70 846 32000           | 106,47 |
| E25 R/L 0026-2525M-K-SX3 | 25 | 25 | 3  | 23,8 | 150 | 33 |                | 31  | 26  |    | SX .3..              | 70 846 32501          | 112,95 | 70 846 32500           | 112,95 |
| E20 R/L 0033-2020K-K-SX4 | 20 | 20 | 4  | 18,3 | 125 | 40 | 40             | 32  | 33  | 5  | SX .4..              | 70 846 42001          | 106,47 | 70 846 42000           | 106,47 |
| E25 R/L 0033-2525M-K-SX4 | 25 | 25 | 4  | 23,3 | 150 | 42 | 42             | 36  | 33  | 5  | SX .4..              | 70 846 42501          | 112,95 | 70 846 42500           | 112,95 |
| E25 R/L 0040-2525M-K-SX5 | 25 | 25 | 5  | 22,9 | 150 | 49 | 49             | 38  | 40  | 6  | SX .5..              | 70 846 52501          | 112,95 | 70 846 52500           | 112,95 |
| E25 R/L 0040-2525M-K-SX6 | 25 | 25 | 6  | 22,4 | 150 | 49 | 49             | 38  | 40  | 6  | SX .6..              | 70 846 62501          | 112,95 | 70 846 62500           | 112,95 |

Spare parts

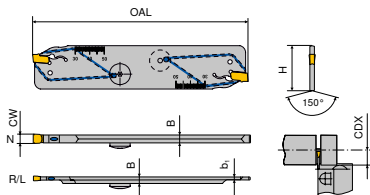
for grooving inserts

| Article no. | EUR   |            |
|-------------|-------|------------|
| SX .2..     |       |            |
| SX .3..     |       |            |
| SX .4..     |       |            |
| SX .5..     |       |            |
| SX .6..     |       |            |
| SX 2-3      | 23,93 | 70 950 836 |
| SX 2-3      | 23,93 | 70 950 836 |
| SX 4-6      | 24,42 | 70 950 837 |
| SX 4-6      | 24,42 | 70 950 837 |

MonoClamp – Radial Blade SX-DC Standard



CERATIZIT \ Performance



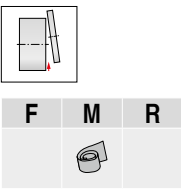
| Designation        | CW | H  | B   | OAL | b <sub>1</sub> | CDX | for grooving inserts | R/L/N | Article no. | EUR   |
|--------------------|----|----|-----|-----|----------------|-----|----------------------|-------|-------------|-------|
|                    | mm | mm | mm  | mm  | mm             | mm  |                      |       |             |       |
| XLCF R 2602-DC-SX2 | 2  | 26 | 2,4 | 110 | 1,6            | 25  | SX .2..              | R     | 70 884 512  | 75,50 |
| XLCF N 2603-DC-SX3 | 3  | 26 | 2,5 | 110 |                | 35  | SX .3..              | N     | 70 884 613  | 75,50 |
| XLCF N 3203-DC-SX3 | 3  | 32 | 2,5 | 150 |                | 50  | SX .3..              | N     | 70 884 603  | 81,80 |
| XLCF N 3204-DC-SX4 | 4  | 32 | 3,3 | 150 |                | 50  | SX .4..              | N     | 70 884 604  | 81,80 |

Spare parts  
OAL

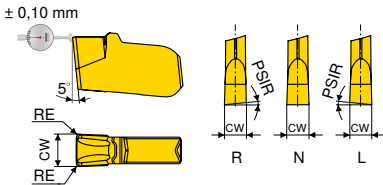
| Article no. | EUR   |            | Article no. | EUR   |            |
|-------------|-------|------------|-------------|-------|------------|
| 110         |       |            | T15 - IP    | 10,70 | 80 950 128 |
| 150         |       |            | T15 - IP    | 10,70 | 80 950 128 |
| 150         |       |            | T15 - IP    | 10,70 | 80 950 128 |
| SX 2-3      | 23,93 | 70 950 836 | SX 2-3      | 23,93 | 70 950 836 |
| SX 2-3      | 23,93 | 70 950 836 | SX 2-3      | 23,93 | 70 950 836 |
| SX 4-6      | 24,42 | 70 950 837 | SX 4-6      | 24,42 | 70 950 837 |

Insert SX

▲ Specially developed geometry with negative edge-chamfers available in right, left and neutral types



CERATIZIT \ Performance



| Designation           | IH | CW                     | PSIR | RE                     | for tool holder | Article no. |       | Article no. |       | Article no. |       | Article no. |       |  |  |
|-----------------------|----|------------------------|------|------------------------|-----------------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|--|--|
|                       |    | <small>+/-0,05</small> |      | <small>+/-0,05</small> |                 |             | EUR   |             | EUR   |             | EUR   |             | EUR   |  |  |
| SX E2.00 L 6          | L  | 2                      | 6    | 0,2                    | -SX2            | 70 342 913  | EUR   |             |       |             |       | 70 342 612  | EUR   |  |  |
| SX E3.00 L 6          | L  | 3                      | 6    | 0,2                    | -SX3            |             | 11,57 |             |       |             |       | 70 342 613  | EUR   |  |  |
| SX E4.00 L 6          | L  | 4                      | 6    | 0,3                    | -SX4            |             |       |             |       |             |       | 70 342 614  | EUR   |  |  |
|                       |    |                        |      |                        |                 |             |       |             |       |             |       |             |       |  |  |
| SX E2.00 N 0.20       | N  | 2                      |      | 0,2                    | -SX2            | 70 342 922  | 10,87 | 70 342 523  | 11,57 | 70 342 822  | 10,87 | 70 342 622  | 10,87 |  |  |
| SX E3.00 N 0.20       | N  | 3                      |      | 0,2                    | -SX3            | 70 342 923  | 11,57 |             |       | 70 342 823  | 11,57 | 70 342 623  | 11,57 |  |  |
| SX E4.00 N 0.30       | N  | 4                      |      | 0,3                    | -SX4            | 70 342 924  | 12,19 |             |       | 70 342 824  | 12,19 | 70 342 624  | 12,19 |  |  |
| SX E5.00 N 0.30       | N  | 5                      |      | 0,3                    | -SX5            | 70 342 925  | 12,98 |             |       | 70 342 825  | 12,98 | 70 342 625  | 12,98 |  |  |
| SX E6.00 N 0.40       | N  | 6                      |      | 0,4                    | -SX6            | 70 342 926  | 14,00 |             |       | 70 342 826  | 14,00 | 70 342 626  | 14,00 |  |  |
|                       |    |                        |      |                        |                 |             |       | 70 342 524  | 12,19 |             |       |             |       |  |  |
| SX E2.00 R 6          | R  | 2                      | 6    | 0,2                    | -SX2            | 70 342 903  | 11,57 |             |       |             |       | 70 342 602  | 10,87 |  |  |
| SX E3.00 R 6          | R  | 3                      | 6    | 0,2                    | -SX3            |             |       |             |       |             |       | 70 342 603  | 11,57 |  |  |
| SX E4.00 R 6          | R  | 4                      | 6    | 0,3                    | -SX4            |             |       |             |       |             |       | 70 342 604  | 12,19 |  |  |
|                       |    |                        |      |                        |                 |             |       |             |       |             |       |             |       |  |  |
| Steel                 |    |                        |      |                        |                 | ●           |       | ●           |       | ●           |       | ●           |       |  |  |
| Stainless steel       |    |                        |      |                        |                 | ○           |       | ○           |       | ●           |       | ●           |       |  |  |
| Cast iron             |    |                        |      |                        |                 | ●           |       | ●           |       |             |       | ●           |       |  |  |
| Non ferrous metals    |    |                        |      |                        |                 |             |       |             |       |             |       | ○           |       |  |  |
| Heat resistant alloys |    |                        |      |                        |                 |             |       |             |       | ○           |       | ●           |       |  |  |
| Hardened materials    |    |                        |      |                        |                 | ○           |       |             |       |             |       |             |       |  |  |

SX-M1

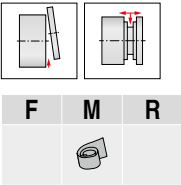
Parting / Grooving



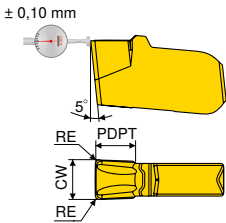
| SX-M1               |                        |
|---------------------|------------------------|
| Cutting width in mm | Feed rate f in mm/rev. |
| 2                   | 0,05–0,15              |
| 3                   | 0,10–0,20              |
| 4                   | 0,10–0,25              |
| 5                   | 0,15–0,30              |
| 6                   | 0,15–0,35              |

Insert SX

▲ All purpose geometry for parting, grooving & turning.



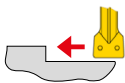
CERATIZIT \ Performance



| Designation           | CW<br>+/-0,05 | RER<br>+/-0,05 | PDPT | for tool holder | Article no. |       | Article no. |       | Article no. |       | Article no. |       |
|-----------------------|---------------|----------------|------|-----------------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|
|                       |               |                |      |                 |             | EUR   |             | EUR   |             | EUR   |             | EUR   |
| SX E2.00 N 0.20       | 2             | 0,2            | 1,5  | -SX2            | 70 343 922  | 10,87 | 70 343 522  | 10,87 | 70 343 822  | 10,87 | 70 343 622  | 10,87 |
| SX E3.00 N 0.30       | 3             | 0,3            | 2,0  | -SX3            | 70 343 923  | 11,57 | 70 343 523  | 11,57 | 70 343 823  | 11,57 | 70 343 623  | 11,57 |
| SX E4.00 N 0.40       | 4             | 0,4            | 2,5  | -SX4            | 70 343 924  | 12,19 | 70 343 524  | 12,19 | 70 343 824  | 12,19 | 70 343 624  | 12,19 |
| SX E5.00 N 0.40       | 5             | 0,4            | 2,7  | -SX5            | 70 343 925  | 12,98 | 70 343 525  | 12,98 | 70 343 825  | 12,98 | 70 343 625  | 12,98 |
| SX E6.00 N 0.50       | 6             | 0,5            | 3,0  | -SX6            | 70 343 926  | 14,00 | 70 343 526  | 14,00 | 70 343 826  | 14,00 | 70 343 626  | 14,00 |
|                       |               |                |      |                 |             |       |             |       |             |       |             |       |
| Steel                 |               |                |      |                 | ●           |       | ●           |       | ●           |       | ●           |       |
| Stainless steel       |               |                |      |                 | ○           |       | ○           |       | ●           |       | ●           |       |
| Cast iron             |               |                |      |                 | ●           |       | ●           |       |             |       | ●           |       |
| Non ferrous metals    |               |                |      |                 |             |       |             |       |             |       | ○           |       |
| Heat resistant alloys |               |                |      |                 |             |       |             |       | ○           |       | ●           |       |
| Hardened materials    |               |                |      |                 | ○           |       |             |       |             |       |             |       |

SX-M2

Turning



Parting / Grooving



| SX-M2               | Depth of Cut a <sub>p</sub> in mm |           |           |           |           |           |           | SX-M2                  |
|---------------------|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------------|
|                     | 0,5                               | 1,0       | 1,5       | 2,0       | 2,5       | 3,0       | 3,5       |                        |
| Cutting width in mm | Feed rate f in mm/rev.            |           |           |           |           |           |           | Feed rate f in mm/rev. |
| 2                   | 0,05–0,17                         | 0,05–0,13 | 0,05–0,10 |           |           |           |           | 0,05–0,15              |
| 3                   | 0,07–0,20                         | 0,07–0,20 | 0,07–0,18 | 0,07–0,15 |           |           |           | 0,075–0,20             |
| 4                   | 0,10–0,25                         | 0,10–0,25 | 0,10–0,25 | 0,10–0,22 | 0,10–0,18 |           |           | 0,10–0,25              |
| 5                   | 0,12–0,27                         | 0,12–0,27 | 0,12–0,27 | 0,12–0,25 | 0,12–0,22 |           |           | 0,10–0,30              |
| 6                   | 0,15–0,30                         | 0,15–0,30 | 0,15–0,30 | 0,15–0,30 | 0,15–0,25 | 0,15–0,20 |           | 0,15–0,35              |
| 8                   | 0,17–0,45                         | 0,17–0,45 | 0,17–0,45 | 0,17–0,45 | 0,17–0,40 | 0,17–0,37 | 0,17–0,35 | 0,20–0,50              |
| 10                  | 0,20–0,50                         | 0,20–0,50 | 0,20–0,50 | 0,20–0,50 | 0,20–0,46 | 0,20–0,42 | 0,20–0,38 | 0,20–0,50              |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed

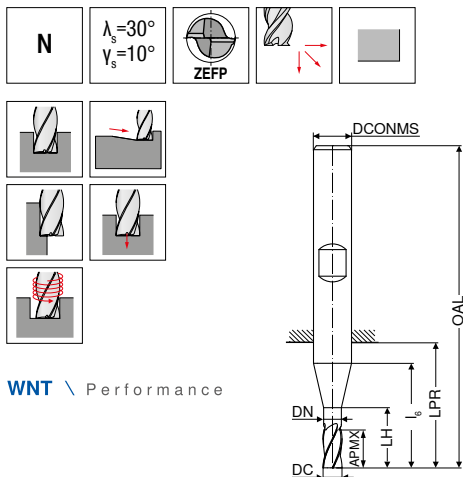
Calculation

RPM =  $\frac{v_c \times 1000}{\pi \times D}$

v<sub>c</sub> = (See Individual v<sub>c</sub> Charts)  
π = 3.142  
D = Diameter



## Slot milling cutter HSS-E Co 8



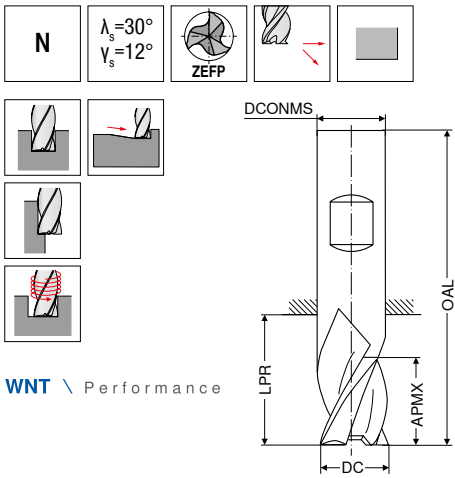
| DC    | Tol. | APMX | DN    | LH    |                      | LPR | OAL | DCONMS <sub>h6</sub> | ZEFP |  | Article no. |                     |            | Article no. |     |
|-------|------|------|-------|-------|----------------------|-----|-----|----------------------|------|--|-------------|---------------------|------------|-------------|-----|
| mm    |      | mm   | mm    | mm    | l <sub>6</sub><br>mm | mm  | mm  | mm                   |      |  |             | EUR                 |            |             | EUR |
| 1,00  | h10  | 2,5  |       | 2,5   | 9                    | 11  | 47  | 6                    | 2    |  | 54 025 010  | <sup>1)</sup> 24,93 |            |             |     |
| 1,50  | h10  | 3,0  |       | 3,0   | 9                    | 11  | 47  | 6                    | 2    |  | 54 025 015  | <sup>1)</sup> 24,93 |            |             |     |
| 1,80  | h10  | 4,0  |       | 4,0   | 10                   | 12  | 48  | 6                    | 2    |  | 54 025 018  | 25,45               |            |             |     |
| 2,00  | e8   | 4,0  |       | 4,0   | 10                   | 12  | 48  | 6                    | 2    |  | 54 025 020  | 20,99               |            |             |     |
| 2,50  | e8   | 5,0  |       | 5,0   | 11                   | 13  | 49  | 6                    | 2    |  | 54 025 025  | 20,99               |            |             |     |
| 2,80  | h10  | 5,0  |       | 5,0   | 11                   | 13  | 49  | 6                    | 2    |  | 54 025 028  | 21,96               |            |             |     |
| 3,00  | e8   | 5,0  |       | 5,0   | 11                   | 13  | 49  | 6                    | 2    |  | 54 025 030  | 20,99               |            |             |     |
| 3,00  | e8   | 8,0  |       | 8,0   | 18                   | 20  | 56  | 6                    | 2    |  |             |                     | 54 020 030 | 30,93       |     |
| 3,50  | h10  | 6,0  |       | 6,0   | 12                   | 14  | 50  | 6                    | 2    |  | 54 025 035  | 21,96               |            |             |     |
| 3,50  | h10  | 10,0 |       | 10,0  | 21                   | 23  | 59  | 6                    | 2    |  |             |                     | 54 020 035 | 33,90       |     |
| 3,80  | h10  | 7,0  |       | 7,0   | 13                   | 15  | 51  | 6                    | 2    |  | 54 025 038  | 24,49               |            |             |     |
| 4,00  | e8   | 7,0  |       | 7,0   | 13                   | 15  | 51  | 6                    | 2    |  | 54 025 040  | 18,47               |            |             |     |
| 4,00  | e8   | 11,0 |       | 11,0  | 25                   | 27  | 63  | 6                    | 2    |  |             |                     | 54 020 040 | 30,93       |     |
| 4,50  | h10  | 7,0  |       | 7,0   | 13                   | 15  | 51  | 6                    | 2    |  | 54 025 045  | 21,96               |            |             |     |
| 4,50  | h10  | 11,0 |       | 11,0  | 25                   | 27  | 63  | 6                    | 2    |  |             |                     | 54 020 045 | 33,90       |     |
| 4,80  | h10  | 8,0  |       | 8,0   | 14                   | 16  | 52  | 6                    | 2    |  | 54 025 048  | 24,49               |            |             |     |
| 5,00  | e8   | 8,0  |       | 8,0   | 14                   | 16  | 52  | 6                    | 2    |  | 54 025 050  | 20,99               |            |             |     |
| 5,00  | e8   | 13,0 |       | 13,0  | 30                   | 32  | 68  | 6                    | 2    |  |             |                     | 54 020 050 | 30,93       |     |
| 5,50  | h10  | 8,0  |       | 8,0   | 14                   | 16  | 52  | 6                    | 2    |  | 54 025 055  | 21,96               |            |             |     |
| 5,50  | h10  | 13,0 |       | 13,0  | 30                   | 32  | 68  | 6                    | 2    |  |             |                     | 54 020 055 | 33,90       |     |
| 5,75  | h10  | 8,0  |       | 8,0   | 14                   | 16  | 52  | 6                    | 2    |  | 54 025 057  | 24,49               |            |             |     |
| 6,00  | e8   | 8,0  | 5,50  | 14,0  | 14                   | 16  | 52  | 6                    | 2    |  | 54 025 060  | 20,99               |            |             |     |
| 6,00  | e8   | 13,0 | 5,50  | 30,0  | 30                   | 32  | 68  | 6                    | 2    |  |             |                     | 54 020 060 | 29,97       |     |
| 6,50  | h10  | 10,0 | 6,00  | 16,0  | 18                   | 20  | 60  | 10                   | 2    |  | 54 025 065  | 25,89               |            |             |     |
| 6,50  | h10  | 16,0 | 6,35  | 36,0  | 38                   | 40  | 80  | 10                   | 2    |  |             |                     | 54 020 065 | 41,84       |     |
| 6,75  | h10  | 10,0 | 6,50  | 16,0  | 18                   | 20  | 60  | 10                   | 2    |  | 54 025 067  | 27,52               |            |             |     |
| 7,00  | e8   | 10,0 | 6,50  | 16,0  | 18                   | 20  | 60  | 10                   | 2    |  | 54 025 070  | 24,93               |            |             |     |
| 7,00  | e8   | 16,0 | 6,35  | 36,0  | 38                   | 40  | 80  | 10                   | 2    |  |             |                     | 54 020 070 | 38,88       |     |
| 7,50  | h10  | 10,0 | 7,00  | 16,0  | 18                   | 20  | 60  | 10                   | 2    |  | 54 025 075  | 25,89               |            |             |     |
| 7,50  | h10  | 16,0 | 7,35  | 36,0  | 38                   | 40  | 80  | 10                   | 2    |  |             |                     | 54 020 075 | 41,84       |     |
| 7,75  | h10  | 11,0 | 7,50  | 17,0  | 19                   | 21  | 61  | 10                   | 2    |  | 54 025 077  | 27,52               |            |             |     |
| 8,00  | e8   | 11,0 | 7,50  | 17,0  | 19                   | 21  | 61  | 10                   | 2    |  | 54 025 080  | 24,93               |            |             |     |
| 8,00  | e8   | 19,0 | 7,35  | 44,0  | 46                   | 48  | 88  | 10                   | 2    |  |             |                     | 54 020 080 | 38,42       |     |
| 8,50  | h10  | 11,0 | 8,00  | 18,0  | 19                   | 21  | 61  | 10                   | 2    |  | 54 025 085  | 32,42               |            |             |     |
| 8,50  | h10  | 19,0 | 8,35  | 45,0  | 46                   | 48  | 88  | 10                   | 2    |  |             |                     | 54 020 085 | 44,37       |     |
| 8,70  | h10  | 11,0 | 8,50  | 18,0  | 19                   | 21  | 61  | 10                   | 2    |  | 54 025 087  | 34,94               |            |             |     |
| 9,00  | h10  | 11,0 | 8,50  | 18,0  | 19                   | 21  | 61  | 10                   | 2    |  | 54 025 090  | 31,98               |            |             |     |
| 9,00  | h10  | 19,0 | 8,35  | 45,0  | 46                   | 48  | 88  | 10                   | 2    |  |             |                     | 54 020 090 | 44,88       |     |
| 9,50  | h10  | 11,0 | 9,00  | 18,0  | 19                   | 21  | 61  | 10                   | 2    |  | 54 025 095  | 32,42               |            |             |     |
| 9,50  | h10  | 19,0 | 9,35  | 45,0  | 46                   | 48  | 88  | 10                   | 2    |  |             |                     | 54 020 095 | 46,89       |     |
| 9,70  | h10  | 13,0 | 9,50  | 21,0  | 21                   | 23  | 63  | 10                   | 2    |  | 54 025 097  | 34,94               |            |             |     |
| 10,00 | e8   | 13,0 | 9,50  | 21,0  | 21                   | 23  | 63  | 10                   | 2    |  | 54 025 100  | 27,97               |            |             |     |
| 10,00 | e8   | 22,0 | 9,35  | 53,0  | 53                   | 55  | 95  | 10                   | 2    |  |             |                     | 54 020 100 | 39,91       |     |
| 10,50 | h10  | 13,0 | 10,00 | 21,0  | 23                   | 25  | 70  | 12                   | 2    |  | 54 025 105  | 37,91               |            |             |     |
| 10,70 | h10  | 13,0 | 10,50 | 21,0  | 23                   | 25  | 70  | 12                   | 2    |  | 54 025 107  | 41,39               |            |             |     |
| 11,00 | h10  | 13,0 | 10,50 | 21,0  | 23                   | 25  | 70  | 12                   | 2    |  | 54 025 110  | 34,50               |            |             |     |
| 11,00 | h10  | 22,0 | 10,50 | 53,0  | 55                   | 57  | 102 | 12                   | 2    |  |             |                     | 54 020 110 | 47,85       |     |
| 11,50 | h10  | 13,0 | 11,00 | 21,0  | 23                   | 25  | 70  | 12                   | 2    |  | 54 025 115  | 38,42               |            |             |     |
| 11,70 | h10  | 16,0 | 11,50 | 26,0  | 26                   | 28  | 73  | 12                   | 2    |  | 54 025 117  | 40,88               |            |             |     |
| 12,00 | e8   | 16,0 | 11,50 | 26,0  | 26                   | 28  | 73  | 12                   | 2    |  | 54 025 120  | 34,50               |            |             |     |
| 12,00 | e8   | 26,0 | 11,50 | 63,0  | 63                   | 65  | 110 | 12                   | 2    |  |             |                     | 54 020 120 | 45,47       |     |
| 12,70 | h10  | 16,0 | 11,50 | 26,0  | 26                   | 28  | 73  | 12                   | 2    |  | 54 025 127  | 56,83               |            |             |     |
| 13,00 | h10  | 16,0 | 11,50 | 26,0  | 26                   | 28  | 73  | 12                   | 2    |  | 54 025 130  | 50,89               |            |             |     |
| 13,00 | h10  | 26,0 | 11,50 | 63,0  | 63                   | 65  | 110 | 12                   | 2    |  |             |                     | 54 020 130 | 65,81       |     |
| 13,70 | h10  | 16,0 | 11,50 | 26,0  | 26                   | 28  | 73  | 12                   | 2    |  | 54 025 137  | 53,86               |            |             |     |
| 14,00 | e8   | 16,0 | 11,50 | 26,0  | 26                   | 28  | 73  | 12                   | 2    |  | 54 025 140  | 46,89               |            |             |     |
| 14,00 | e8   | 26,0 | 11,50 | 63,0  | 63                   | 65  | 110 | 12                   | 2    |  |             |                     | 54 020 140 | 62,83       |     |
| 15,00 | h10  | 16,0 | 11,50 | 26,0  | 26                   | 28  | 73  | 12                   | 2    |  | 54 025 150  | 50,89               |            |             |     |
| 15,00 | h10  | 26,0 | 11,50 | 63,0  | 63                   | 65  | 110 | 12                   | 2    |  |             |                     | 54 020 150 | 70,91       |     |
| 15,70 | h10  | 19,0 | 15,00 | 29,0  | 29                   | 31  | 79  | 16                   | 2    |  | 54 025 157  | 58,91               |            |             |     |
| 16,00 | e8   | 19,0 | 15,00 | 29,0  | 29                   | 31  | 79  | 16                   | 2    |  | 54 025 160  | 50,89               |            |             |     |
| 16,00 | e8   | 32,0 | 15,00 | 73,0  | 73                   | 75  | 123 | 16                   | 2    |  |             |                     | 54 020 160 | 68,92       |     |
| 17,00 | h10  | 19,0 | 15,00 | 29,0  | 29                   | 31  | 79  | 16                   | 2    |  | 54 025 170  | 72,87               |            |             |     |
| 17,00 | h10  | 32,0 | 15,00 | 73,0  | 73                   | 75  | 123 | 16                   | 2    |  |             |                     | 54 020 170 | 103,11      |     |
| 17,70 | h10  | 19,0 | 15,00 | 29,0  | 29                   | 31  | 79  | 16                   | 2    |  | 54 025 177  | 72,87               |            |             |     |
| 18,00 | e8   | 19,0 | 15,00 | 29,0  | 29                   | 31  | 79  | 16                   | 2    |  | 54 025 180  | 64,91               |            |             |     |
| 18,00 | e8   | 32,0 | 15,00 | 73,0  | 73                   | 75  | 123 | 16                   | 2    |  |             |                     | 54 020 180 | 92,75       |     |
| 19,00 | h10  | 19,0 | 15,00 | 29,0  | 29                   | 31  | 79  | 16                   | 2    |  | 54 025 190  | 80,85               |            |             |     |
| 19,00 | h10  | 32,0 | 15,00 | 73,0  | 73                   | 75  | 123 | 16                   | 2    |  |             |                     | 54 020 190 | 107,59      |     |
| 19,70 | h10  | 22,0 | 19,00 | 36,0  | 36                   | 38  | 88  | 20                   | 2    |  | 54 025 197  | 80,85               |            |             |     |
| 20,00 | e8   | 22,0 | 19,00 | 36,0  | 36                   | 38  | 88  | 20                   | 2    |  | 54 025 200  | 69,81               |            |             |     |
| 20,00 | e8   | 38,0 | 19,00 | 89,0  | 89                   | 91  | 141 | 20                   | 2    |  |             |                     | 54 020 200 | 94,92       |     |
| 21,70 | h10  | 22,0 | 19,00 | 36,0  | 36                   | 38  | 88  | 20                   | 2    |  | 54 025 217  | 116,48              |            |             |     |
| 22,00 | e8   | 22,0 | 19,00 | 36,0  | 36                   | 38  | 88  | 20                   | 2    |  | 54 025 220  | 99,47               |            |             |     |
| 22,00 | e8   | 38,0 | 19,00 | 89,0  | 89                   | 91  | 141 | 20                   | 2    |  |             |                     | 54 020 220 | 123,90      |     |
| 23,70 | h10  | 26,0 | 23,00 | 42,0  | 44                   | 46  | 102 | 25                   | 2    |  | 54 025 237  | 134,26              |            |             |     |
| 24,00 | e8   | 26,0 | 23,00 | 42,0  | 44                   | 46  | 102 | 25                   | 2    |  | 54 025 240  | 120,89              |            |             |     |
| 24,00 | e8   | 45,0 | 23,00 | 106,0 | 108                  | 110 | 166 | 25                   | 2    |  |             |                     | 54 020 240 | 172,83      |     |
| 24,70 | h10  | 26,0 | 24,00 | 44,0  | 44                   | 46  | 102 | 25                   | 2    |  | 54 025 247  | 137,97              |            |             |     |
| 25,00 | e8   | 26,0 | 24,00 | 44,0  | 44                   | 46  | 102 | 25                   | 2    |  | 54 025 250  | 120,19              |            |             |     |
| 25,00 | e8   | 45,0 | 24,00 | 108,0 | 108                  | 110 | 166 | 25                   | 2    |  |             |                     | 54 020 250 | 143,22      |     |
| 26,00 | h10  | 26,0 | 24,00 | 44,0  | 44                   | 46  | 102 | 25                   | 2    |  | 54 025 260  | 155,82              |            |             |     |

|                       | Steel | Non ferrous metals |
|-----------------------|-------|--------------------|
| Steel                 | ●     | ●                  |
| Stainless steel       | ●     | ●                  |
| Cast iron             | ●     | ●                  |
| Non ferrous metals    | ○     | ○                  |
| Heat resistant alloys | ○     | ○                  |
| Hardened materials    |       |                    |

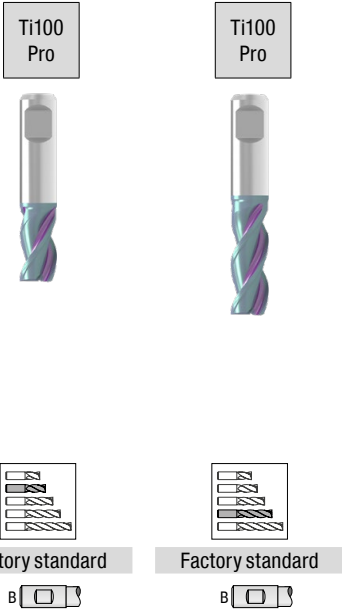
1) Factory standard

Throw-away milling cutter, HSS-E Co 8

▲ Shank similar to DIN 1835 B



WNT \ Performance



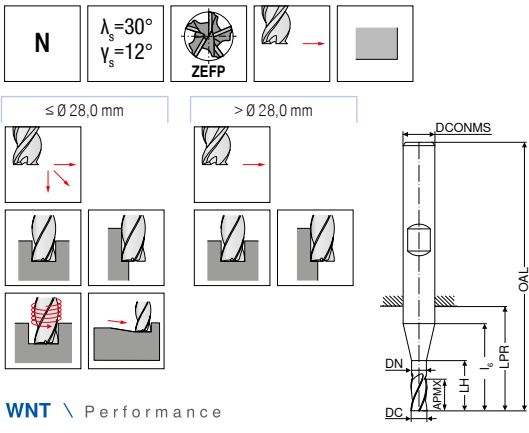
| DC ø8 |    | APMX | LPR | OAL | DCONMS h6 | ZEFP | Article no. |       | Article no.   |       |
|-------|----|------|-----|-----|-----------|------|-------------|-------|---------------|-------|
| mm    | mm | mm   | mm  | mm  | mm        |      |             | EUR   |               | EUR   |
| 1,00  | 2  | 8    | 34  | 6   | 3         |      | 54 014 010  | 15,72 |               |       |
| 1,50  | 3  | 8    | 34  | 6   | 3         |      | 54 014 015  | 15,72 |               |       |
| 1,50  | 4  | 10   | 35  | 6   | 3         |      |             |       | 54 042 015 1) | 17,58 |
| 1,80  | 3  | 8    | 34  | 6   | 3         |      | 54 014 018  | 15,72 |               |       |
| 2,00  | 4  | 9    | 35  | 6   | 3         |      | 54 014 020  | 15,72 |               |       |
| 2,00  | 7  | 12   | 38  | 6   | 3         |      |             |       | 54 042 020    | 17,58 |
| 2,30  | 4  | 9    | 35  | 6   | 3         |      | 54 014 023  | 15,72 |               |       |
| 2,50  | 5  | 10   | 36  | 6   | 3         |      | 54 014 025  | 15,72 |               |       |
| 2,50  | 8  | 13   | 39  | 6   | 3         |      |             |       | 54 042 025    | 17,58 |
| 2,80  | 5  | 10   | 36  | 6   | 3         |      | 54 014 028  | 15,72 |               |       |
| 3,00  | 5  | 10   | 36  | 6   | 3         |      | 54 014 030  | 15,72 |               |       |
| 3,00  | 8  | 13   | 39  | 6   | 3         |      |             |       | 54 042 030    | 17,58 |
| 3,30  | 6  | 11   | 37  | 6   | 3         |      | 54 014 033  | 15,72 |               |       |
| 3,50  | 6  | 11   | 37  | 6   | 3         |      | 54 014 035  | 15,72 |               |       |
| 3,50  | 10 | 15   | 41  | 6   | 3         |      |             |       | 54 042 035    | 17,58 |
| 3,80  | 7  | 12   | 38  | 6   | 3         |      | 54 014 038  | 15,72 |               |       |
| 4,00  | 7  | 12   | 38  | 6   | 3         |      | 54 014 040  | 15,72 |               |       |
| 4,00  | 11 | 16   | 42  | 6   | 3         |      |             |       | 54 042 040    | 17,58 |
| 4,30  | 7  | 12   | 38  | 6   | 3         |      | 54 014 043  | 15,72 |               |       |
| 4,50  | 7  | 12   | 38  | 6   | 3         |      | 54 014 045  | 15,72 |               |       |
| 4,50  | 11 | 16   | 42  | 6   | 3         |      |             |       | 54 042 045    | 17,58 |
| 4,80  | 8  | 13   | 39  | 6   | 3         |      | 54 014 048  | 15,72 |               |       |
| 5,00  | 8  | 13   | 39  | 6   | 3         |      | 54 014 050  | 15,72 |               |       |
| 5,00  | 13 | 18   | 44  | 6   | 3         |      |             |       | 54 042 050    | 17,58 |
| 5,30  | 8  | 13   | 39  | 6   | 3         |      | 54 014 053  | 15,72 |               |       |
| 5,50  | 8  | 13   | 39  | 6   | 3         |      | 54 014 055  | 15,72 |               |       |
| 5,50  | 13 | 18   | 44  | 6   | 3         |      |             |       | 54 042 055    | 17,58 |
| 5,75  | 8  | 13   | 39  | 6   | 3         |      | 54 014 057  | 15,72 |               |       |
| 6,00  | 8  | 13   | 39  | 6   | 3         |      | 54 014 060  | 15,72 |               |       |
| 6,00  | 13 | 18   | 44  | 6   | 3         |      |             |       | 54 042 060    | 17,58 |
| 6,50  | 10 | 14   | 42  | 8   | 3         |      | 54 014 065  | 21,44 |               |       |
| 6,50  | 16 | 20   | 48  | 8   | 3         |      |             |       | 54 042 065    | 23,44 |
| 7,00  | 10 | 14   | 42  | 8   | 3         |      | 54 014 070  | 21,44 |               |       |
| 7,00  | 16 | 20   | 48  | 8   | 3         |      |             |       | 54 042 070    | 23,44 |
| 7,50  | 10 | 14   | 42  | 8   | 3         |      | 54 014 075  | 21,44 |               |       |
| 7,50  | 16 | 20   | 48  | 8   | 3         |      |             |       | 54 042 075    | 23,44 |
| 8,00  | 11 | 15   | 43  | 8   | 3         |      | 54 014 080  | 21,44 |               |       |
| 8,00  | 19 | 23   | 51  | 8   | 3         |      |             |       | 54 042 080    | 23,44 |
| 8,50  | 11 | 16   | 48  | 10  | 3         |      | 54 014 085  | 24,49 |               |       |
| 8,50  | 19 | 24   | 56  | 10  | 3         |      |             |       | 54 042 085    | 26,26 |
| 9,00  | 11 | 16   | 48  | 10  | 3         |      | 54 014 090  | 24,49 |               |       |
| 9,00  | 19 | 24   | 56  | 10  | 3         |      |             |       | 54 042 090    | 26,26 |
| 9,50  | 11 | 16   | 48  | 10  | 3         |      | 54 014 095  | 24,49 |               |       |
| 9,50  | 19 | 24   | 56  | 10  | 3         |      |             |       | 54 042 095    | 26,26 |
| 10,00 | 13 | 18   | 50  | 10  | 3         |      | 54 014 100  | 24,49 |               |       |
| 10,00 | 22 | 27   | 59  | 10  | 3         |      |             |       | 54 042 100    | 26,26 |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ● | ● |
| Cast iron             | ● | ● |
| Non ferrous metals    | ○ | ○ |
| Heat resistant alloys | ○ | ○ |
| Hardened materials    |   |   |

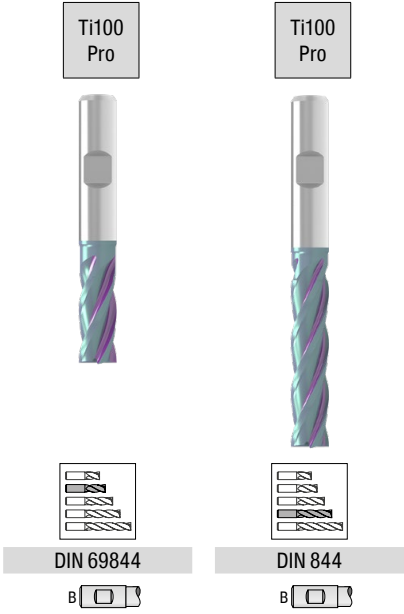
1) Shank tolerance -0,025 / -0,0323

End milling cutter HSS-E Co 8

▲ > Ø 28,0 mm recessed centre



WNT \ Performance



| DC k10 |     | APMX | DN  | LH  | l6  | LPR | OAL | DCONMS h6 | ZEFP | Article no. |        | Article no. |        |
|--------|-----|------|-----|-----|-----|-----|-----|-----------|------|-------------|--------|-------------|--------|
| mm     | mm  | mm   | mm  | mm  | mm  | mm  | mm  | mm        |      |             | EUR    |             | EUR    |
| 2,0    | 7   |      | 7   | 13  | 15  | 51  | 6   | 6         | 4    | 54 018 020  | 24,49  |             |        |
| 2,5    | 8   |      | 8   | 14  | 16  | 52  | 6   | 6         | 4    | 54 018 025  | 23,44  |             |        |
| 3,0    | 8   |      | 8   | 14  | 16  | 52  | 6   | 6         | 4    | 54 018 030  | 22,93  |             |        |
| 3,0    | 12  |      | 12  | 18  | 20  | 56  | 6   | 6         | 4    |             |        | 54 019 030  | 29,45  |
| 3,5    | 10  |      | 10  | 16  | 18  | 54  | 6   | 6         | 4    | 54 018 035  | 24,49  |             |        |
| 4,0    | 11  |      | 11  | 17  | 19  | 55  | 6   | 6         | 4    | 54 018 040  | 21,96  |             |        |
| 4,0    | 19  |      | 19  | 25  | 27  | 63  | 6   | 6         | 4    |             |        | 54 019 040  | 29,45  |
| 4,5    | 11  |      | 11  | 17  | 19  | 55  | 6   | 6         | 4    | 54 018 045  | 23,96  |             |        |
| 5,0    | 13  |      | 13  | 19  | 21  | 57  | 6   | 6         | 4    | 54 018 050  | 21,96  |             |        |
| 5,0    | 24  |      | 24  | 30  | 32  | 68  | 6   | 6         | 4    |             |        | 54 019 050  | 29,45  |
| 5,5    | 13  |      | 13  | 19  | 21  | 57  | 6   | 6         | 4    | 54 018 055  | 24,49  |             |        |
| 6,0    | 13  | 5,5  | 19  | 19  | 21  | 57  | 6   | 6         | 4    | 54 018 060  | 22,40  |             |        |
| 6,0    | 24  | 5,5  | 30  | 30  | 32  | 68  | 6   | 6         | 4    |             |        | 54 019 060  | 28,86  |
| 6,5    | 16  | 6,0  | 22  | 24  | 26  | 66  | 10  | 10        | 4    | 54 018 065  | 30,93  |             |        |
| 7,0    | 16  | 6,5  | 22  | 24  | 26  | 66  | 10  | 10        | 4    | 54 018 070  | 30,49  |             |        |
| 7,0    | 30  | 6,5  | 36  | 38  | 40  | 80  | 10  | 10        | 4    |             |        | 54 019 070  | 36,95  |
| 7,5    | 16  | 7,0  | 22  | 24  | 26  | 66  | 10  | 10        | 4    | 54 018 075  | 30,93  |             |        |
| 8,0    | 19  | 7,5  | 25  | 27  | 29  | 69  | 10  | 10        | 4    | 54 018 080  | 29,45  |             |        |
| 8,0    | 38  | 7,5  | 44  | 46  | 48  | 88  | 10  | 10        | 4    |             |        | 54 019 080  | 33,90  |
| 8,5    | 19  | 8,0  | 26  | 27  | 29  | 69  | 10  | 10        | 4    | 54 018 085  | 30,93  |             |        |
| 9,0    | 19  | 8,5  | 26  | 27  | 29  | 69  | 10  | 10        | 4    | 54 018 090  | 33,46  |             |        |
| 9,0    | 38  | 8,5  | 45  | 46  | 48  | 88  | 10  | 10        | 4    |             |        | 54 019 090  | 39,91  |
| 9,5    | 19  | 9,0  | 26  | 27  | 29  | 69  | 10  | 10        | 4    | 54 018 095  | 38,42  |             |        |
| 10,0   | 22  | 9,5  | 30  | 30  | 32  | 72  | 10  | 10        | 4    | 54 018 100  | 30,93  |             |        |
| 10,0   | 45  | 9,5  | 53  | 53  | 55  | 95  | 10  | 10        | 4    |             |        | 54 019 100  | 36,42  |
| 10,5   | 22  | 10,0 | 30  | 32  | 34  | 79  | 12  | 12        | 4    | 54 018 105  | 42,51  |             |        |
| 11,0   | 22  | 10,5 | 30  | 32  | 34  | 79  | 12  | 12        | 4    | 54 018 110  | 37,91  |             |        |
| 11,0   | 45  | 10,5 | 53  | 55  | 57  | 102 | 12  | 12        | 4    |             |        | 54 019 110  | 48,44  |
| 11,5   | 22  | 11,0 | 30  | 32  | 34  | 79  | 12  | 12        | 4    | 54 018 115  | 38,88  |             |        |
| 12,0   | 26  | 11,5 | 36  | 36  | 38  | 83  | 12  | 12        | 4    | 54 018 120  | 35,98  |             |        |
| 12,0   | 53  | 11,5 | 63  | 63  | 65  | 110 | 12  | 12        | 4    |             |        | 54 019 120  | 42,95  |
| 13,0   | 26  | 11,5 | 36  | 36  | 38  | 83  | 12  | 12        | 4    | 54 018 130  | 52,89  |             |        |
| 14,0   | 26  | 11,5 | 36  | 36  | 38  | 83  | 12  | 12        | 4    | 54 018 140  | 44,88  |             |        |
| 14,0   | 53  | 11,5 | 63  | 63  | 65  | 110 | 12  | 12        | 4    |             |        | 54 019 140  | 56,83  |
| 15,0   | 26  | 11,5 | 36  | 36  | 38  | 83  | 12  | 12        | 4    | 54 018 150  | 53,86  |             |        |
| 15,0   | 53  | 11,5 | 63  | 63  | 65  | 110 | 12  | 12        | 4    |             |        | 54 019 150  | 65,81  |
| 16,0   | 32  | 15,0 | 42  | 42  | 44  | 92  | 16  | 16        | 4    | 54 018 160  | 52,89  |             |        |
| 16,0   | 63  | 15,0 | 73  | 73  | 75  | 123 | 16  | 16        | 4    |             |        | 54 019 160  | 63,80  |
| 18,0   | 32  | 15,0 | 42  | 42  | 44  | 92  | 16  | 16        | 4    | 54 018 180  | 72,87  |             |        |
| 18,0   | 63  | 15,0 | 73  | 73  | 75  | 123 | 16  | 16        | 4    |             |        | 54 019 180  | 90,51  |
| 20,0   | 38  | 19,0 | 52  | 52  | 54  | 104 | 20  | 20        | 4    | 54 018 200  | 76,44  |             |        |
| 20,0   | 75  | 19,0 | 89  | 89  | 91  | 141 | 20  | 20        | 4    |             |        | 54 019 200  | 94,92  |
| 22,0   | 38  | 19,0 | 52  | 52  | 54  | 104 | 20  | 5         | 5    | 54 018 220  | 101,64 |             |        |
| 22,0   | 75  | 19,0 | 89  | 89  | 91  | 141 | 20  | 5         | 5    |             |        | 54 019 220  | 153,51 |
| 24,0   | 45  | 23,0 | 61  | 63  | 65  | 121 | 25  | 5         | 5    | 54 018 240  | 117,18 |             |        |
| 24,0   | 90  | 23,0 | 106 | 108 | 110 | 166 | 25  | 5         | 5    |             |        | 54 019 240  | 170,66 |
| 25,0   | 45  | 24,0 | 63  | 63  | 65  | 121 | 25  | 5         | 5    | 54 018 250  | 112,07 |             |        |
| 25,0   | 90  | 24,0 | 108 | 108 | 110 | 166 | 25  | 5         | 5    |             |        | 54 019 250  | 163,24 |
| 28,0   | 45  | 24,0 | 63  | 63  | 65  | 121 | 25  | 5         | 5    | 54 018 280  | 137,97 |             |        |
| 28,0   | 90  | 24,0 | 108 | 108 | 110 | 166 | 25  | 5         | 5    |             |        | 54 019 280  | 213,64 |
| 30,0   | 45  | 24,0 | 63  | 63  | 65  | 121 | 25  | 5         | 5    | 54 018 300  | 163,94 |             |        |
| 30,0   | 90  | 24,0 | 108 | 108 | 110 | 166 | 25  | 5         | 5    |             |        | 54 019 300  | 254,45 |
| 32,0   | 53  | 31,0 | 70  | 70  | 73  | 133 | 32  | 5         | 5    | 54 018 320  | 155,82 |             |        |
| 32,0   | 106 | 31,0 | 123 | 123 | 126 | 186 | 32  | 6         | 6    |             |        | 54 019 320  | 247,80 |
| 36,0   | 53  | 31,0 | 70  | 70  | 73  | 133 | 32  | 6         | 6    | 54 018 360  | 224,84 |             |        |
| 40,0   | 63  | 38,0 | 80  | 80  | 85  | 155 | 40  | 6         | 6    | 54 018 400  | 279,72 |             |        |
| 40,0   | 125 | 38,0 | 142 | 142 | 147 | 217 | 40  | 6         | 6    |             |        | 54 019 400  | 367,22 |
| 45,0   | 125 | 38,0 | 142 | 142 | 147 | 217 | 40  | 8         | 8    |             |        | 54 019 450  | 505,96 |
| 50,0   | 150 | 48,0 | 172 | 172 | 172 | 252 | 50  | 8         | 8    |             |        | 54 019 500  | 587,58 |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ● | ● |
| Cast iron             | ● | ● |
| Non ferrous metals    | ○ | ○ |
| Heat resistant alloys | ○ | ○ |
| Hardened materials    |   |   |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

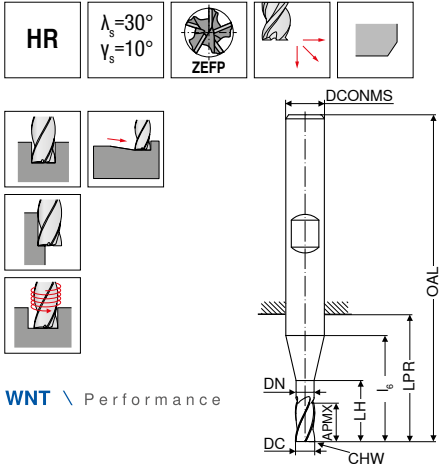
Speed Calculation

RPM =  $\frac{v_c \times 1000}{\pi \times D}$

v<sub>c</sub> = (See Individual v<sub>c</sub> Charts)  
π = 3,142  
D = Diameter



Powdersteel Fine rough milling cutter



WNT \ Performance

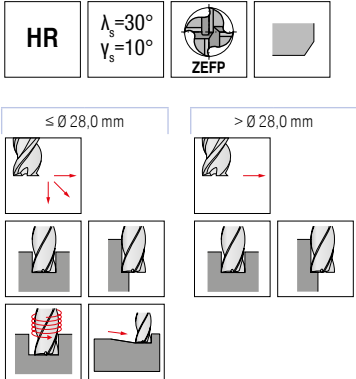


Factory standard DIN 844 Factory standard

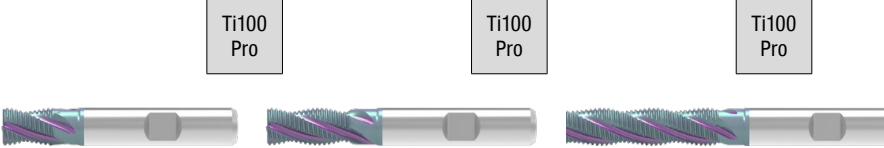


| DC <sub>k12</sub>     | APMX | DN   | LH | <i>l</i> <sub>6</sub> | LPR | OAL | DCONMS <sub>n6</sub> | CHW  | ZEFP | Article no. | EUR    | Article no. | EUR    | Article no. | EUR    |
|-----------------------|------|------|----|-----------------------|-----|-----|----------------------|------|------|-------------|--------|-------------|--------|-------------|--------|
| 6                     | 8    | 5,5  | 14 | 14                    | 16  | 52  | 6                    | 0,35 | 4    | 54 031 060  | 44,37  | 54 032 060  | 33,90  |             |        |
| 6                     | 13   | 5,5  | 19 | 19                    | 21  | 57  | 6                    | 0,35 | 4    | 54 031 080  | 49,92  | 54 032 080  | 47,85  |             |        |
| 8                     | 11   | 7,5  | 17 | 19                    | 21  | 61  | 10                   | 0,45 | 4    | 54 031 100  | 49,92  |             |        | 54 033 080  | 65,28  |
| 8                     | 19   | 7,5  | 25 | 27                    | 29  | 69  | 10                   | 0,45 | 4    |             |        | 54 032 100  | 52,89  | 54 033 100  | 70,00  |
| 8                     | 28   | 7,5  | 34 | 36                    | 38  | 78  | 10                   | 0,45 | 4    | 54 031 120  | 58,91  | 54 032 120  | 59,86  | 54 033 120  | 81,62  |
| 10                    | 13   | 9,5  | 21 | 21                    | 23  | 63  | 10                   | 0,45 | 4    |             |        |             |        | 54 033 140  | 106,82 |
| 10                    | 22   | 9,5  | 30 | 30                    | 32  | 72  | 10                   | 0,45 | 4    | 54 031 140  | 75,67  | 54 032 140  | 66,77  |             |        |
| 10                    | 34   | 9,5  | 42 | 42                    | 44  | 84  | 10                   | 0,45 | 4    | 54 031 160  | 83,09  | 54 032 160  | 83,09  | 54 033 160  | 122,36 |
| 12                    | 16   | 11,5 | 26 | 26                    | 28  | 73  | 12                   | 0,60 | 4    | 54 031 180  | 99,47  | 54 032 180  | 101,64 | 54 033 180  | 151,34 |
| 12                    | 26   | 11,5 | 36 | 36                    | 38  | 83  | 12                   | 0,60 | 4    | 54 031 200  | 112,07 | 54 032 200  | 116,48 | 54 033 200  | 153,51 |
| 12                    | 40   | 11,5 | 50 | 50                    | 52  | 97  | 12                   | 0,60 | 4    | 54 031 220  | 149,80 | 54 032 220  | 162,47 | 54 033 220  | 213,64 |
| 14                    | 16   | 11,5 | 26 | 26                    | 28  | 73  | 12                   | 0,60 | 4    | 54 031 250  | 176,54 | 54 032 250  | 159,53 | 54 033 250  | 239,61 |
| 14                    | 26   | 11,5 | 36 | 36                    | 38  | 83  | 12                   | 0,60 | 4    |             |        |             |        |             |        |
| 14                    | 40   | 11,5 | 50 | 50                    | 52  | 97  | 12                   | 0,60 | 4    | 54 031 280  | 221,83 | 54 032 300  | 271,53 |             |        |
| 16                    | 19   | 15,0 | 29 | 29                    | 31  | 79  | 16                   | 0,70 | 4    | 54 031 320  | 235,90 | 54 032 320  | 255,15 |             |        |
| 16                    | 32   | 15,0 | 42 | 42                    | 44  | 92  | 16                   | 0,70 | 4    |             |        |             |        |             |        |
| 16                    | 48   | 15,0 | 58 | 58                    | 60  | 108 | 16                   | 0,70 | 4    |             |        |             |        |             |        |
| 18                    | 19   | 15,0 | 29 | 29                    | 31  | 79  | 16                   | 0,70 | 4    |             |        |             |        |             |        |
| 18                    | 32   | 15,0 | 42 | 42                    | 44  | 92  | 16                   | 0,70 | 4    |             |        |             |        |             |        |
| 18                    | 48   | 15,0 | 58 | 58                    | 60  | 108 | 16                   | 0,70 | 4    |             |        |             |        |             |        |
| 20                    | 22   | 19,0 | 36 | 36                    | 38  | 88  | 20                   | 0,70 | 4    |             |        |             |        |             |        |
| 20                    | 38   | 19,0 | 52 | 52                    | 54  | 104 | 20                   | 0,70 | 4    |             |        |             |        |             |        |
| 20                    | 56   | 19,0 | 70 | 70                    | 72  | 122 | 20                   | 0,70 | 4    |             |        |             |        |             |        |
| 22                    | 22   | 19,0 | 36 | 36                    | 38  | 88  | 20                   | 0,70 | 4    |             |        |             |        |             |        |
| 22                    | 38   | 19,0 | 52 | 52                    | 54  | 104 | 20                   | 0,70 | 4    |             |        |             |        |             |        |
| 22                    | 56   | 19,0 | 70 | 70                    | 72  | 122 | 20                   | 0,70 | 4    |             |        |             |        |             |        |
| 25                    | 26   | 24,0 | 44 | 44                    | 46  | 102 | 25                   | 0,70 | 4    |             |        |             |        |             |        |
| 25                    | 45   | 24,0 | 63 | 63                    | 65  | 121 | 25                   | 0,70 | 4    |             |        |             |        |             |        |
| 25                    | 68   | 24,0 | 86 | 86                    | 88  | 144 | 25                   | 0,70 | 4    |             |        |             |        |             |        |
| 28                    | 26   | 24,0 | 44 | 44                    | 46  | 102 | 25                   | 0,90 | 5    |             |        |             |        |             |        |
| 30                    | 45   | 24,0 | 63 | 63                    | 65  | 121 | 25                   | 0,90 | 5    |             |        |             |        |             |        |
| 32                    | 32   | 31,0 | 49 | 49                    | 52  | 112 | 32                   | 0,90 | 6    |             |        |             |        |             |        |
| 32                    | 53   | 31,0 | 70 | 70                    | 73  | 133 | 32                   | 0,90 | 6    |             |        |             |        |             |        |
| Steel                 |      |      |    |                       |     |     |                      |      |      | •           |        | •           |        | •           |        |
| Stainless steel       |      |      |    |                       |     |     |                      |      |      | •           |        | •           |        | •           |        |
| Cast iron             |      |      |    |                       |     |     |                      |      |      | •           |        | •           |        | •           |        |
| Non ferrous metals    |      |      |    |                       |     |     |                      |      |      | ○           |        | ○           |        | ○           |        |
| Heat resistant alloys |      |      |    |                       |     |     |                      |      |      | ○           |        | ○           |        | ○           |        |
| Hardened materials    |      |      |    |                       |     |     |                      |      |      |             |        |             |        |             |        |

Fine profile milling cutter HSS-E Co 8



WNT \ Performance



Factory standard DIN 69844 DIN 844



| DC <sub>k12</sub>     | APMX | DN   | LH  | <i>l</i> <sub>6</sub> | LPR | OAL | DCONMS <sub>n6</sub> | CHW  | ZEFP | Article no. | EUR   | Article no. | EUR    | Article no. | EUR    |
|-----------------------|------|------|-----|-----------------------|-----|-----|----------------------|------|------|-------------|-------|-------------|--------|-------------|--------|
| 4                     | 11   |      | 11  | 17                    | 19  | 55  | 6                    | 0,35 | 3    |             |       | 54 023 040  | 32,94  |             |        |
| 5                     | 13   |      | 13  | 19                    | 21  | 57  | 6                    | 0,35 | 3    |             |       | 54 023 050  | 32,94  |             |        |
| 6                     | 8    | 5,5  | 14  | 14                    | 16  | 52  | 6                    | 0,35 | 4    | 54 022 060  | 35,39 | 54 023 060  | 28,41  | 54 024 060  | 53,86  |
| 6                     | 13   | 5,5  | 19  | 19                    | 21  | 57  | 6                    | 0,35 | 4    | 54 022 080  | 43,84 | 54 023 080  | 31,46  | 54 024 080  | 63,80  |
| 6                     | 24   | 5,5  | 30  | 30                    | 32  | 68  | 6                    | 0,35 | 4    | 54 022 100  | 38,88 | 54 023 100  | 33,90  | 54 024 100  | 66,77  |
| 8                     | 11   | 7,5  | 17  | 19                    | 21  | 61  | 10                   | 0,45 | 4    | 54 022 120  | 47,85 | 54 023 120  | 39,91  | 54 024 120  | 74,90  |
| 8                     | 19   | 7,5  | 25  | 27                    | 29  | 69  | 10                   | 0,45 | 4    | 54 022 140  | 60,83 | 54 023 140  | 44,88  | 54 024 140  | 86,03  |
| 8                     | 38   | 7,5  | 44  | 46                    | 48  | 88  | 10                   | 0,45 | 4    | 54 022 160  | 63,80 | 54 023 160  | 51,86  | 54 024 160  | 100,87 |
| 10                    | 13   | 9,5  | 21  | 21                    | 23  | 63  | 10                   | 0,45 | 4    | 54 022 180  | 83,09 | 54 023 180  | 63,80  | 54 024 180  | 123,20 |
| 10                    | 22   | 9,5  | 30  | 30                    | 32  | 72  | 10                   | 0,45 | 4    | 54 022 200  | 86,03 | 54 023 200  | 75,67  | 54 024 200  | 143,22 |
| 10                    | 45   | 9,5  | 53  | 53                    | 55  | 95  | 10                   | 0,45 | 4    |             |       | 54 023 220  | 95,76  | 54 024 220  | 195,86 |
| 12                    | 16   | 11,5 | 26  | 26                    | 28  | 73  | 12                   | 0,60 | 4    |             |       | 54 023 250  | 103,11 | 54 024 250  | 229,25 |
| 12                    | 26   | 11,5 | 36  | 36                    | 38  | 83  | 12                   | 0,60 | 4    |             |       | 54 023 280  | 156,52 | 54 024 280  | 288,61 |
| 12                    | 53   | 11,5 | 63  | 63                    | 65  | 110 | 12                   | 0,60 | 4    |             |       | 54 023 300  | 134,26 | 54 024 300  | 314,58 |
| 14                    | 16   | 11,5 | 26  | 26                    | 28  | 73  | 12                   | 0,60 | 4    |             |       | 54 023 320  | 160,23 |             |        |
| 14                    | 26   | 11,5 | 36  | 36                    | 38  | 83  | 12                   | 0,60 | 4    |             |       |             |        |             |        |
| 14                    | 53   | 11,5 | 63  | 63                    | 65  | 110 | 12                   | 0,60 | 4    |             |       |             |        |             |        |
| 16                    | 19   | 15,0 | 29  | 29                    | 31  | 79  | 16                   | 0,70 | 4    |             |       |             |        |             |        |
| 16                    | 32   | 15,0 | 42  | 42                    | 44  | 92  | 16                   | 0,70 | 4    |             |       |             |        |             |        |
| 16                    | 63   | 15,0 | 73  | 73                    | 75  | 123 | 16                   | 0,70 | 4    |             |       |             |        |             |        |
| 18                    | 19   | 15,0 | 29  | 29                    | 31  | 79  | 16                   | 0,70 | 4    |             |       |             |        |             |        |
| 18                    | 32   | 15,0 | 42  | 42                    | 44  | 92  | 16                   | 0,70 | 4    |             |       |             |        |             |        |
| 18                    | 63   | 15,0 | 73  | 73                    | 75  | 123 | 16                   | 0,70 | 4    |             |       |             |        |             |        |
| 20                    | 22   | 19,0 | 36  | 36                    | 38  | 88  | 20                   | 0,70 | 4    |             |       |             |        |             |        |
| 20                    | 38   | 19,0 | 52  | 52                    | 54  | 104 | 20                   | 0,70 | 4    |             |       |             |        |             |        |
| 20                    | 75   | 19,0 | 89  | 89                    | 91  | 141 | 20                   | 0,70 | 4    |             |       |             |        |             |        |
| 22                    | 38   | 19,0 | 52  | 52                    | 54  | 114 | 20                   | 0,70 | 4    |             |       |             |        |             |        |
| 22                    | 75   | 19,0 | 89  | 89                    | 91  | 141 | 20                   | 0,70 | 4    |             |       |             |        |             |        |
| 25                    | 45   | 24,0 | 63  | 63                    | 65  | 121 | 25                   | 0,70 | 4    |             |       |             |        |             |        |
| 25                    | 90   | 24,0 | 108 | 108                   | 110 | 166 | 25                   | 0,70 | 4    |             |       |             |        |             |        |
| 28                    | 45   | 24,0 | 63  | 63                    | 65  | 121 | 25                   | 0,90 | 5    |             |       |             |        |             |        |
| 28                    | 90   | 24,0 | 108 | 108                   | 110 | 166 | 25                   | 0,90 | 5    |             |       |             |        |             |        |
| 30                    | 45   | 24,0 | 63  | 63                    | 65  | 121 | 25                   | 0,90 | 5    |             |       |             |        |             |        |
| 30                    | 90   | 24,0 | 108 | 108                   | 110 | 166 | 25                   | 0,90 | 5    |             |       |             |        |             |        |
| 32                    | 53   | 31,0 | 70  | 70                    | 73  | 133 | 32                   | 0,90 | 6    |             |       |             |        |             |        |
| 32                    | 106  | 31,0 | 123 | 123                   | 126 | 186 | 32                   | 0,90 | 6    |             |       |             |        |             |        |
| Steel                 |      |      |     |                       |     |     |                      |      |      | •           |       | •           |        | •           |        |
| Stainless steel       |      |      |     |                       |     |     |                      |      |      | •           |       | •           |        | •           |        |
| Cast iron             |      |      |     |                       |     |     |                      |      |      | •           |       | •           |        | •           |        |
| Non ferrous metals    |      |      |     |                       |     |     |                      |      |      | ○           |       | ○           |        | ○           |        |
| Heat resistant alloys |      |      |     |                       |     |     |                      |      |      | ○           |       | ○           |        | ○           |        |
| Hardened materials    |      |      |     |                       |     |     |                      |      |      |             |       |             |        |             |        |

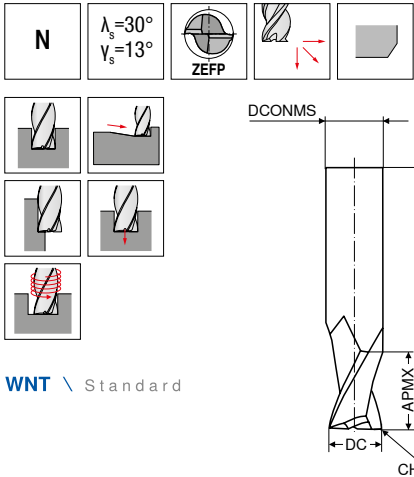




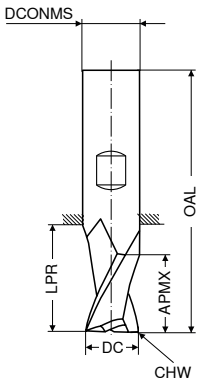
# **SOLID CARBIDE MILLING CUTTERS**



End milling cutter



| DC <sub>es</sub> | APMX | OAL | DCONMS <sub>h5</sub> | CHW  | ZEFP | Article no. |       |
|------------------|------|-----|----------------------|------|------|-------------|-------|
| mm               | mm   | mm  | mm                   | mm   |      |             | EUR   |
| 0,25             | 0,5  | 38  | 3                    |      | 2    | 50 594 925  | 29,10 |
| 0,30             | 1,0  | 38  | 3                    |      | 2    | 50 594 930  | 29,10 |
| 0,35             | 1,0  | 38  | 3                    |      | 2    | 50 594 935  | 29,10 |
| 0,40             | 1,0  | 38  | 3                    |      | 2    | 50 594 940  | 29,10 |
| 0,50             | 1,5  | 38  | 3                    |      | 2    | 50 594 950  | 29,10 |
| 0,60             | 1,5  | 38  | 3                    |      | 2    | 50 594 960  | 29,10 |
| 0,70             | 2,0  | 38  | 3                    |      | 2    | 50 594 970  | 29,10 |
| 0,80             | 2,0  | 38  | 3                    |      | 2    | 50 594 980  | 29,10 |
| 0,90             | 2,5  | 38  | 3                    |      | 2    | 50 594 990  | 29,10 |
| 1,00             | 3,0  | 50  | 3                    |      | 2    | 50 594 010  | 29,98 |
| 1,10             | 3,0  | 50  | 3                    |      | 2    | 50 594 011  | 29,98 |
| 1,20             | 4,0  | 50  | 3                    |      | 2    | 50 594 012  | 29,98 |
| 1,40             | 4,0  | 50  | 3                    |      | 2    | 50 594 014  | 29,98 |
| 1,50             | 4,0  | 50  | 3                    |      | 2    | 50 594 015  | 29,98 |
| 1,60             | 4,0  | 50  | 3                    |      | 2    | 50 594 016  | 29,98 |
| 1,80             | 5,0  | 50  | 3                    |      | 2    | 50 594 018  | 29,98 |
| 2,00             | 5,0  | 50  | 3                    | 0,07 | 2    | 50 594 020  | 29,98 |
| 2,50             | 6,0  | 50  | 3                    | 0,07 | 2    | 50 594 025  | 29,98 |

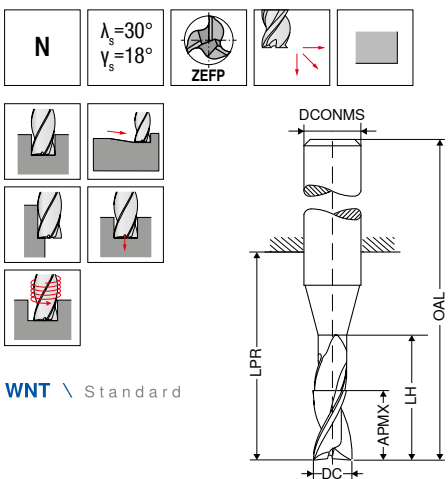


| DC <sub>es</sub> | APMX | LPR | OAL | DCONMS <sub>h5</sub> | CHW  | ZEFP | Article no. |        |
|------------------|------|-----|-----|----------------------|------|------|-------------|--------|
| mm               | mm   | mm  | mm  | mm                   | mm   |      |             | EUR    |
| 2,8              | 8    | 21  | 57  | 6                    | 0,07 | 2    | 50 594 028  | 24,58  |
| 3,0              | 8    | 21  | 57  | 6                    | 0,15 | 2    | 50 594 030  | 24,58  |
| 3,8              | 11   | 21  | 57  | 6                    | 0,15 | 2    | 50 594 038  | 24,58  |
| 4,0              | 11   | 21  | 57  | 6                    | 0,15 | 2    | 50 594 040  | 24,58  |
| 4,8              | 13   | 21  | 57  | 6                    | 0,15 | 2    | 50 594 048  | 24,58  |
| 5,0              | 13   | 21  | 57  | 6                    | 0,15 | 2    | 50 594 050  | 24,58  |
| 5,8              | 13   | 21  | 57  | 6                    | 0,15 | 2    | 50 594 058  | 24,58  |
| 6,0              | 13   | 21  | 57  | 6                    | 0,15 | 2    | 50 594 060  | 24,58  |
| 6,8              | 16   | 27  | 63  | 8                    | 0,15 | 2    | 50 594 068  | 28,77  |
| 7,0              | 16   | 27  | 63  | 8                    | 0,15 | 2    | 50 594 070  | 28,77  |
| 7,8              | 19   | 27  | 63  | 8                    | 0,15 | 2    | 50 594 078  | 28,77  |
| 8,0              | 19   | 27  | 63  | 8                    | 0,15 | 2    | 50 594 080  | 28,77  |
| 8,7              | 19   | 32  | 72  | 10                   | 0,15 | 2    | 50 594 087  | 44,64  |
| 9,0              | 19   | 32  | 72  | 10                   | 0,15 | 2    | 50 594 090  | 44,64  |
| 9,7              | 22   | 32  | 72  | 10                   | 0,15 | 2    | 50 594 097  | 44,64  |
| 10,0             | 22   | 32  | 72  | 10                   | 0,15 | 2    | 50 594 100  | 44,64  |
| 10,7             | 26   | 38  | 83  | 12                   | 0,15 | 2    | 50 594 107  | 69,11  |
| 11,0             | 26   | 38  | 83  | 12                   | 0,15 | 2    | 50 594 110  | 69,11  |
| 11,7             | 26   | 38  | 83  | 12                   | 0,15 | 2    | 50 594 117  | 69,11  |
| 12,0             | 26   | 38  | 83  | 12                   | 0,15 | 2    | 50 594 120  | 65,92  |
| 13,7             | 26   | 38  | 83  | 14                   | 0,15 | 2    | 50 594 137  | 84,43  |
| 14,0             | 26   | 38  | 83  | 14                   | 0,15 | 2    | 50 594 140  | 84,43  |
| 15,7             | 32   | 44  | 92  | 16                   | 0,15 | 2    | 50 594 157  | 112,40 |
| 16,0             | 32   | 44  | 92  | 16                   | 0,15 | 2    | 50 594 160  | 100,70 |
| 17,7             | 32   | 44  | 92  | 18                   | 0,15 | 2    | 50 594 177  | 184,10 |
| 18,0             | 32   | 44  | 92  | 18                   | 0,15 | 2    | 50 594 180  | 131,30 |
| 19,7             | 38   | 54  | 104 | 20                   | 0,15 | 2    | 50 594 197  | 245,80 |
| 20,0             | 38   | 54  | 104 | 20                   | 0,15 | 2    | 50 594 200  | 166,50 |

|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ○ |
| Cast iron             | ● |
| Non ferrous metals    | ○ |
| Heat resistant alloys | ○ |
| Hardened materials    | ○ |

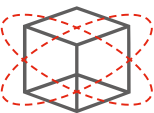
Mini milling cutter

▲ Shank similar to DIN 6535



| DC es | APMX | LH   | LPR | OAL | DCONMS n5 | ZEFP | Article no. |        | Article no. |        |
|-------|------|------|-----|-----|-----------|------|-------------|--------|-------------|--------|
| mm    | mm   | mm   | mm  | mm  | mm        |      |             | EUR    |             | EUR    |
| 2,00  | 4    | 4,0  | 10  | 35  | 6         | 3    | 50 598 020  | 16,97  | 50 599 020  | 23,81  |
| 2,50  | 4    | 4,0  | 10  | 35  | 6         | 3    | 50 598 025  | 18,30  | 50 599 025  | 25,24  |
| 3,00  | 5    | 5,0  | 10  | 36  | 6         | 3    | 50 598 030  | 16,97  | 50 599 030  | 23,81  |
| 3,50  | 5    | 5,0  | 10  | 36  | 6         | 3    | 50 598 035  | 18,30  | 50 599 035  | 25,36  |
| 4,00  | 7    | 7,0  | 12  | 38  | 6         | 3    | 50 598 040  | 16,97  | 50 599 040  | 23,81  |
| 4,50  | 7    | 7,0  | 12  | 38  | 6         | 3    | 50 598 045  | 18,30  | 50 599 045  | 25,36  |
| 5,00  | 8    | 8,0  | 13  | 39  | 6         | 3    | 50 598 050  | 16,97  | 50 599 050  | 23,81  |
| 5,50  | 8    | 8,0  | 13  | 39  | 6         | 3    | 50 598 055  | 18,30  | 50 599 055  | 25,36  |
| 5,75  | 8    | 8,0  | 13  | 39  | 6         | 3    | 50 598 057  | 18,30  | 50 599 057  | 25,36  |
| 6,00  | 8    | 8,5  | 13  | 39  | 6         | 3    | 50 598 060  | 16,97  | 50 599 060  | 23,81  |
| 6,75  | 11   | 11,5 | 16  | 43  | 8         | 3    | 50 598 067  | 24,14  | 50 599 067  | 32,29  |
| 7,00  | 11   | 11,5 | 16  | 43  | 8         | 3    | 50 598 070  | 23,25  | 50 599 070  | 29,98  |
| 7,75  | 11   | 11,5 | 16  | 43  | 8         | 3    | 50 598 077  | 24,36  | 50 599 077  | 32,62  |
| 8,00  | 11   | 11,5 | 16  | 43  | 8         | 3    | 50 598 080  | 26,68  | 50 599 080  | 32,07  |
| 8,70  | 13   | 13,5 | 18  | 50  | 10        | 3    | 50 598 087  | 38,03  | 50 599 087  | 47,83  |
| 9,00  | 13   | 13,5 | 18  | 50  | 10        | 3    | 50 598 090  | 34,72  | 50 599 090  | 44,30  |
| 9,70  | 13   | 13,5 | 18  | 50  | 10        | 3    | 50 598 097  | 38,03  | 50 599 097  | 47,83  |
| 10,00 | 13   | 13,5 | 18  | 50  | 10        | 3    | 50 598 100  | 37,80  | 50 599 100  | 45,85  |
| 12,00 | 15   | 15,5 | 24  | 55  | 12        | 3    | 50 598 120  | 49,26  | 50 599 120  | 59,52  |
| 14,00 | 15   | 15,5 | 26  | 58  | 14        | 3    | 50 598 140  | 84,31  | 50 599 140  | 94,45  |
| 16,00 | 18   | 18,5 | 28  | 62  | 16        | 3    | 50 598 160  | 94,57  | 50 599 160  | 108,00 |
| 18,00 | 20   | 20,5 | 35  | 70  | 18        | 3    | 50 598 180  | 120,10 | 50 599 180  | 134,50 |
| 20,00 | 22   | 22,5 | 40  | 75  | 20        | 3    | 50 598 200  | 152,10 | 50 599 200  | 166,50 |

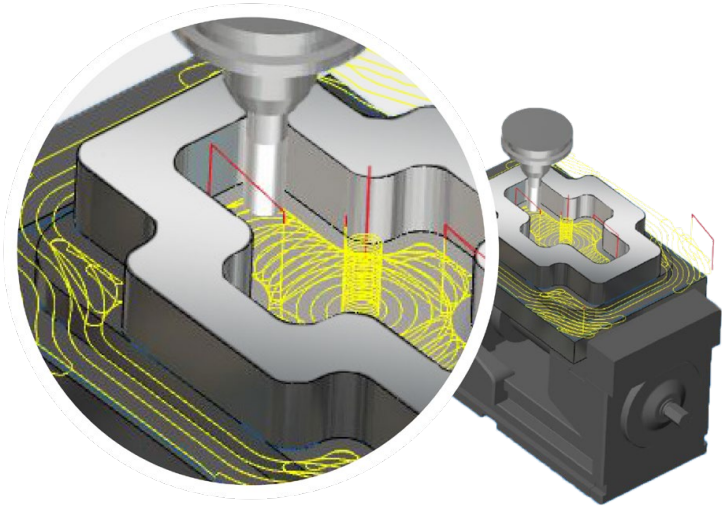
|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ○ | ○ |
| Cast iron             | ● | ● |
| Non ferrous metals    | ○ | ○ |
| Heat resistant alloys | ○ | ○ |
| Hardened materials    |   | ○ |



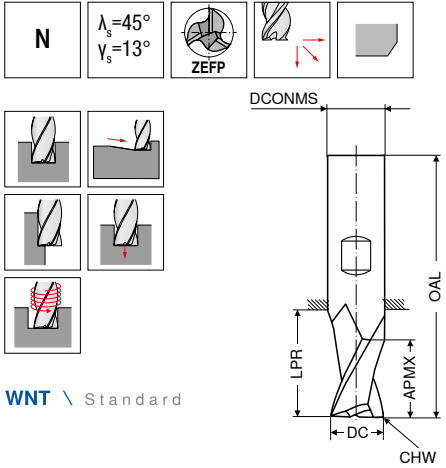
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Mini milling cutter

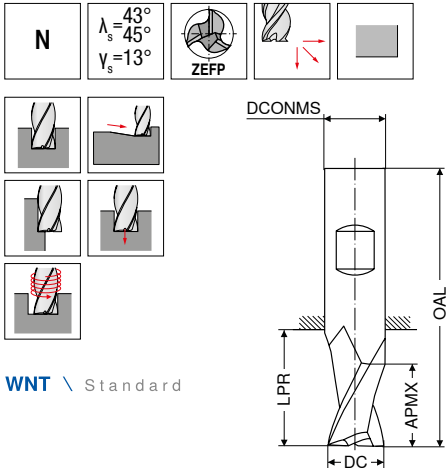


WNT \ Standard

| DC <sub>e8</sub> | APMX | LPR | OAL | DCONMS <sub>h5</sub> | CHW  | ZEFP |
|------------------|------|-----|-----|----------------------|------|------|
| mm               | mm   | mm  | mm  | mm                   | mm   |      |
| 0,5              | 1,5  | 17  | 45  | 3                    | 0,08 | 3    |
| 1,0              | 2,0  | 17  | 45  | 3                    | 0,08 | 3    |
| 1,5              | 3,0  | 17  | 45  | 3                    | 0,08 | 3    |
| 1,8              | 3,0  | 17  | 45  | 3                    | 0,08 | 3    |
| 2,0              | 4,0  | 19  | 45  | 6                    | 0,08 | 3    |
| 2,5              | 6,0  | 19  | 45  | 6                    | 0,15 | 3    |
| 2,8              | 6,0  | 19  | 45  | 6                    | 0,15 | 3    |
| 3,0              | 6,0  | 19  | 45  | 6                    | 0,15 | 3    |
| 3,8              | 7,0  | 19  | 45  | 6                    | 0,15 | 3    |
| 4,0              | 7,0  | 19  | 45  | 6                    | 0,15 | 3    |
| 4,8              | 8,0  | 19  | 45  | 6                    | 0,15 | 3    |
| 5,0              | 8,0  | 19  | 45  | 6                    | 0,15 | 3    |
| 5,7              | 10,0 | 19  | 45  | 6                    | 0,15 | 3    |
| 6,0              | 10,0 | 19  | 45  | 6                    | 0,15 | 3    |
| 6,7              | 10,0 | 26  | 55  | 8                    | 0,15 | 3    |
| 7,0              | 12,0 | 26  | 55  | 8                    | 0,15 | 3    |
| 7,8              | 12,0 | 26  | 55  | 8                    | 0,15 | 3    |
| 8,0              | 13,0 | 26  | 55  | 8                    | 0,15 | 3    |
| 8,7              | 14,0 | 28  | 55  | 10                   | 0,15 | 3    |
| 9,7              | 16,0 | 28  | 55  | 10                   | 0,15 | 3    |
| 10,0             | 16,0 | 28  | 55  | 10                   | 0,15 | 3    |

|                       |   |   |   |   |
|-----------------------|---|---|---|---|
| Steel                 | ○ | ○ | ○ | ○ |
| Stainless steel       | ● | ● | ● | ● |
| Cast iron             | ○ | ○ | ○ | ○ |
| Non ferrous metals    | ○ | ○ | ○ | ○ |
| Heat resistant alloys | ● | ● | ● | ● |
| Hardened materials    |   | ● |   | ● |

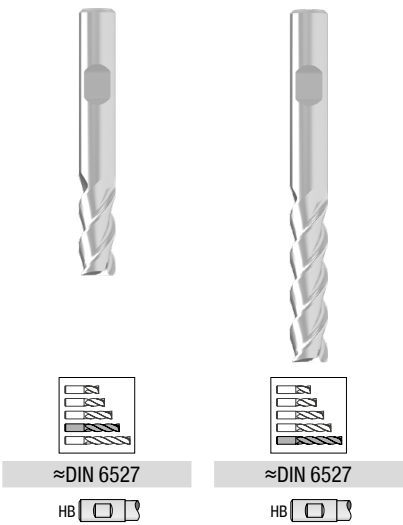
End milling cutter



WNT \ Standard

| DC <sub>e8</sub> | APMX | LPR | OAL | DCONMS <sub>h5</sub> | ZEFP |
|------------------|------|-----|-----|----------------------|------|
| mm               | mm   | mm  | mm  | mm                   |      |
| 3,0              | 8    | 21  | 57  | 6                    | 3    |
| 3,5              | 11   | 21  | 57  | 6                    | 3    |
| 3,5              | 15   | 23  | 59  | 6                    | 3    |
| 4,0              | 11   | 21  | 57  | 6                    | 3    |
| 4,0              | 19   | 27  | 63  | 6                    | 3    |
| 4,5              | 13   | 21  | 57  | 6                    | 3    |
| 4,5              | 19   | 27  | 63  | 6                    | 3    |
| 5,0              | 13   | 21  | 57  | 6                    | 3    |
| 5,0              | 24   | 32  | 68  | 6                    | 3    |
| 5,5              | 13   | 21  | 57  | 6                    | 3    |
| 5,5              | 24   | 32  | 68  | 6                    | 3    |
| 6,0              | 13   | 21  | 57  | 6                    | 3    |
| 6,0              | 24   | 32  | 68  | 6                    | 3    |
| 6,5              | 16   | 27  | 63  | 8                    | 3    |
| 6,5              | 30   | 44  | 80  | 8                    | 3    |
| 7,0              | 16   | 27  | 63  | 8                    | 3    |
| 7,0              | 30   | 44  | 80  | 8                    | 3    |
| 7,5              | 19   | 27  | 63  | 8                    | 3    |
| 7,5              | 30   | 44  | 80  | 8                    | 3    |
| 8,0              | 19   | 27  | 63  | 8                    | 3    |
| 8,0              | 38   | 52  | 88  | 8                    | 3    |
| 8,5              | 19   | 32  | 72  | 10                   | 3    |
| 8,5              | 38   | 48  | 88  | 10                   | 3    |
| 9,0              | 19   | 32  | 72  | 10                   | 3    |
| 9,0              | 38   | 48  | 88  | 10                   | 3    |
| 9,5              | 22   | 32  | 72  | 10                   | 3    |
| 9,5              | 38   | 48  | 88  | 10                   | 3    |
| 10,0             | 22   | 32  | 72  | 10                   | 3    |
| 10,0             | 45   | 55  | 95  | 10                   | 3    |
| 11,0             | 26   | 38  | 83  | 12                   | 3    |
| 11,0             | 45   | 57  | 102 | 12                   | 3    |
| 12,0             | 26   | 38  | 83  | 12                   | 3    |
| 12,0             | 53   | 65  | 110 | 12                   | 3    |
| 14,0             | 26   | 38  | 83  | 14                   | 3    |
| 14,0             | 53   | 65  | 110 | 14                   | 3    |
| 16,0             | 32   | 44  | 92  | 16                   | 3    |
| 16,0             | 63   | 75  | 123 | 16                   | 3    |
| 18,0             | 32   | 44  | 92  | 18                   | 3    |
| 18,0             | 63   | 75  | 123 | 18                   | 3    |
| 20,0             | 38   | 54  | 104 | 20                   | 3    |
| 20,0             | 75   | 91  | 141 | 20                   | 3    |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ○ | ○ |
| Stainless steel       | ● | ● |
| Cast iron             | ○ | ○ |
| Non ferrous metals    | ○ | ○ |
| Heat resistant alloys | ● | ● |
| Hardened materials    |   |   |

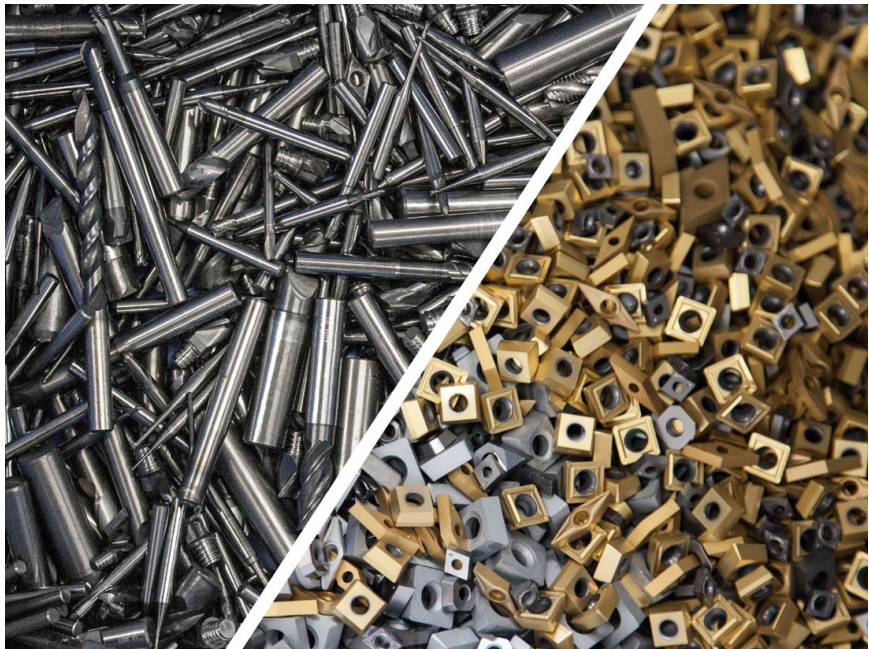


| Article no. | Article no. |
|-------------|-------------|
| EUR         | EUR         |
| 50 614 030  | 26,88       |
| 50 614 035  | 29,10       |
| 50 614 040  | 26,88       |
| 50 614 045  | 29,10       |
| 50 614 050  | 26,56       |
| 50 614 055  | 29,10       |
| 50 614 060  | 26,88       |
| 50 614 065  | 35,05       |
| 50 614 070  | 33,73       |
| 50 614 075  | 32,07       |
| 50 614 080  | 30,97       |
| 50 614 085  | 48,38       |
| 50 614 090  | 48,38       |
| 50 614 095  | 55,44       |
| 50 614 100  | 49,48       |
| 50 614 110  | 78,47       |
| 50 614 120  | 71,31       |
| 50 614 140  | 91,70       |
| 50 614 160  | 125,70      |
| 50 614 180  | 152,10      |
| 50 614 200  | 197,30      |
| 50 614 036  | 44,86       |
| 50 614 041  | 44,97       |
| 50 614 046  | 44,86       |
| 50 614 051  | 48,93       |
| 50 614 056  | 48,93       |
| 50 614 061  | 47,39       |
| 50 614 066  | 67,44       |
| 50 614 071  | 67,44       |
| 50 614 076  | 67,44       |
| 50 614 081  | 61,84       |
| 50 614 086  | 106,50      |
| 50 614 091  | 106,50      |
| 50 614 096  | 106,50      |
| 50 614 101  | 103,60      |
| 50 614 111  | 149,90      |
| 50 614 121  | 149,90      |
| 50 614 141  | 191,80      |
| 50 614 161  | 260,10      |
| 50 614 181  | 315,20      |
| 50 614 201  | 419,90      |

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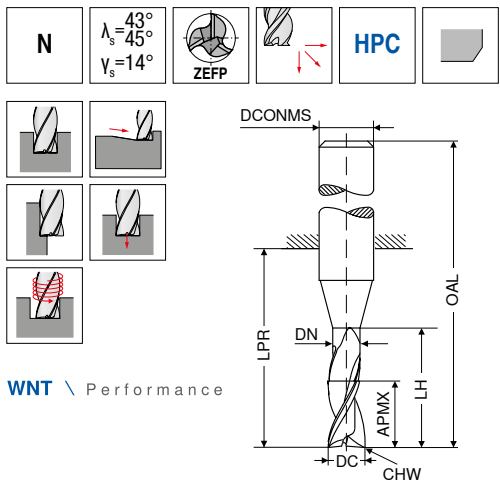
Speed Calculation

$$RPM = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
 $D$  = Diameter



SilverLine – End milling cutter



| DC <sub>es</sub> | APMX | DN   | LH | LPR | OAL | DCONMS <sub>h5</sub> | CHW  | ZEFP |
|------------------|------|------|----|-----|-----|----------------------|------|------|
| mm               | mm   | mm   | mm | mm  | mm  | mm                   | mm   |      |
| 3,0              | 8    | 2,9  | 15 | 21  | 57  | 6                    | 0,15 | 3    |
| 3,5              | 11   | 3,4  | 16 | 21  | 57  | 6                    | 0,15 | 3    |
| 4,0              | 8    | 3,9  | 15 | 18  | 54  | 6                    | 0,15 | 3    |
| 4,0              | 11   | 3,9  | 16 | 21  | 57  | 6                    | 0,15 | 3    |
| 4,0              | 16   |      |    | 26  | 62  | 6                    | 0,15 | 3    |
| 4,5              | 13   | 4,4  | 19 | 21  | 57  | 6                    | 0,15 | 3    |
| 5,0              | 9    | 4,9  | 16 | 18  | 54  | 6                    | 0,15 | 3    |
| 5,0              | 13   | 4,9  | 19 | 21  | 57  | 6                    | 0,15 | 3    |
| 5,0              | 17   |      |    | 26  | 62  | 6                    | 0,15 | 3    |
| 5,5              | 13   | 5,4  | 19 | 21  | 57  | 6                    | 0,15 | 3    |
| 6,0              | 10   | 5,9  | 17 | 18  | 54  | 6                    | 0,25 | 3    |
| 6,0              | 13   | 5,9  | 19 | 21  | 57  | 6                    | 0,25 | 3    |
| 6,0              | 18   |      |    | 26  | 62  | 6                    | 0,25 | 3    |
| 6,5              | 19   | 6,3  | 25 | 27  | 63  | 8                    | 0,25 | 3    |
| 7,0              | 19   | 6,8  | 25 | 27  | 63  | 8                    | 0,25 | 3    |
| 7,5              | 19   | 7,3  | 25 | 27  | 63  | 8                    | 0,25 | 3    |
| 8,0              | 12   | 7,8  | 20 | 22  | 58  | 8                    | 0,25 | 3    |
| 8,0              | 19   | 7,8  | 25 | 27  | 63  | 8                    | 0,25 | 3    |
| 8,0              | 24   |      |    | 32  | 68  | 8                    | 0,25 | 3    |
| 8,5              | 22   | 8,2  | 30 | 32  | 72  | 10                   | 0,25 | 3    |
| 9,0              | 22   | 8,7  | 30 | 32  | 72  | 10                   | 0,25 | 3    |
| 9,5              | 22   | 9,2  | 30 | 32  | 72  | 10                   | 0,25 | 3    |
| 10,0             | 14   | 9,7  | 24 | 26  | 66  | 10                   | 0,25 | 3    |
| 10,0             | 22   | 9,7  | 30 | 32  | 72  | 10                   | 0,25 | 3    |
| 10,0             | 30   |      |    | 40  | 80  | 10                   | 0,25 | 3    |
| 12,0             | 16   | 11,7 | 26 | 28  | 73  | 12                   | 0,25 | 3    |
| 12,0             | 26   | 11,7 | 36 | 38  | 83  | 12                   | 0,25 | 3    |
| 12,0             | 36   |      |    | 48  | 93  | 12                   | 0,25 | 3    |
| 14,0             | 18   | 13,7 | 28 | 30  | 75  | 14                   | 0,25 | 3    |
| 14,0             | 26   | 13,7 | 36 | 38  | 83  | 14                   | 0,25 | 3    |
| 14,0             | 42   |      |    | 54  | 99  | 14                   | 0,25 | 3    |
| 16,0             | 22   | 15,5 | 32 | 34  | 82  | 16                   | 0,25 | 3    |
| 16,0             | 32   | 15,5 | 42 | 44  | 92  | 16                   | 0,25 | 3    |
| 16,0             | 48   |      |    | 60  | 108 | 16                   | 0,25 | 3    |
| 18,0             | 24   | 17,5 | 34 | 36  | 84  | 18                   | 0,25 | 3    |
| 18,0             | 32   | 17,5 | 42 | 44  | 92  | 18                   | 0,25 | 3    |
| 18,0             | 54   |      |    | 66  | 114 | 18                   | 0,25 | 3    |
| 20,0             | 26   | 19,5 | 40 | 42  | 92  | 20                   | 0,25 | 3    |
| 20,0             | 38   | 19,5 | 38 | 54  | 104 | 20                   | 0,25 | 3    |
| 20,0             | 60   |      |    | 76  | 126 | 20                   | 0,25 | 3    |

|                       |   |   |   |
|-----------------------|---|---|---|
| Steel                 | ● | ● | ● |
| Stainless steel       | ● | ● | ● |
| Cast iron             | ○ | ○ | ○ |
| Non ferrous metals    | ○ | ○ | ○ |
| Heat resistant alloys | ● | ● | ● |
| Hardened materials    |   |   |   |

|             | Ti1010                   | Ti1010                   | Ti1010           |
|-------------|--------------------------|--------------------------|------------------|
|             |                          |                          |                  |
|             |                          |                          |                  |
|             | ≈DIN 6527                | ≈DIN 6527                | Factory standard |
|             | HB                       | HB                       | HB               |
| Article no. | Article no.              | Article no.              | Article no.      |
| EUR         | EUR                      | EUR                      | EUR              |
| 50 951 040  | 50 951 031<br>50 951 036 | 50 951 041<br>50 951 046 | 50 951 042       |
| 52,90       | 55,00<br>55,00           | 52,90<br>55,00           | 55,99            |
| 50 951 050  | 50 951 051<br>50 951 056 | 50 951 052<br>50 951 057 | 50 951 052       |
| 52,90       | 52,90<br>57,76           | 55,99<br>57,76           | 55,99            |
| 50 951 060  | 50 951 061<br>50 951 066 | 50 951 062<br>50 951 067 | 50 951 062       |
| 55,00       | 55,66<br>66,34           | 62,05<br>66,34           | 62,05            |
| 50 951 080  | 50 951 071<br>50 951 076 | 50 951 072<br>50 951 077 | 50 951 072       |
| 62,61       | 66,34<br>65,14           | 69,54<br>65,14           | 69,54            |
| 50 951 100  | 50 951 081<br>50 951 086 | 50 951 082<br>50 951 087 | 50 951 082       |
| 99,30       | 111,30<br>111,30         | 124,60<br>111,30         | 124,60           |
| 50 951 120  | 50 951 091<br>50 951 096 | 50 951 092<br>50 951 097 | 50 951 092       |
| 138,80      | 110,10<br>149,90         | 167,50<br>149,90         | 167,50           |
| 50 951 140  | 50 951 101<br>50 951 106 | 50 951 102<br>50 951 107 | 50 951 102       |
| 173,10      | 110,10<br>197,30         | 218,30<br>197,30         | 218,30           |
| 50 951 160  | 50 951 111<br>50 951 116 | 50 951 112<br>50 951 117 | 50 951 112       |
| 205,00      | 330,60<br>345,10         | 336,10<br>345,10         | 336,10           |
| 50 951 180  | 50 951 121<br>50 951 126 | 50 951 122<br>50 951 127 | 50 951 122       |
| 288,80      | 401,10<br>434,30         | 502,60<br>434,30         | 502,60           |
| 50 951 200  | 50 951 131<br>50 951 136 | 50 951 132<br>50 951 137 | 50 951 132       |
| 351,60      | 401,10<br>401,10         | 502,60<br>401,10         | 502,60           |

Solutions for the metalworking industry



Automotive



Aerospace



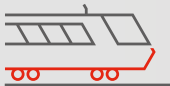
Heavy Duty  
machining



Energy



Medical



Rail industry



General  
Engineering

End milling cutter

- ▲ irregular helix angle
- ▲ 54 001 ... / 54 002 ... / 54 003 ...: special cutting edge preparation for the machining of steel
- ▲ 54 004 ... / 54 005 ... / 54 006 ...: special cutting edge preparation for the machining of stainless steel

N

$\lambda_s=35^\circ$   
 $\gamma_s=38^\circ$   
 $\gamma_s=10^\circ$

HPC

| DC   | APMX | DN   | LH   | LPR | OAL | DCONMS <sub>h5</sub> | CHW  | ZEFP | Article no. | EUR    |
|------|------|------|------|-----|-----|----------------------|------|------|-------------|--------|
| 3.0  | 8    | 2.8  | 12.0 | 21  | 57  | 6                    | 0.15 | 4    | 54 006 030  | 17,08  |
| 4.0  | 11   | 3.8  | 15.0 | 21  | 57  | 6                    | 0.15 | 4    | 54 006 040  | 17,08  |
| 5.0  | 13   | 4.8  | 17.0 | 21  | 57  | 6                    | 0.15 | 4    | 54 006 050  | 17,08  |
| 6.0  | 13   | 5.8  | 21.0 | 21  | 57  | 6                    | 0.15 | 4    | 54 006 060  | 20,06  |
| 8.0  | 19   | 7.7  | 27.0 | 27  | 63  | 8                    | 0.25 | 4    | 54 006 080  | 25,91  |
| 10.0 | 22   | 9.7  | 32.0 | 32  | 72  | 10                   | 0.25 | 4    | 54 006 100  | 33,96  |
| 12.0 | 26   | 11.6 | 38.0 | 38  | 83  | 12                   | 0.35 | 4    | 54 006 120  | 54,01  |
| 16.0 | 32   | 15.5 | 44.0 | 44  | 92  | 16                   | 0.35 | 4    | 54 006 160  | 83,32  |
| 20.0 | 38   | 19.5 | 54.0 | 54  | 104 | 20                   | 0.35 | 4    | 54 006 200  | 125,70 |

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

Hardened materials

SilverLine – End milling cutter

N

$\lambda_s=35^\circ$   
 $\gamma_s=38^\circ$   
 $\gamma_s=10^\circ$

HPC

| DC <sub>r8</sub> | APMX | LH | LPR | OAL | DCONMS <sub>h6</sub> | CHW  | ZEFP | Article no. | EUR    |
|------------------|------|----|-----|-----|----------------------|------|------|-------------|--------|
| 3.0              | 5    | 8  | 14  | 50  | 6                    | 0.15 | 4    | 50 955 030  | 37,25  |
| 3.0              | 8    | 11 | 21  | 57  | 6                    | 0.15 | 4    | 50 955 031  | 37,25  |
| 3.5              | 8    | 11 | 18  | 54  | 6                    | 0.15 | 4    | 50 955 035  | 37,25  |
| 3.5              | 11   | 14 | 21  | 57  | 6                    | 0.15 | 4    | 50 955 040  | 37,25  |
| 4.0              | 8    | 11 | 18  | 54  | 6                    | 0.15 | 4    | 50 955 045  | 38,24  |
| 4.0              | 11   | 14 | 21  | 57  | 6                    | 0.15 | 4    | 50 955 050  | 38,24  |
| 4.5              | 9    | 12 | 18  | 54  | 6                    | 0.15 | 4    | 50 955 055  | 36,81  |
| 4.5              | 13   | 16 | 21  | 57  | 6                    | 0.15 | 4    | 50 955 060  | 36,81  |
| 5.0              | 9    | 12 | 18  | 54  | 6                    | 0.15 | 4    | 50 955 070  | 49,26  |
| 5.0              | 13   | 16 | 21  | 57  | 6                    | 0.15 | 4    | 50 955 080  | 49,26  |
| 6.0              | 10   | 13 | 18  | 54  | 6                    | 0.15 | 4    | 50 955 090  | 64,26  |
| 6.0              | 13   | 16 | 21  | 57  | 6                    | 0.15 | 4    | 50 955 100  | 64,26  |
| 7.0              | 12   | 15 | 22  | 58  | 8                    | 0.25 | 4    | 50 955 110  | 101,60 |
| 7.0              | 21   | 24 | 27  | 63  | 8                    | 0.25 | 4    | 50 955 120  | 101,60 |
| 8.0              | 12   | 15 | 22  | 58  | 8                    | 0.25 | 4    | 50 955 140  | 130,00 |
| 8.0              | 21   | 24 | 27  | 63  | 8                    | 0.25 | 4    | 50 955 150  | 161,00 |
| 9.0              | 14   | 17 | 26  | 66  | 10                   | 0.25 | 4    | 50 955 160  | 161,00 |
| 9.0              | 22   | 25 | 32  | 72  | 10                   | 0.25 | 4    | 50 955 170  | 220,50 |
| 10.0             | 14   | 17 | 26  | 66  | 10                   | 0.25 | 4    | 50 955 180  | 220,50 |
| 10.0             | 22   | 25 | 32  | 72  | 10                   | 0.25 | 4    | 50 955 190  | 248,00 |
| 11.0             | 16   | 19 | 28  | 73  | 12                   | 0.35 | 4    | 50 955 200  | 248,00 |
| 11.0             | 26   | 29 | 38  | 83  | 12                   | 0.35 | 4    | 50 955 201  | 248,00 |
| 12.0             | 16   | 19 | 28  | 73  | 12                   | 0.35 | 4    |             |        |
| 12.0             | 26   | 29 | 38  | 83  | 12                   | 0.35 | 4    |             |        |
| 14.0             | 16   | 19 | 28  | 73  | 14                   | 0.35 | 4    |             |        |
| 14.0             | 26   | 29 | 38  | 83  | 14                   | 0.35 | 4    |             |        |
| 15.0             | 22   | 25 | 34  | 82  | 16                   | 0.35 | 4    |             |        |
| 15.0             | 36   | 39 | 44  | 92  | 16                   | 0.35 | 4    |             |        |
| 16.0             | 22   | 25 | 34  | 82  | 16                   | 0.35 | 4    |             |        |
| 16.0             | 36   | 39 | 44  | 92  | 16                   | 0.35 | 4    |             |        |
| 17.0             | 22   | 25 | 34  | 82  | 18                   | 0.35 | 4    |             |        |
| 17.0             | 36   | 39 | 44  | 92  | 18                   | 0.35 | 4    |             |        |
| 18.0             | 22   | 25 | 34  | 82  | 18                   | 0.35 | 4    |             |        |
| 18.0             | 36   | 39 | 44  | 92  | 18                   | 0.35 | 4    |             |        |
| 19.0             | 26   | 29 | 42  | 92  | 20                   | 0.35 | 4    |             |        |
| 19.0             | 41   | 44 | 54  | 104 | 20                   | 0.35 | 4    |             |        |
| 20.0             | 26   | 29 | 42  | 92  | 20                   | 0.35 | 4    |             |        |
| 20.0             | 41   | 44 | 54  | 104 | 20                   | 0.35 | 4    |             |        |

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

Hardened materials

SilverLine – End milling cutter with corner radius

N

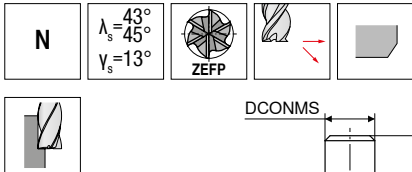
$\lambda_s=35^\circ$   
 $\gamma_s=38^\circ$   
 $\gamma_s=14^\circ$

HPC

| DC <sub>r8</sub> | RE <sub>±0,01</sub> | APMX | DN   | LH | LPR | OAL | DCONMS <sub>h5</sub> | ZEFP | Article no. | EUR    |
|------------------|---------------------|------|------|----|-----|-----|----------------------|------|-------------|--------|
| 3                | 0,10                | 8,0  | 2,8  | 13 | 21  | 57  | 6                    | 4    | 50 968 030  | 49,16  |
| 3                | 0,40                | 8,0  | 2,8  | 13 | 21  | 57  | 6                    | 4    | 50 968 031  | 49,16  |
| 3                | 0,50                | 8,0  | 2,8  | 13 | 21  | 57  | 6                    | 4    | 50 968 032  | 49,16  |
| 3                | 1,00                | 8,0  | 2,8  | 13 | 21  | 57  | 6                    | 4    | 50 968 033  | 49,16  |
| 3                | 0,30                | 6,5  | 2,8  | 15 | 22  | 58  | 6                    | 4    | 50 968 034  | 57,64  |
| 3                | 0,50                | 6,5  | 2,8  | 15 | 22  | 58  | 6                    | 4    | 50 968 035  | 57,64  |
| 3                | 0,80                | 6,5  | 2,8  | 15 | 22  | 58  | 6                    | 4    | 50 968 036  | 57,64  |
| 4                | 0,10                | 11,0 | 3,8  | 17 | 21  | 57  | 6                    | 4    | 50 968 040  | 49,16  |
| 4                | 0,40                | 11,0 | 3,8  | 17 | 21  | 57  | 6                    | 4    | 50 968 041  | 49,16  |
| 4                | 0,50                | 11,0 | 3,8  | 17 | 21  | 57  | 6                    | 4    | 50 968 042  | 49,16  |
| 4                | 1,00                | 11,0 | 3,8  | 17 | 21  | 57  | 6                    | 4    | 50 968 043  | 49,16  |
| 4                | 0,40                | 8,5  | 3,8  | 20 | 26  | 62  | 6                    | 4    |             |        |
| 4                | 0,50                | 8,5  | 3,8  | 20 | 26  | 62  | 6                    | 4    |             |        |
| 4                | 0,80                | 8,5  | 3,8  | 20 | 26  | 62  | 6                    | 4    |             |        |
| 5                | 0,10                | 13,0 | 4,8  | 19 | 21  | 57  | 6                    | 4    | 50 968 050  | 50,03  |
| 5                | 0,50                | 13,0 | 4,8  | 19 | 21  | 57  | 6                    | 4    | 50 968 051  | 50,03  |
| 5                | 1,00                | 13,0 | 4,8  | 19 | 21  | 57  | 6                    | 4    | 50 968 052  | 50,03  |
| 5                | 0,50                | 10,5 | 4,8  | 25 | 34  | 70  | 6                    | 4    |             |        |
| 5                | 0,80                | 10,5 | 4,8  | 25 | 34  | 70  | 6                    | 4    |             |        |
| 6                | 0,10                | 13,0 | 5,8  | 19 | 21  | 57  | 6                    | 4    | 50 968 060  | 48,71  |
| 6                | 0,50                | 13,0 | 5,8  | 19 | 21  | 57  | 6                    | 4    | 50 968 061  | 48,71  |
| 6                | 1,00                | 13,0 | 5,8  | 19 | 21  | 57  | 6                    | 4    | 50 968 062  | 48,71  |
| 6                | 1,50                | 13,0 | 5,8  | 19 | 21  | 57  | 6                    | 4    | 50 968 063  | 48,71  |
| 6                | 0,60                | 13,0 | 5,8  | 30 | 34  | 70  | 6                    | 4    |             |        |
| 6                | 0,80                | 13,0 | 5,8  | 30 | 34  | 70  | 6                    | 4    |             |        |
| 6                | 1,00                | 13,0 | 5,8  | 30 | 34  | 70  | 6                    | 4    |             |        |
| 8                | 0,15                | 21,0 | 7,7  | 25 | 27  | 63  | 8                    | 4    | 50 968 080  | 61,16  |
| 8                | 0,50                | 21,0 | 7,7  | 25 | 27  | 63  | 8                    | 4    | 50 968 081  | 61,16  |
| 8                | 1,00                | 21,0 | 7,7  | 25 | 27  | 63  | 8                    | 4    | 50 968 082  | 61,16  |
| 8                | 1,50                | 21,0 | 7,7  | 25 | 27  | 63  | 8                    | 4    | 50 968 083  | 61,16  |
| 8                | 2,00                | 21,0 | 7,7  | 25 | 27  | 63  | 8                    | 4    | 50 968 084  | 61,16  |
| 8                | 0,80                | 17,0 | 7,7  | 40 | 44  | 80  | 8                    | 4    |             |        |
| 8                | 1,00                | 17,0 | 7,7  | 40 | 44  | 80  | 8                    | 4    |             |        |
| 8                | 1,50                | 17,0 | 7,7  | 40 | 44  | 80  | 8                    | 4    |             |        |
| 8                | 2,00                | 17,0 | 7,7  | 40 | 44  | 80  | 8                    | 4    |             |        |
| 10               | 0,15                | 22,0 | 9,7  | 30 | 32  | 72  | 10                   | 4    | 50 968 100  | 76,26  |
| 10               | 0,50                | 22,0 | 9,7  | 30 | 32  | 72  | 10                   | 4    | 50 968 101  | 76,26  |
| 10               | 1,00                | 22,0 | 9,7  | 30 | 32  | 72  | 10                   | 4    | 50 968 102  | 76,26  |
| 10               | 1,50                | 22,0 | 9,7  | 30 | 32  | 72  | 10                   | 4    | 50 968 103  | 76,26  |
| 10               | 2,00                | 22,0 | 9,7  | 30 | 32  | 72  | 10                   | 4    | 50 968 104  | 76,26  |
| 10               | 0,50                | 21,0 | 9,7  | 50 | 54  | 94  | 10                   | 4    |             |        |
| 10               | 1,00                | 21,0 | 9,7  | 50 | 54  | 94  | 10                   | 4    |             |        |
| 10               | 1,50                | 21,0 | 9,7  | 50 | 54  | 94  | 10                   | 4    |             |        |
| 10               | 2,00                | 21,0 | 9,7  | 50 | 54  | 94  | 10                   | 4    |             |        |
| 12               | 0,20                | 26,0 | 11,6 | 36 | 38  | 83  | 12                   | 4    | 50 968 120  | 119,10 |
| 12               | 0,50                | 26,0 | 11,6 | 36 | 38  | 83  | 12                   | 4    | 50 968 121  | 119,10 |
| 12               | 1,00                | 26,0 | 11,6 | 36 | 38  | 83  | 12                   | 4    | 50 968 122  | 119,10 |
| 12               | 1,50                | 26,0 | 11,6 | 36 | 38  | 83  | 12                   | 4    | 50 968 123  | 119,10 |
| 12               | 2,00                | 26,0 | 11,6 | 36 | 38  | 83  | 12                   | 4    | 50 968 124  | 119,10 |
| 12               | 3,00                | 26,0 | 11,6 | 36 | 38  | 83  | 12                   | 4    | 50 968 131  | 119,10 |
| 12               | 4,00                | 26,0 | 11,6 | 36 | 38  | 83  | 12                   | 4    | 50 968 125  | 119,10 |
| 12               | 0,50                | 25,0 | 11,6 | 60 | 64  | 109 | 12                   | 4    |             |        |
| 12               | 1,00                | 25,0 | 11,6 | 60 | 64  | 109 | 12                   | 4    |             |        |
| 12               | 1,50                | 25,0 | 11,6 | 60 | 64  | 109 | 12                   | 4    |             |        |
| 12               | 2,00                | 25,0 | 11,6 | 60 | 64  | 109 | 12                   | 4    |             |        |
| 12               | 3,00                | 25,0 | 11,6 | 60 | 64  | 109 | 12                   | 4    |             |        |
| 12               | 4,00                | 25,0 | 11,6 | 60 | 64  | 109 | 12                   | 4    |             |        |
| 14               | 0,30                | 26,0 | 13,6 | 36 | 38  | 83  | 14                   | 4    | 50 968 140  | 177,50 |
| 14               | 1,00                | 26,0 | 13,6 | 36 | 38  | 83  | 14                   | 4    | 50 968 141  | 177,50 |
| 14               | 2,00                | 26,0 | 13,6 | 36 | 38  | 83  | 14                   | 4    | 50 968 142  | 177,50 |
| 14               | 3,00                | 26,0 | 13,6 | 36 | 38  | 83  | 14                   | 4    | 50 968 147  | 177,50 |
| 14               | 4,00                | 26,0 | 13,6 | 36 | 38  | 83  | 14                   | 4    | 50 968 143  | 177,50 |
| 14               | 1,00                | 29,0 | 13,6 | 70 | 74  | 119 | 14                   | 4    |             |        |
| 14               | 2,00                | 29,0 | 13,6 | 70 | 74  | 119 | 14                   | 4    |             |        |
| 14               | 3,00                | 29,0 | 13,6 | 70 | 74  | 119 | 14                   | 4    |             |        |
| 14               | 4,00                | 29,0 | 13,6 | 70 | 74  | 119 | 14                   | 4    |             |        |
| 16               | 0,30                | 36,0 | 15,5 | 42 | 44  | 92  | 16                   | 4    | 50 968 160  | 177,50 |
| 16               | 1,00                | 36,0 | 15,5 | 42 | 44  | 92  | 16                   | 4    | 50 968 161  | 177,50 |
| 16               | 2,00                | 36,0 | 15,5 | 42 | 44  | 92  | 16                   | 4    | 50 968 162  | 177,50 |
| 16               | 3,00                | 36,0 | 15,5 | 42 | 44  | 92  | 16                   | 4    | 50 968 167  | 177,50 |
| 16               | 4,00                | 36,0 | 15,5 | 42 | 44  | 92  | 16                   | 4    | 50 968 163  | 177,50 |
| 16               | 1,00                | 33,0 | 15,5 | 80 | 84  | 132 | 16                   | 4    |             |        |
| 16               | 2,00                | 33,0 | 15,5 | 80 | 84  | 132 | 16                   | 4    |             |        |
| 16               | 3,00                | 33,0 | 15,5 | 80 | 84  | 132 | 16                   | 4    |             |        |
| 16               | 4,00                | 33,0 | 15,5 | 80 | 84  | 132 | 16                   | 4    |             |        |
| 18               | 1,00                | 36,0 | 17,5 | 42 | 44  | 92  | 18                   | 4    | 50 968 180  | 237,00 |
| 18               | 2,00                | 36,0 | 17,5 | 42 | 44  | 92  | 18                   | 4    | 50 968 181  | 237,00 |
| 18               | 3,00                | 36,0 | 17,5 | 42 | 44  | 92  | 18                   | 4    | 50 968 186  | 237,00 |
| 18               | 4,00                | 36,0 | 17,5 | 42 | 44  | 92  | 18                   | 4    | 50 968 182  | 237,00 |
| 18               | 1,00                | 38,0 | 17,5 | 90 | 94  | 142 | 18                   | 4    |             |        |
| 18               | 2                   |      |      |    |     |     |                      |      |             |        |



Finish milling cutter



WNT \ Standard



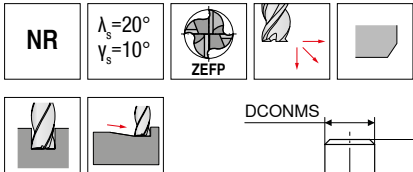
≈DIN 6527 Factory standard

| DC <sub>18</sub> | APMX | LPR | OAL | DCONMS <sub>15</sub> | CHW  | ZEFP |
|------------------|------|-----|-----|----------------------|------|------|
| mm               | mm   | mm  | mm  | mm                   | mm   |      |
| 4                | 11   | 21  | 57  | 6                    | 0,15 | 6    |
| 4                | 16   | 26  | 62  | 6                    | 0,15 | 6    |
| 5                | 13   | 21  | 57  | 6                    | 0,15 | 6    |
| 5                | 18   | 26  | 62  | 6                    | 0,15 | 6    |
| 6                | 13   | 21  | 57  | 6                    | 0,15 | 6    |
| 6                | 18   | 26  | 62  | 6                    | 0,15 | 6    |
| 7                | 16   | 27  | 63  | 8                    | 0,15 | 6    |
| 7                | 21   | 32  | 68  | 8                    | 0,15 | 6    |
| 8                | 19   | 27  | 63  | 8                    | 0,15 | 6    |
| 8                | 24   | 32  | 68  | 8                    | 0,15 | 6    |
| 9                | 19   | 32  | 72  | 10                   | 0,15 | 6    |
| 9                | 27   | 40  | 80  | 10                   | 0,15 | 6    |
| 10               | 22   | 32  | 72  | 10                   | 0,15 | 6    |
| 10               | 30   | 40  | 80  | 10                   | 0,15 | 6    |
| 12               | 26   | 38  | 83  | 12                   | 0,15 | 6    |
| 12               | 36   | 48  | 93  | 12                   | 0,15 | 6    |
| 14               | 26   | 38  | 83  | 14                   | 0,15 | 6    |
| 14               | 42   | 54  | 99  | 14                   | 0,15 | 6    |
| 16               | 32   | 44  | 92  | 16                   | 0,15 | 6    |
| 16               | 48   | 60  | 108 | 16                   | 0,15 | 6    |
| 16               | 65   | 77  | 125 | 16                   | 0,15 | 6    |
| 16               | 75   | 102 | 150 | 16                   | 0,15 | 6    |
| 16               | 95   | 102 | 150 | 16                   | 0,15 | 6    |
| 18               | 32   | 44  | 92  | 18                   | 0,15 | 8    |
| 18               | 54   | 66  | 114 | 18                   | 0,15 | 8    |
| 20               | 38   | 54  | 104 | 20                   | 0,15 | 8    |
| 20               | 60   | 76  | 126 | 20                   | 0,15 | 8    |
| 20               | 75   | 85  | 135 | 20                   | 0,15 | 8    |
| 20               | 95   | 100 | 150 | 20                   | 0,15 | 8    |
| 25               | 75   | 94  | 150 | 25                   | 0,15 | 8    |
| 25               | 95   | 104 | 160 | 25                   | 0,15 | 8    |
| 32               | 75   | 90  | 150 | 32                   | 0,15 | 8    |
| 32               | 95   | 100 | 160 | 32                   | 0,15 | 8    |

| Article no. | Article no. |
|-------------|-------------|
| EUR         | EUR         |
| 50 633 040  | 50 633 041  |
| 41,88       | 59,29       |
| 50 633 050  | 50 633 051  |
| 41,88       | 59,29       |
| 50 633 060  | 50 633 061  |
| 41,88       | 59,29       |
| 50 633 070  | 50 633 071  |
| 51,14       | 77,59       |
| 50 633 080  | 50 633 081  |
| 48,93       | 68,44       |
| 50 633 090  | 50 633 091  |
| 80,89       | 123,50      |
| 50 633 100  | 50 633 101  |
| 78,47       | 121,30      |
| 50 633 120  | 50 633 121  |
| 104,30      | 164,20      |
| 50 633 140  | 50 633 141  |
| 142,30      | 222,60      |
| 50 633 160  | 50 633 161  |
| 187,30      | 284,30      |
|             | 50 633 162  |
|             | 358,30      |
|             | 50 633 163  |
|             | 401,10      |
|             | 50 633 164  |
|             | 465,10      |
| 50 633 180  | 50 633 181  |
| 217,10      | 348,30      |
| 50 633 200  | 50 633 201  |
| 266,80      | 446,40      |
|             | 50 633 202  |
|             | 471,60      |
|             | 50 633 203  |
|             | 489,30      |
|             | 50 633 250  |
|             | 648,10      |
|             | 50 633 251  |
|             | 689,90      |
| 50 633 320  | 50 633 321  |
| 1.246,00    | 1.294,00    |

|                       |   |   |
|-----------------------|---|---|
| Steel                 | ○ | ○ |
| Stainless steel       | ● | ● |
| Cast iron             | ○ | ○ |
| Non ferrous metals    | ○ | ○ |
| Heat resistant alloys | ● | ● |
| Hardened materials    | ● | ● |

Rough milling cutter



WNT \ Standard



DIN 6527

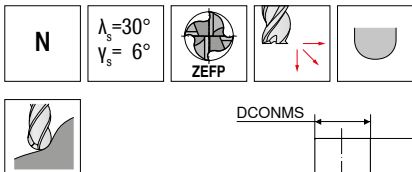
| DC <sub>d11</sub> | APMX | LPR | OAL | DCONMS <sub>15</sub> | CHW | ZEFP |
|-------------------|------|-----|-----|----------------------|-----|------|
| mm                | mm   | mm  | mm  | mm                   | mm  |      |
| 4                 | 8    | 21  | 57  | 6                    | 0,6 | 4    |
| 5                 | 13   | 21  | 57  | 6                    | 0,6 | 4    |
| 6                 | 13   | 21  | 57  | 6                    | 0,6 | 4    |
| 7                 | 19   | 27  | 63  | 8                    | 0,6 | 4    |
| 8                 | 19   | 27  | 63  | 8                    | 0,6 | 4    |
| 9                 | 22   | 32  | 72  | 10                   | 0,6 | 4    |
| 10                | 22   | 32  | 72  | 10                   | 0,6 | 4    |
| 11                | 26   | 38  | 83  | 12                   | 0,6 | 4    |
| 12                | 26   | 38  | 83  | 12                   | 0,6 | 4    |
| 13                | 26   | 38  | 83  | 14                   | 0,6 | 4    |
| 14                | 26   | 38  | 83  | 14                   | 0,6 | 4    |
| 16                | 32   | 44  | 92  | 16                   | 0,6 | 4    |
| 18                | 32   | 44  | 92  | 18                   | 0,6 | 4    |
| 20                | 38   | 54  | 104 | 20                   | 0,6 | 4    |
| 25                | 45   | 65  | 121 | 25                   | 0,6 | 5    |

| Article no. | EUR    |
|-------------|--------|
| 50 624 040  | 73,07  |
| 50 624 050  | 73,07  |
| 50 624 060  | 79,35  |
| 50 624 070  | 90,49  |
| 50 624 080  | 90,49  |
| 50 624 090  | 105,00 |
| 50 624 100  | 105,00 |
| 50 624 110  | 124,60 |
| 50 624 120  | 124,60 |
| 50 624 130  | 175,20 |
| 50 624 140  | 175,20 |
| 50 624 160  | 197,30 |
| 50 624 180  | 264,60 |
| 50 624 200  | 294,30 |
| 50 624 250  | 360,40 |

|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ○ |
| Cast iron             | ● |
| Non ferrous metals    | ○ |
| Heat resistant alloys | ○ |
| Hardened materials    |   |

Ball Nosed Cutter

▲ Radius accuracy: ± 0,01 mm



WNT \ Standard



DIN 6527

DIN 6527

Factory standard

DIN 6527

| DC <sub>18</sub> | APMX | LPR | OAL | DCONMS <sub>15</sub> | ZEFP |
|------------------|------|-----|-----|----------------------|------|
| mm               | mm   | mm  | mm  | mm                   |      |
| 3                | 8    | 21  | 57  | 6                    | 4    |
| 4                | 11   | 21  | 57  | 6                    | 4    |
| 6                | 13   | 21  | 57  | 6                    | 4    |
| 6                | 40   | 64  | 100 | 6                    | 4    |
| 8                | 19   | 27  | 63  | 8                    | 4    |
| 8                | 40   | 64  | 100 | 8                    | 4    |
| 10               | 22   | 32  | 72  | 10                   | 4    |
| 10               | 40   | 60  | 100 | 10                   | 4    |
| 12               | 26   | 38  | 83  | 12                   | 4    |
| 12               | 45   | 55  | 100 | 12                   | 4    |
| 12               | 75   | 105 | 150 | 12                   | 4    |
| 14               | 26   | 38  | 83  | 14                   | 4    |
| 14               | 45   | 55  | 100 | 14                   | 4    |
| 16               | 32   | 44  | 92  | 16                   | 4    |
| 16               | 75   | 102 | 150 | 16                   | 4    |
| 20               | 38   | 54  | 104 | 20                   | 4    |
| 20               | 75   | 100 | 150 | 20                   | 4    |

| Article no. | EUR    |
|-------------|--------|
| 50 642 030  | 42,21  |
| 50 642 040  | 42,21  |
| 50 642 060  | 42,21  |
| 50 642 080  | 48,61  |
| 50 642 100  | 82,77  |
| 50 642 120  | 111,30 |
| 50 642 140  | 141,00 |
| 50 642 160  | 198,30 |
| 50 642 200  | 275,60 |

| Article no. | EUR    |
|-------------|--------|
| 50 643 030  | 51,58  |
| 50 643 040  | 51,58  |
| 50 643 060  | 51,58  |
| 50 643 080  | 57,53  |
| 50 643 100  | 91,81  |
| 50 643 120  | 120,10 |
| 50 643 140  | 149,90 |
| 50 643 160  | 203,80 |
| 50 643 200  | 283,30 |

| Article no. | EUR    |
|-------------|--------|
| 50 642 061  | 53,12  |
| 50 642 081  | 59,74  |
| 50 642 101  | 106,70 |
| 50 642 121  | 144,40 |
| 50 642 122  | 224,90 |
| 50 642 141  | 199,50 |
| 50 642 161  | 275,60 |
| 50 642 201  | 435,30 |

| Article no. | EUR    |
|-------------|--------|
| 50 643 061  | 62,61  |
| 50 643 081  | 69,33  |
| 50 643 101  | 115,80 |
| 50 643 121  | 153,20 |
| 50 643 122  | 232,50 |
| 50 643 141  | 205,00 |
| 50 643 161  | 283,30 |
| 50 643 201  | 445,30 |

|                       |   |   |   |   |
|-----------------------|---|---|---|---|
| Steel                 | ● | ● | ● | ● |
| Stainless steel       | ○ | ○ | ○ | ○ |
| Cast iron             | ● | ● | ● | ● |
| Non ferrous metals    | ○ | ○ | ○ | ○ |
| Heat resistant alloys | ○ | ○ | ○ | ○ |
| Hardened materials    |   | ○ |   | ○ |

NC deburring cutter

N

$\lambda_s=0^\circ$   
 $\nu_s=0^\circ$

WNT \ Performance

Ti1000

$\alpha = 90^\circ$

Factory standard

HB

Article no.

EUR

Ti1000

$\alpha = 90^\circ$

Factory standard

HB

Article no.

EUR

| DC <sub>h6</sub> | OAL | LPR | DCONMS <sub>h6</sub> | ZEFP |
|------------------|-----|-----|----------------------|------|
| mm               | mm  | mm  | mm                   |      |
| 4                | 50  | 22  | 4                    | 4    |
| 6                | 54  | 18  | 6                    | 4    |
| 8                | 59  | 23  | 8                    | 4    |
| 10               | 60  | 20  | 10                   | 4    |
| 12               | 70  | 25  | 12                   | 4    |

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

Hardened materials

1) DIN 6535 HA Shank

NC front and rear chamfer milling cutter

N

$\lambda_s=0^\circ$   
 $\nu_s=0^\circ$

WNT \ Standard

Ti1000

Factory standard

HA

Article no.

EUR

Ti1000

Factory standard

HA

Article no.

EUR

| DC | APMX | DN  | LH   | OAL | DCONMS <sub>h5</sub> | ZEFP | Fig. |
|----|------|-----|------|-----|----------------------|------|------|
| mm | mm   | mm  | mm   | mm  | mm                   |      |      |
| 3  | 2,0  | 2,2 | 12,0 | 75  | 4                    | 4    | A    |
| 4  | 2,7  | 2,9 | 17,7 | 75  | 4                    | 4    | A    |
| 5  | 3,0  | 3,9 | 18,0 | 75  | 5                    | 4    | A    |
| 6  | 4,0  | 3,9 | 19,0 | 100 | 6                    | 4    | A    |
| 8  | 2,0  |     |      | 100 | 6                    | 4    | B    |
| 10 | 4,0  |     |      | 100 | 6                    | 4    | B    |
| 12 | 6,0  |     |      | 100 | 6                    | 4    | B    |

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

Hardened materials

Engraving cutter 60°

W

$\lambda_s=15^\circ$   
 $\nu_s=20^\circ$

WNT \ Standard

Factory standard

HA

Article no.

EUR

| DC <sub>h6</sub> | APMX | OAL | DCONMS <sub>h6</sub> | ZEFP |
|------------------|------|-----|----------------------|------|
| mm               | mm   | mm  | mm                   |      |
| 3                | 15   | 50  | 3                    | 1    |
| 4                | 18   | 50  | 4                    | 1    |
| 6                | 20   | 54  | 6                    | 1    |

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

Hardened materials

End milling cutter

W

$\lambda_s=55^\circ$   
 $\nu_s=5^\circ$

WNT \ Standard

Factory standard

HA

Article no.

EUR

| DC <sub>h6</sub> | APMX | OAL | DCONMS <sub>h6</sub> | ZEFP |
|------------------|------|-----|----------------------|------|
| mm               | mm   | mm  | mm                   |      |
| 3                | 12   | 50  | 3                    | 2    |
| 4                | 15   | 50  | 4                    | 2    |
| 5                | 20   | 50  | 5                    | 2    |
| 6                | 20   | 57  | 6                    | 2    |
| 8                | 20   | 63  | 8                    | 2    |
| 10               | 25   | 73  | 10                   | 2    |
| 12               | 25   | 83  | 12                   | 2    |
| 14               | 30   | 83  | 14                   | 2    |
| 16               | 30   | 92  | 16                   | 2    |
| 20               | 38   | 104 | 20                   | 2    |

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

Hardened materials



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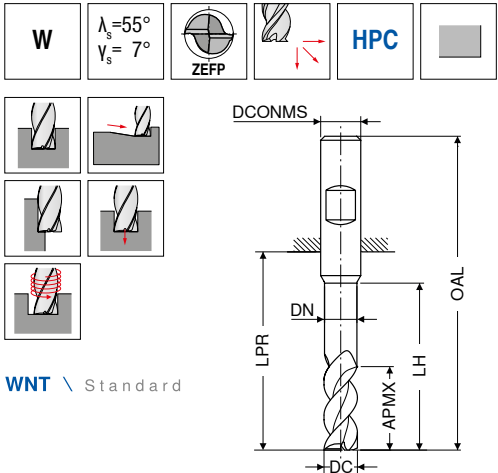
Speed  
Calculation

$$RPM = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
 $D$  = Diameter



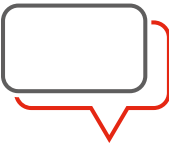
End milling cutter



| DC <sub>h6</sub> | APMX | DN   | LH | LPR | OAL | DCONMS <sub>h5</sub> | ZEFP |
|------------------|------|------|----|-----|-----|----------------------|------|
| mm               | mm   | mm   | mm | mm  | mm  | mm                   |      |
| 2,7              | 5,0  | 2,5  | 12 | 19  | 55  | 6                    | 2    |
| 3,0              | 3,5  | 2,8  | 12 | 19  | 55  | 6                    | 2    |
| 3,0              | 5,0  | 2,8  | 12 | 19  | 55  | 6                    | 2    |
| 3,7              | 6,5  | 3,5  | 12 | 19  | 55  | 6                    | 2    |
| 4,0              | 4,5  | 3,8  | 12 | 19  | 55  | 6                    | 2    |
| 4,0              | 6,5  | 3,8  | 12 | 19  | 55  | 6                    | 2    |
| 4,7              | 8,0  | 4,5  | 15 | 22  | 58  | 6                    | 2    |
| 5,0              | 5,5  | 4,8  | 15 | 22  | 58  | 6                    | 2    |
| 5,0              | 8,0  | 4,8  | 15 | 22  | 58  | 6                    | 2    |
| 5,7              | 10,0 | 5,5  | 18 | 22  | 58  | 6                    | 2    |
| 6,0              | 7,0  | 5,8  | 18 | 22  | 58  | 6                    | 2    |
| 6,0              | 10,0 | 5,8  | 18 | 22  | 58  | 6                    | 2    |
| 6,7              | 13,0 | 6,4  | 24 | 28  | 64  | 8                    | 2    |
| 7,0              | 13,0 | 6,7  | 24 | 28  | 64  | 8                    | 2    |
| 7,7              | 13,0 | 7,4  | 24 | 28  | 64  | 8                    | 2    |
| 8,0              | 9,0  | 7,7  | 24 | 28  | 64  | 8                    | 2    |
| 8,0              | 13,0 | 7,7  | 24 | 28  | 64  | 8                    | 2    |
| 8,7              | 16,0 | 8,4  | 30 | 34  | 74  | 10                   | 2    |
| 9,0              | 16,0 | 8,7  | 30 | 34  | 74  | 10                   | 2    |
| 9,7              | 16,0 | 9,4  | 30 | 34  | 74  | 10                   | 2    |
| 10,0             | 11,0 | 9,7  | 30 | 34  | 74  | 10                   | 2    |
| 10,0             | 16,0 | 9,7  | 30 | 34  | 74  | 10                   | 2    |
| 10,7             | 19,0 | 10,3 | 36 | 40  | 85  | 12                   | 2    |
| 11,0             | 19,0 | 10,6 | 36 | 40  | 85  | 12                   | 2    |
| 11,7             | 19,0 | 11,3 | 36 | 40  | 85  | 12                   | 2    |
| 12,0             | 13,0 | 11,6 | 36 | 40  | 85  | 12                   | 2    |
| 12,0             | 19,0 | 11,6 | 36 | 40  | 85  | 12                   | 2    |
| 13,0             | 22,0 | 12,6 | 42 | 46  | 91  | 14                   | 2    |
| 13,7             | 22,0 | 13,3 | 42 | 46  | 91  | 14                   | 2    |
| 14,0             | 15,0 | 13,6 | 42 | 46  | 91  | 14                   | 2    |
| 14,0             | 22,0 | 13,6 | 42 | 46  | 91  | 14                   | 2    |
| 15,0             | 25,0 | 14,5 | 48 | 52  | 100 | 16                   | 2    |
| 15,7             | 25,0 | 15,2 | 48 | 52  | 100 | 16                   | 2    |
| 16,0             | 17,0 | 15,5 | 48 | 52  | 100 | 16                   | 2    |
| 16,0             | 25,0 | 15,5 | 48 | 52  | 100 | 16                   | 2    |
| 18,0             | 20,0 | 17,5 | 54 | 58  | 106 | 18                   | 2    |
| 18,0             | 29,0 | 17,5 | 54 | 58  | 106 | 18                   | 2    |
| 19,7             | 32,0 | 19,2 | 60 | 64  | 114 | 20                   | 2    |
| 20,0             | 22,0 | 19,5 | 60 | 64  | 114 | 20                   | 2    |
| 20,0             | 32,0 | 19,5 | 60 | 64  | 114 | 20                   | 2    |
| 24,7             | 40,0 | 24,2 | 75 | 80  | 136 | 25                   | 2    |
| 25,0             | 27,0 | 24,5 | 75 | 80  | 136 | 25                   | 2    |
| 25,0             | 40,0 | 24,5 | 75 | 80  | 136 | 25                   | 2    |

|                       |  |  |  |
|-----------------------|--|--|--|
| Steel                 |  |  |  |
| Stainless steel       |  |  |  |
| Cast iron             |  |  |  |
| Non ferrous metals    |  |  |  |
| Heat resistant alloys |  |  |  |
| Hardened materials    |  |  |  |

| Factory standard |        | Factory standard |        | Factory standard |        | Factory standard |        |
|------------------|--------|------------------|--------|------------------|--------|------------------|--------|
|                  |        |                  |        |                  |        |                  |        |
| Article no.      |        | Article no.      |        | Article no.      |        | Article no.      |        |
| EUR              |        | EUR              |        | EUR              |        | EUR              |        |
| 54 590 027       | 23,25  | 54 592 027       | 34,16  | 54 591 027       | 23,25  | 54 593 027       | 34,16  |
| 54 590 033       | 23,91  | 54 592 033       | 34,72  |                  |        |                  |        |
| 54 590 031       | 23,25  | 54 592 031       | 34,16  | 54 591 031       | 23,25  | 54 593 031       | 34,16  |
| 54 590 037       | 23,25  | 54 592 037       | 34,16  | 54 591 037       | 23,25  | 54 593 037       | 34,16  |
| 54 590 043       | 23,91  | 54 592 043       | 34,72  |                  |        |                  |        |
| 54 590 041       | 23,25  | 54 592 041       | 34,16  | 54 591 041       | 23,25  | 54 593 041       | 34,16  |
| 54 590 047       | 23,25  | 54 592 047       | 34,16  | 54 591 047       | 23,25  | 54 593 047       | 34,16  |
| 54 590 053       | 23,91  | 54 592 053       | 34,72  |                  |        |                  |        |
| 54 590 051       | 23,25  | 54 592 051       | 34,16  | 54 591 051       | 23,25  | 54 593 051       | 34,16  |
| 54 590 057       | 23,25  | 54 592 057       | 34,16  | 54 591 057       | 23,25  | 54 593 057       | 34,16  |
| 54 590 063       | 23,91  | 54 592 063       | 34,72  |                  |        |                  |        |
| 54 590 061       | 23,25  | 54 592 061       | 34,16  | 54 591 061       | 23,25  | 54 593 061       | 34,16  |
| 54 590 067       | 34,16  | 54 592 067       | 46,51  | 54 591 067       | 34,16  | 54 593 067       | 46,51  |
| 54 590 071       | 34,16  | 54 592 071       | 46,51  | 54 591 071       | 34,16  | 54 593 071       | 46,51  |
| 54 590 077       | 34,16  | 54 592 077       | 46,51  | 54 591 077       | 34,16  | 54 593 077       | 46,51  |
| 54 590 083       | 34,16  | 54 592 083       | 46,51  |                  |        |                  |        |
| 54 590 081       | 34,16  | 54 592 081       | 46,51  | 54 591 081       | 34,16  | 54 593 081       | 46,51  |
| 54 590 087       | 54,01  | 54 592 087       | 67,89  | 54 591 087       | 54,01  | 54 593 087       | 67,89  |
| 54 590 091       | 54,01  | 54 592 091       | 67,89  | 54 591 091       | 54,01  | 54 593 091       | 67,89  |
| 54 590 097       | 54,01  | 54 592 097       | 67,89  | 54 591 097       | 54,01  | 54 593 097       | 67,89  |
| 54 590 103       | 54,01  | 54 592 103       | 67,89  |                  |        |                  |        |
| 54 590 101       | 54,01  | 54 592 101       | 67,89  | 54 591 101       | 54,01  | 54 593 101       | 67,89  |
| 54 590 107       | 71,65  | 54 592 107       | 85,20  | 54 591 107       | 71,65  | 54 593 107       | 85,20  |
| 54 590 111       | 71,65  | 54 592 111       | 85,20  | 54 591 111       | 71,65  | 54 593 111       | 85,20  |
| 54 590 117       | 71,65  | 54 592 117       | 85,20  | 54 591 117       | 71,65  | 54 593 117       | 85,20  |
| 54 590 123       | 71,65  | 54 592 123       | 85,20  |                  |        |                  |        |
| 54 590 121       | 71,65  | 54 592 121       | 85,20  | 54 591 121       | 71,65  | 54 593 121       | 85,20  |
| 54 590 131       | 104,40 | 54 592 131       | 120,10 | 54 591 131       | 104,40 | 54 593 131       | 120,10 |
| 54 590 137       | 104,40 | 54 592 137       | 120,10 | 54 591 137       | 104,40 | 54 593 137       | 120,10 |
| 54 590 143       | 104,40 | 54 592 143       | 120,10 |                  |        |                  |        |
| 54 590 141       | 104,40 | 54 592 141       | 120,10 | 54 591 141       | 104,40 | 54 593 141       | 120,10 |
| 54 590 151       | 168,60 | 54 592 151       | 192,80 | 54 591 151       | 168,60 | 54 593 151       | 192,80 |
| 54 590 157       | 168,60 | 54 592 157       | 192,80 | 54 591 157       | 168,60 | 54 593 157       | 192,80 |
| 54 590 163       | 168,60 | 54 592 163       | 192,80 |                  |        |                  |        |
| 54 590 161       | 168,60 | 54 592 161       | 192,80 | 54 591 161       | 168,60 | 54 593 161       | 192,80 |
| 54 590 183       | 216,00 | 54 592 183       | 251,30 |                  |        |                  |        |
| 54 590 181       | 217,10 | 54 592 181       | 238,10 | 54 591 181       | 217,10 | 54 593 181       | 238,10 |
| 54 590 197       | 237,00 | 54 592 197       | 253,60 | 54 591 197       | 237,00 | 54 593 197       | 262,30 |
| 54 590 203       | 228,10 | 54 592 203       | 250,20 |                  |        |                  |        |
| 54 590 201       | 237,00 | 54 592 201       | 253,60 | 54 591 201       | 237,00 | 54 593 201       | 253,60 |
| 54 590 247       | 364,80 | 54 592 247       | 384,60 | 54 591 247       | 364,80 | 54 593 247       | 384,60 |
| 54 590 253       | 345,10 | 54 592 253       | 365,90 |                  |        |                  |        |
| 54 590 251       | 364,80 | 54 592 251       | 384,60 | 54 591 251       | 364,80 | 54 593 251       | 384,60 |



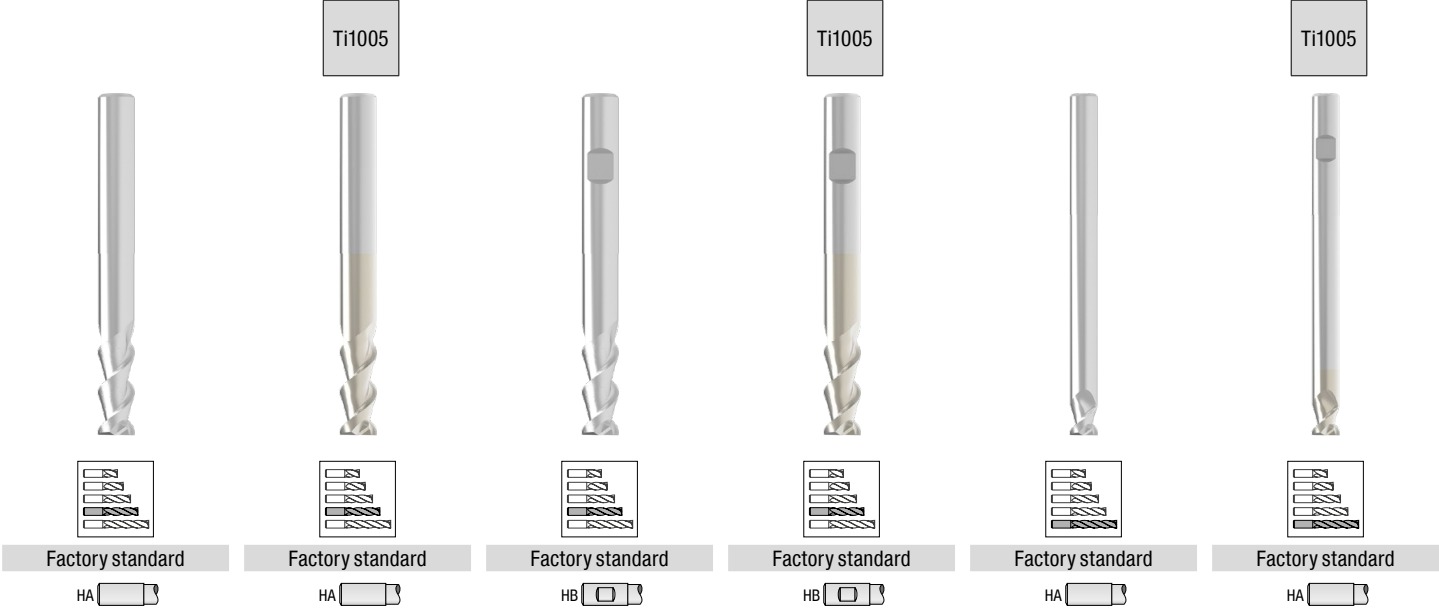
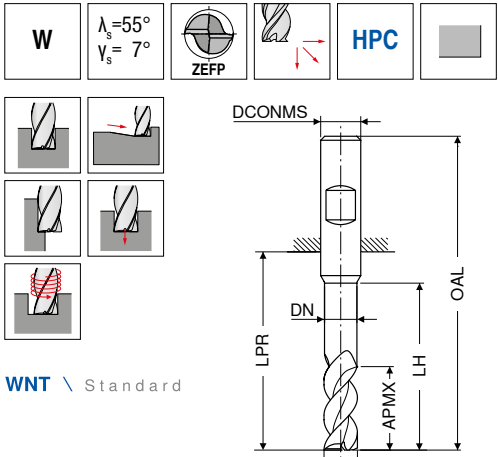
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End milling cutter



Factory standard

Factory standard

Factory standard

Factory standard

Factory standard

Factory standard

HA

HA

HB

HB

HA

HA

| DC <sub>h6</sub> | APMX | DN   | LH  | LPR | OAL | DCONMS <sub>h5</sub> | ZEFP | Article no. |        | Article no. |        | Article no. |        | Article no. |        | Article no. |        | Article no. |        |
|------------------|------|------|-----|-----|-----|----------------------|------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
| mm               | mm   | mm   | mm  | mm  | mm  | mm                   |      |             | EUR    |             | EUR    |             | EUR    |             | EUR    |             | EUR    |             | EUR    |
| 2,7              | 8,0  | 2,5  | 15  | 22  | 58  | 6                    | 2    | 54 590 028  | 27,01  | 54 592 028  | 37,80  | 54 591 028  | 27,01  | 54 593 028  | 37,80  |             |        |             |        |
| 3,0              | 3,5  | 2,8  | 15  | 22  | 58  | 6                    | 2    | 54 590 034  | 25,57  | 54 592 034  | 36,48  |             |        |             |        |             |        |             |        |
| 3,0              | 8,0  | 2,8  | 15  | 22  | 58  | 6                    | 2    | 54 590 032  | 27,01  | 54 592 032  | 37,80  | 54 591 032  | 27,01  | 54 593 032  | 37,80  |             |        |             |        |
| 3,0              | 3,5  | 2,8  | 24  | 31  | 67  | 6                    | 2    |             |        |             |        |             |        |             |        | 54 590 035  | 31,96  | 54 592 035  | 42,76  |
| 3,7              | 10,5 | 3,5  | 20  | 26  | 62  | 6                    | 2    | 54 590 038  | 27,01  | 54 592 038  | 37,80  | 54 591 038  | 27,01  | 54 593 038  | 37,80  |             |        |             |        |
| 4,0              | 4,5  | 3,8  | 20  | 26  | 62  | 6                    | 2    | 54 590 044  | 25,57  | 54 592 044  | 36,48  |             |        |             |        |             |        |             |        |
| 4,0              | 10,5 | 3,8  | 20  | 26  | 62  | 6                    | 2    | 54 590 042  | 27,01  | 54 592 042  | 37,80  | 54 591 042  | 27,01  | 54 593 042  | 37,80  |             |        |             |        |
| 4,0              | 4,5  | 3,8  | 32  | 38  | 74  | 6                    | 2    |             |        |             |        |             |        |             |        | 54 590 045  | 31,96  | 54 592 045  | 42,76  |
| 4,7              | 13,0 | 4,5  | 25  | 34  | 70  | 6                    | 2    | 54 590 048  | 27,01  | 54 592 048  | 37,80  | 54 591 048  | 27,01  | 54 593 048  | 37,80  |             |        |             |        |
| 5,0              | 5,5  | 4,8  | 25  | 34  | 70  | 6                    | 2    | 54 590 054  | 25,57  | 54 592 054  | 36,48  |             |        |             |        |             |        |             |        |
| 5,0              | 13,0 | 4,8  | 25  | 34  | 70  | 6                    | 2    | 54 590 052  | 27,01  | 54 592 052  | 37,80  | 54 591 052  | 27,01  | 54 593 052  | 37,80  |             |        |             |        |
| 5,0              | 5,5  | 4,8  | 40  | 52  | 88  | 6                    | 2    |             |        |             |        |             |        |             |        | 54 590 055  | 32,73  | 54 592 055  | 43,43  |
| 5,7              | 16,0 | 5,5  | 30  | 34  | 70  | 6                    | 2    | 54 590 058  | 27,01  | 54 592 058  | 37,80  | 54 591 058  | 27,01  | 54 593 058  | 37,80  |             |        |             |        |
| 6,0              | 7,0  | 5,8  | 30  | 34  | 70  | 6                    | 2    | 54 590 064  | 25,57  | 54 592 064  | 36,48  |             |        |             |        |             |        |             |        |
| 6,0              | 16,0 | 5,8  | 30  | 34  | 70  | 6                    | 2    | 54 590 062  | 27,01  | 54 592 062  | 37,80  | 54 591 062  | 27,01  | 54 593 062  | 37,80  |             |        |             |        |
| 6,0              | 7,0  | 5,8  | 48  | 52  | 88  | 6                    | 2    |             |        |             |        |             |        |             |        | 54 590 065  | 32,73  | 54 592 065  | 43,43  |
| 6,7              | 21,0 | 6,4  | 40  | 44  | 80  | 8                    | 2    | 54 590 068  | 38,69  | 54 592 068  | 50,69  | 54 591 068  | 38,69  | 54 593 068  | 50,69  |             |        |             |        |
| 7,0              | 21,0 | 6,7  | 40  | 44  | 80  | 8                    | 2    | 54 590 072  | 38,69  | 54 592 072  | 50,69  | 54 591 072  | 38,69  | 54 593 072  | 50,69  |             |        |             |        |
| 7,7              | 21,0 | 7,4  | 40  | 44  | 80  | 8                    | 2    | 54 590 078  | 38,69  | 54 592 078  | 50,69  | 54 591 078  | 38,69  | 54 593 078  | 50,69  |             |        |             |        |
| 8,0              | 9,0  | 7,7  | 40  | 44  | 80  | 8                    | 2    | 54 590 084  | 37,59  | 54 592 084  | 49,71  |             |        |             |        |             |        |             |        |
| 8,0              | 21,0 | 7,7  | 40  | 44  | 80  | 8                    | 2    | 54 590 082  | 38,69  | 54 592 082  | 50,69  | 54 591 082  | 38,69  | 54 593 082  | 50,69  |             |        |             |        |
| 8,0              | 9,0  | 7,7  | 64  | 68  | 104 | 8                    | 2    |             |        |             |        |             |        |             |        | 54 590 085  | 48,50  | 54 592 085  | 60,94  |
| 8,7              | 26,0 | 8,4  | 50  | 54  | 94  | 10                   | 2    | 54 590 088  | 61,06  | 54 592 088  | 74,84  | 54 591 088  | 61,06  | 54 593 088  | 74,84  |             |        |             |        |
| 9,0              | 26,0 | 8,7  | 50  | 54  | 94  | 10                   | 2    | 54 590 092  | 61,06  | 54 592 092  | 74,84  | 54 591 092  | 61,06  | 54 593 092  | 74,84  |             |        |             |        |
| 9,7              | 26,0 | 9,4  | 50  | 54  | 94  | 10                   | 2    | 54 590 098  | 61,06  | 54 592 098  | 74,84  | 54 591 098  | 61,06  | 54 593 098  | 74,84  |             |        |             |        |
| 10,0             | 11,0 | 9,7  | 50  | 54  | 94  | 10                   | 2    | 54 590 104  | 59,40  | 54 592 104  | 73,29  |             |        |             |        |             |        |             |        |
| 10,0             | 26,0 | 9,7  | 50  | 54  | 94  | 10                   | 2    | 54 590 102  | 61,06  | 54 592 102  | 74,84  | 54 591 102  | 61,06  | 54 593 102  | 74,84  |             |        |             |        |
| 10,0             | 11,0 | 9,7  | 80  | 84  | 124 | 10                   | 2    |             |        |             |        |             |        |             |        | 54 590 105  | 98,86  | 54 592 105  | 115,80 |
| 10,7             | 31,0 | 10,3 | 60  | 64  | 109 | 12                   | 2    | 54 590 108  | 100,50 | 54 592 108  | 119,10 | 54 591 108  | 100,50 | 54 593 108  | 119,10 |             |        |             |        |
| 11,0             | 31,0 | 10,6 | 60  | 64  | 109 | 12                   | 2    | 54 590 112  | 100,50 | 54 592 112  | 119,10 | 54 591 112  | 100,50 | 54 593 112  | 119,10 |             |        |             |        |
| 11,7             | 31,0 | 11,3 | 60  | 64  | 109 | 12                   | 2    | 54 590 118  | 100,50 | 54 592 118  | 119,10 | 54 591 118  | 100,50 | 54 593 118  | 119,10 |             |        |             |        |
| 12,0             | 13,0 | 11,6 | 60  | 64  | 109 | 12                   | 2    | 54 590 124  | 98,64  | 54 592 124  | 116,80 |             |        |             |        |             |        |             |        |
| 12,0             | 31,0 | 11,6 | 60  | 64  | 109 | 12                   | 2    | 54 590 122  | 100,50 | 54 592 122  | 119,10 | 54 591 122  | 100,50 | 54 593 122  | 119,10 |             |        |             |        |
| 12,0             | 13,0 | 11,6 | 96  | 100 | 145 | 12                   | 2    |             |        |             |        |             |        |             |        | 54 590 125  | 130,00 | 54 592 125  | 145,50 |
| 13,0             | 36,0 | 12,6 | 70  | 74  | 119 | 14                   | 2    | 54 590 132  | 145,50 | 54 592 132  | 165,40 | 54 591 132  | 145,50 | 54 593 132  | 165,40 |             |        |             |        |
| 13,7             | 36,0 | 13,3 | 70  | 74  | 119 | 14                   | 2    | 54 590 138  | 145,50 | 54 592 138  | 168,60 | 54 591 138  | 145,50 | 54 593 138  | 165,40 |             |        |             |        |
| 14,0             | 15,0 | 13,6 | 70  | 74  | 119 | 14                   | 2    | 54 590 144  | 144,40 | 54 592 144  | 164,20 |             |        |             |        |             |        |             |        |
| 14,0             | 36,0 | 13,6 | 70  | 74  | 119 | 14                   | 2    | 54 590 142  | 145,50 | 54 592 142  | 165,40 | 54 591 142  | 145,50 | 54 593 142  | 165,40 |             |        |             |        |
| 14,0             | 15,0 | 13,6 | 112 | 116 | 161 | 14                   | 2    |             |        |             |        |             |        |             |        | 54 590 145  | 192,80 | 54 592 145  | 212,80 |
| 15,0             | 41,0 | 14,5 | 80  | 84  | 132 | 16                   | 2    | 54 590 152  | 189,60 | 54 592 152  | 212,80 | 54 591 152  | 189,60 | 54 593 152  | 212,80 |             |        |             |        |
| 15,7             | 41,0 | 15,2 | 80  | 84  | 132 | 16                   | 2    | 54 590 158  | 189,60 | 54 592 158  | 212,80 | 54 591 158  | 189,60 | 54 593 158  | 212,80 |             |        |             |        |
| 16,0             | 17,0 | 15,5 | 80  | 84  | 132 | 16                   | 2    | 54 590 164  | 187,30 | 54 592 164  | 206,10 |             |        |             |        |             |        |             |        |
| 16,0             | 41,0 | 15,5 | 80  | 84  | 132 | 16                   | 2    | 54 590 162  | 189,60 | 54 592 162  | 212,80 | 54 591 162  | 189,60 | 54 593 162  | 212,80 |             |        |             |        |
| 16,0             | 17,0 | 15,5 | 128 | 132 | 180 | 16                   | 2    |             |        |             |        |             |        |             |        | 54 590 165  | 250,20 | 54 592 165  | 272,30 |
| 18,0             | 20,0 | 17,5 | 90  | 94  | 142 | 18                   | 2    | 54 590 184  | 235,90 | 54 592 184  | 255,70 |             |        |             |        |             |        |             |        |
| 18,0             | 47,0 | 17,5 | 90  | 94  | 142 | 18                   | 2    | 54 590 182  | 246,90 | 54 592 182  | 268,80 | 54 591 182  | 246,90 | 54 593 182  | 268,80 |             |        |             |        |
| 18,0             | 20,0 | 17,5 | 144 | 148 | 196 | 18                   | 2    |             |        |             |        |             |        |             |        | 54 590 185  | 318,60 | 54 592 185  | 338,30 |
| 19,7             | 52,0 | 19,2 | 100 | 104 | 154 | 20                   | 2    | 54 590 198  | 270,10 | 54 592 198  | 295,40 | 54 591 198  | 270,10 | 54 593 198  | 295,40 |             |        |             |        |
| 20,0             | 22,0 | 19,5 | 100 | 104 | 154 | 20                   | 2    | 54 590 204  | 251,30 | 54 592 204  | 277,80 |             |        |             |        |             |        |             |        |
| 20,0             | 52,0 | 19,5 | 100 | 104 | 154 | 20                   | 2    | 54 590 202  | 270,10 | 54 592 202  | 295,40 | 54 591 202  | 270,10 | 54 593 202  | 295,40 |             |        |             |        |
| 20,0             | 22,0 | 19,5 | 160 | 164 | 214 | 20                   | 2    |             |        |             |        |             |        |             |        | 54 590 205  | 347,20 | 54 592 205  | 373,60 |
| 24,7             | 65,0 | 24,2 | 125 | 130 | 186 | 25                   | 2    | 54 590 248  | 503,70 | 54 592 248  | 524,60 | 54 591 248  | 503,70 | 54 593 248  | 524,60 |             |        |             |        |
| 25,0             | 27,0 | 24,5 | 125 | 130 | 186 | 25                   | 2    | 54 590 254  | 486,10 | 54 592 254  | 505,90 |             |        |             |        |             |        |             |        |
| 25,0             | 65,0 | 24,5 | 125 | 130 | 186 | 25                   | 2    | 54 590 252  | 503,70 | 54 592 252  | 524,60 | 54 591 252  | 503,70 | 54 593 252  | 524,60 |             |        |             |        |
| 25,0             | 27,0 | 24,5 | 200 | 204 | 260 | 25                   | 2    |             |        |             |        |             |        |             |        | 54 590 255  | 686,60 | 54 592 255  | 709,80 |

|                       |   |   |   |   |   |
|-----------------------|---|---|---|---|---|
| Steel                 |   |   |   |   |   |
| Stainless steel       |   |   |   |   |   |
| Cast iron             |   |   |   |   |   |
| Non ferrous metals    | • | • | • | • | • |
| Heat resistant alloys |   |   |   |   |   |
| Hardened materials    |   |   |   |   |   |

Where is my order right now?

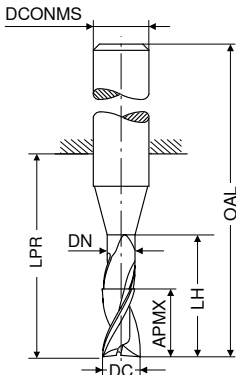
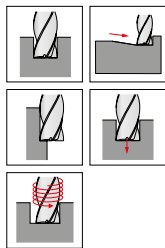
Order Delivery Tracking

For those who do not want to lose sight of their order: With the shipment number you can track the current status of your order online – no matter how your order was placed.



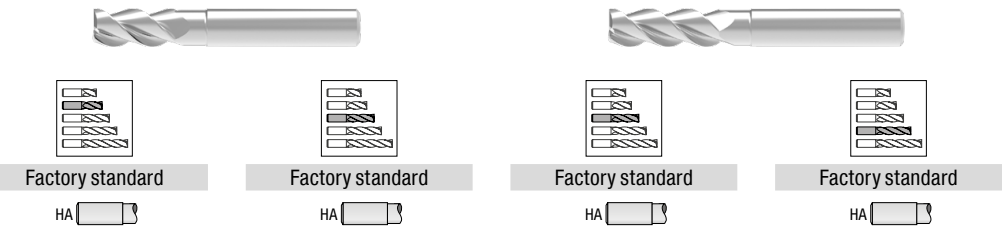


AluLine – End milling cutter



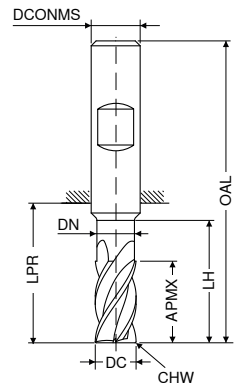
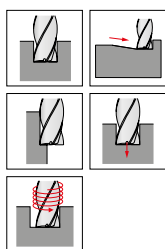
WNT \ Performance

| DC <sub>h5</sub> | APMX | DN   | LH | OAL | DCONMS <sub>h5</sub> | ZEFP |
|------------------|------|------|----|-----|----------------------|------|
| mm               | mm   | mm   | mm | mm  | mm                   |      |
| 3                | 8    | 2,7  | 13 | 57  | 6                    | 3    |
| 4                | 11   | 3,7  | 17 | 57  | 6                    | 3    |
| 5                | 13   | 4,7  | 19 | 57  | 6                    | 3    |
| 6                | 13   | 5,7  | 19 | 57  | 6                    | 3    |
| 6                | 18   | 5,7  | 24 | 62  | 6                    | 3    |
| 8                | 21   | 7,4  | 25 | 63  | 8                    | 3    |
| 8                | 24   | 7,4  | 30 | 68  | 8                    | 3    |
| 10               | 22   | 9,2  | 30 | 72  | 10                   | 3    |
| 10               | 30   | 9,2  | 38 | 80  | 10                   | 3    |
| 12               | 26   | 11,0 | 36 | 83  | 12                   | 3    |
| 12               | 36   | 11,0 | 46 | 93  | 12                   | 3    |
| 14               | 26   | 13,0 | 36 | 83  | 14                   | 3    |
| 16               | 36   | 15,0 | 42 | 92  | 16                   | 3    |
| 16               | 48   | 15,0 | 58 | 108 | 16                   | 3    |
| 18               | 36   | 17,0 | 42 | 92  | 18                   | 3    |
| 20               | 41   | 19,0 | 52 | 104 | 20                   | 3    |
| 20               | 60   | 19,0 | 74 | 126 | 20                   | 3    |



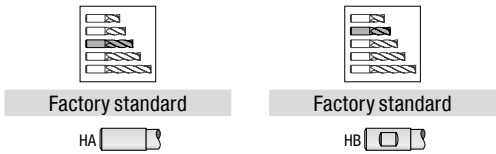
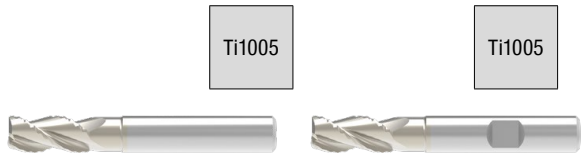
|                       |
|-----------------------|
| Steel                 |
| Stainless steel       |
| Cast iron             |
| Non ferrous metals    |
| Heat resistant alloys |
| Hardened materials    |

AluLine – Rough milling cutter



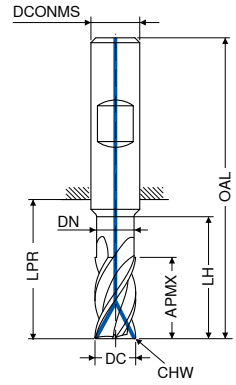
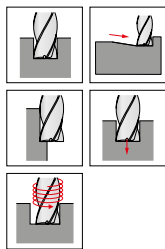
WNT \ Performance

| DC <sub>h10</sub> | APMX | DN   | LH | LPR | OAL | DCONMS <sub>h6</sub> | CHW | ZEFP |
|-------------------|------|------|----|-----|-----|----------------------|-----|------|
| mm                | mm   | mm   | mm | mm  | mm  | mm                   | mm  |      |
| 6                 | 13   | 5,7  | 18 | 21  | 57  | 6                    | 0,4 | 3    |
| 8                 | 21   | 7,4  | 25 | 27  | 63  | 8                    | 0,4 | 3    |
| 10                | 22   | 9,2  | 30 | 32  | 72  | 10                   | 0,4 | 3    |
| 12                | 26   | 11,0 | 36 | 38  | 83  | 12                   | 0,4 | 3    |
| 16                | 36   | 15,0 | 42 | 44  | 92  | 16                   | 0,4 | 3    |
| 20                | 41   | 19,0 | 52 | 54  | 104 | 20                   | 0,4 | 3    |



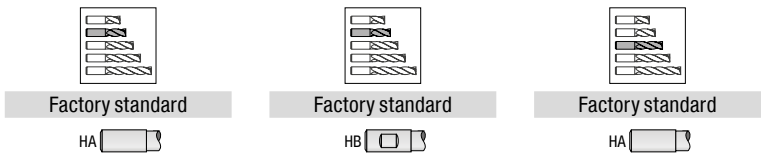
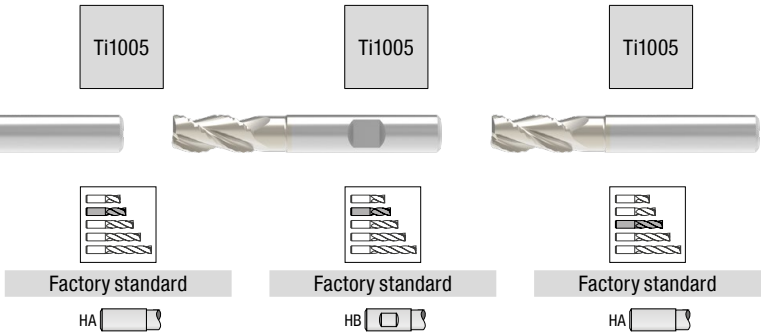
|                       |
|-----------------------|
| Steel                 |
| Stainless steel       |
| Cast iron             |
| Non ferrous metals    |
| Heat resistant alloys |
| Hardened materials    |

AluLine – Rough milling cutter



WNT \ Performance

| DC <sub>h10</sub> | APMX | DN   | LH | LPR | OAL | DCONMS <sub>h6</sub> | CHW | ZEFP |
|-------------------|------|------|----|-----|-----|----------------------|-----|------|
| mm                | mm   | mm   | mm | mm  | mm  | mm                   | mm  |      |
| 6                 | 13   | 5,7  | 18 | 21  | 57  | 6                    | 0,4 | 3    |
| 8                 | 21   | 7,4  | 25 | 27  | 63  | 8                    | 0,4 | 3    |
| 10                | 22   | 9,2  | 30 | 32  | 72  | 10                   | 0,4 | 3    |
| 12                | 26   | 11,0 | 36 | 38  | 83  | 12                   | 0,4 | 3    |
| 16                | 36   | 15,0 | 42 | 44  | 92  | 16                   | 0,4 | 3    |
| 20                | 41   | 19,0 | 52 | 54  | 104 | 20                   | 0,4 | 3    |



|                       |
|-----------------------|
| Steel                 |
| Stainless steel       |
| Cast iron             |
| Non ferrous metals    |
| Heat resistant alloys |
| Hardened materials    |

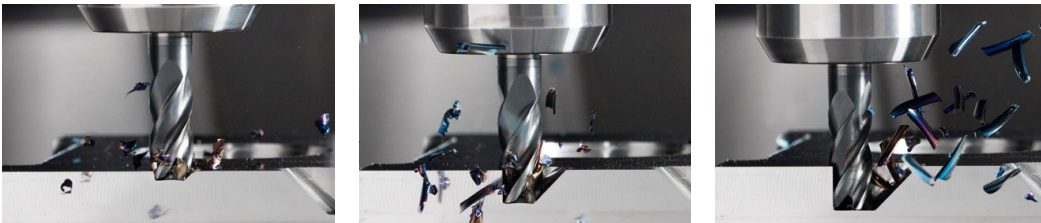


# MONSTERMILL PCR-UNI | PCR-ALU

## MonsterMill PCR-UNI and PCR-ALU

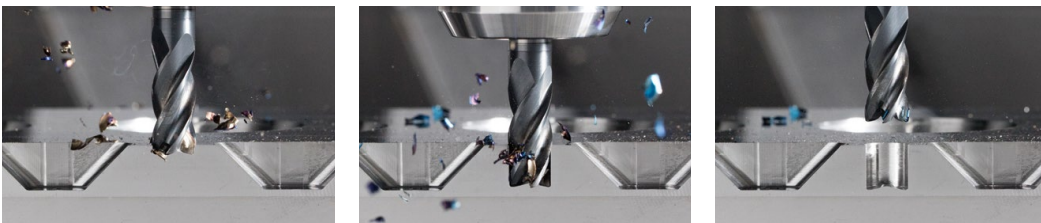
Ramping and helical milling

### High ramping and helix angle



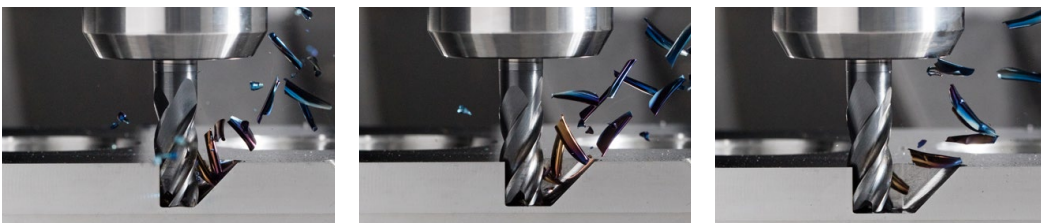
- ▲ Penetrates the material quickly
- ▲ Process-secure ramping at high angles of up to 45°
- ▲ Quick creation of circular pockets with high helical widths of cut

### Drilling



- ▲ High feed rates when drilling with a 4-fluted tool
- ▲ Drilling up to 1 x DC
- ▲ Quick penetration to working depth

### Slot and profile milling



- ▲ High performance 4-fluted HPC milling cutter
- ▲ Full slot milling with high chip removal
- ▲ Profiling using a 4-fluted tool for high feed rates

More information can be found in → **Main Catalogue 2019**

Product range

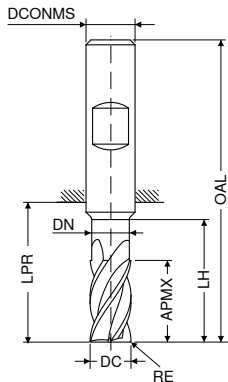
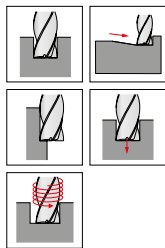
34-36

Cutting Data

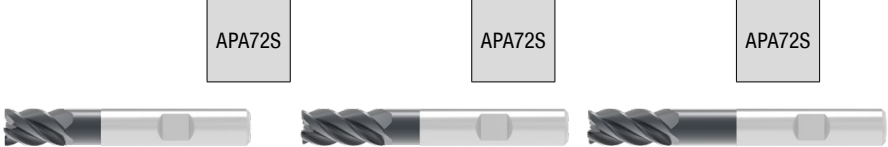
272-275



MonsterMill – Plunge milling cutter with corner radius



WNT \ Performance



DIN 6527

DIN 6527

DIN 6527

HB

HB

HB

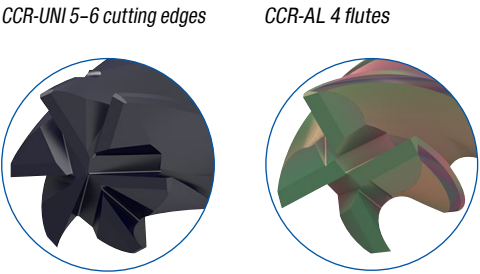
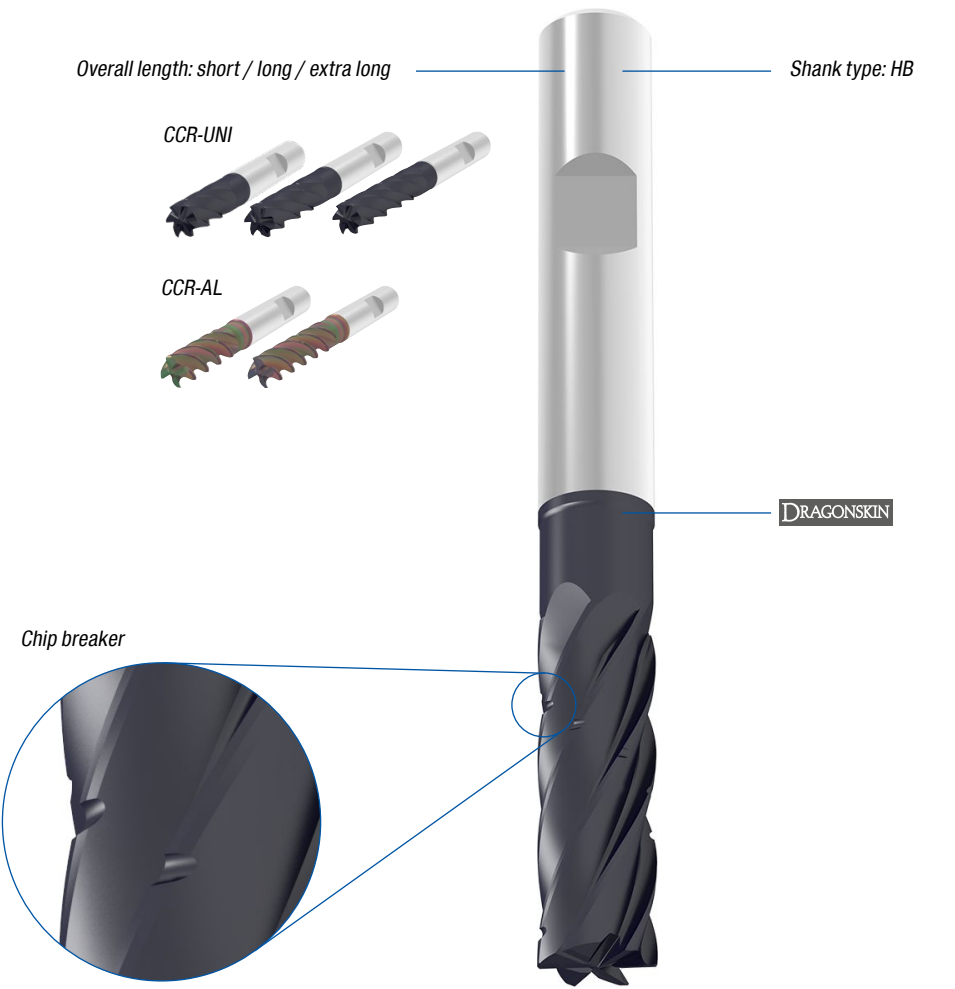
| DC <sub>18</sub> | RE <sub>±0,03</sub> | APMX | DN   | LH | LPR | OAL | DCONMS <sub>h6</sub> | ZEFP | Article no. | EUR    | Article no. | EUR    | Article no. | EUR    |
|------------------|---------------------|------|------|----|-----|-----|----------------------|------|-------------|--------|-------------|--------|-------------|--------|
| 5,7              | 0,20                | 10   |      |    | 18  | 54  | 6                    | 4    | 52 613 057  | 44,19  | 52 614 057  | 44,42  | 52 615 057  | 51,25  |
| 5,7              | 0,20                | 13   | 5,5  | 19 | 21  | 57  | 6                    | 4    |             |        |             |        |             |        |
| 5,7              | 0,20                | 13   | 5,5  | 24 | 26  | 62  | 6                    | 4    |             |        |             |        |             |        |
| 6,0              | 0,20                | 10   |      |    | 18  | 54  | 6                    | 4    | 52 613 060  | 44,19  | 52 614 060  | 46,29  | 52 615 060  | 52,77  |
| 6,0              | 0,20                | 13   | 5,8  | 19 | 21  | 57  | 6                    | 4    |             |        |             |        |             |        |
| 6,0              | 0,20                | 13   | 5,8  | 24 | 26  | 62  | 6                    | 4    |             |        |             |        |             |        |
| 6,7              | 0,20                | 11   |      |    | 22  | 58  | 8                    | 4    | 52 613 067  | 53,01  | 52 614 067  | 52,46  | 52 615 067  | 69,95  |
| 6,7              | 0,20                | 16   | 6,5  | 25 | 27  | 63  | 8                    | 4    |             |        |             |        |             |        |
| 6,7              | 0,20                | 16   | 6,4  | 30 | 32  | 68  | 8                    | 4    |             |        |             |        |             |        |
| 7,0              | 0,20                | 11   |      |    | 22  | 58  | 8                    | 4    | 52 613 070  | 53,01  | 52 614 070  | 52,46  | 52 615 070  | 69,95  |
| 7,0              | 0,20                | 16   | 6,8  | 25 | 27  | 63  | 8                    | 4    |             |        |             |        |             |        |
| 7,0              | 0,20                | 16   | 6,7  | 30 | 32  | 68  | 8                    | 4    |             |        |             |        |             |        |
| 7,7              | 0,20                | 12   |      |    | 22  | 58  | 8                    | 4    | 52 613 077  | 53,01  | 52 614 077  | 54,01  | 52 615 077  | 69,95  |
| 7,7              | 0,20                | 19   | 7,5  | 25 | 27  | 63  | 8                    | 4    |             |        |             |        |             |        |
| 7,7              | 0,20                | 21   | 7,4  | 30 | 32  | 68  | 8                    | 4    |             |        |             |        |             |        |
| 8,0              | 0,20                | 12   |      |    | 22  | 58  | 8                    | 4    | 52 613 080  | 53,01  | 52 614 080  | 55,88  | 52 615 080  | 73,08  |
| 8,0              | 0,20                | 19   | 7,8  | 25 | 27  | 63  | 8                    | 4    |             |        |             |        |             |        |
| 8,0              | 0,20                | 21   | 7,7  | 30 | 32  | 68  | 8                    | 4    |             |        |             |        |             |        |
| 8,7              | 0,32                | 13   |      |    | 26  | 66  | 10                   | 4    | 52 613 087  | 68,89  | 52 614 087  | 78,47  | 52 615 087  | 87,38  |
| 8,7              | 0,32                | 19   | 8,5  | 30 | 32  | 72  | 10                   | 4    |             |        |             |        |             |        |
| 8,7              | 0,32                | 22   | 8,4  | 38 | 40  | 80  | 10                   | 4    |             |        |             |        |             |        |
| 9,0              | 0,32                | 13   |      |    | 26  | 66  | 10                   | 4    | 52 613 090  | 68,89  | 52 614 090  | 78,47  | 52 615 090  | 87,38  |
| 9,0              | 0,32                | 19   | 8,8  | 30 | 32  | 72  | 10                   | 4    |             |        |             |        |             |        |
| 9,0              | 0,32                | 22   | 8,7  | 38 | 40  | 80  | 10                   | 4    |             |        |             |        |             |        |
| 9,7              | 0,32                | 14   |      |    | 26  | 66  | 10                   | 4    | 52 613 097  | 68,89  | 52 614 097  | 78,47  | 52 615 097  | 87,38  |
| 9,7              | 0,32                | 22   | 9,5  | 30 | 32  | 72  | 10                   | 4    |             |        |             |        |             |        |
| 9,7              | 0,32                | 22   | 9,4  | 38 | 40  | 80  | 10                   | 4    |             |        |             |        |             |        |
| 10,0             | 0,32                | 14   |      |    | 26  | 66  | 10                   | 4    | 52 613 100  | 68,89  | 52 614 100  | 74,62  | 52 615 100  | 83,22  |
| 10,0             | 0,32                | 22   | 9,8  | 30 | 32  | 72  | 10                   | 4    |             |        |             |        |             |        |
| 10,0             | 0,32                | 22   | 9,7  | 38 | 40  | 80  | 10                   | 4    |             |        |             |        |             |        |
| 11,7             | 0,32                | 16   |      |    | 28  | 73  | 12                   | 4    | 52 613 117  | 89,94  | 52 614 117  | 100,50 | 52 615 117  | 119,40 |
| 11,7             | 0,32                | 26   | 11,5 | 36 | 38  | 83  | 12                   | 4    |             |        |             |        |             |        |
| 11,7             | 0,32                | 26   | 11,3 | 46 | 48  | 93  | 12                   | 4    |             |        |             |        |             |        |
| 12,0             | 0,32                | 16   |      |    | 28  | 73  | 12                   | 4    | 52 613 120  | 89,94  | 52 614 120  | 95,89  | 52 615 120  | 113,70 |
| 12,0             | 0,32                | 26   | 11,8 | 36 | 38  | 83  | 12                   | 4    |             |        |             |        |             |        |
| 12,0             | 0,32                | 26   | 11,6 | 46 | 48  | 93  | 12                   | 4    |             |        |             |        |             |        |
| 13,7             | 0,32                | 18   |      |    | 30  | 75  | 14                   | 4    | 52 613 137  | 113,60 | 52 614 137  | 119,10 | 52 615 137  | 144,00 |
| 13,7             | 0,32                | 26   | 13,5 | 36 | 38  | 83  | 14                   | 4    |             |        |             |        |             |        |
| 13,7             | 0,32                | 26   | 13,3 | 52 | 54  | 99  | 14                   | 4    |             |        |             |        |             |        |
| 14,0             | 0,32                | 18   |      |    | 30  | 75  | 14                   | 4    | 52 613 140  | 113,60 | 52 614 140  | 123,50 | 52 615 140  | 140,40 |
| 14,0             | 0,32                | 26   | 13,8 | 36 | 38  | 83  | 14                   | 4    |             |        |             |        |             |        |
| 14,0             | 0,32                | 26   | 13,6 | 52 | 54  | 99  | 14                   | 4    |             |        |             |        |             |        |
| 15,5             | 0,32                | 22   |      |    | 34  | 82  | 16                   | 4    | 52 613 155  | 144,40 | 52 614 155  | 162,00 | 52 615 155  | 200,90 |
| 15,5             | 0,32                | 32   | 15,3 | 42 | 44  | 92  | 16                   | 4    |             |        |             |        |             |        |
| 15,5             | 0,32                | 36   | 15,0 | 58 | 60  | 108 | 16                   | 4    |             |        |             |        |             |        |
| 16,0             | 0,32                | 22   |      |    | 34  | 82  | 16                   | 4    | 52 613 160  | 144,40 | 52 614 160  | 167,50 | 52 615 160  | 196,40 |
| 16,0             | 0,32                | 32   | 15,8 | 42 | 44  | 92  | 16                   | 4    |             |        |             |        |             |        |
| 16,0             | 0,32                | 36   | 15,5 | 58 | 60  | 108 | 16                   | 4    |             |        |             |        |             |        |
| 17,5             | 0,32                | 24   |      |    | 36  | 84  | 18                   | 4    | 52 613 175  | 172,00 | 52 614 175  | 189,60 | 52 615 175  | 226,00 |
| 17,5             | 0,32                | 32   | 17,3 | 42 | 44  | 92  | 18                   | 4    |             |        |             |        |             |        |
| 17,5             | 0,32                | 36   | 17,0 | 67 | 69  | 117 | 18                   | 4    |             |        |             |        |             |        |
| 18,0             | 0,32                | 24   |      |    | 36  | 84  | 18                   | 4    | 52 613 180  | 172,00 | 52 614 180  | 195,10 | 52 615 180  | 225,50 |
| 18,0             | 0,32                | 32   | 17,8 | 42 | 44  | 92  | 18                   | 4    |             |        |             |        |             |        |
| 18,0             | 0,32                | 36   | 17,5 | 67 | 69  | 117 | 18                   | 4    |             |        |             |        |             |        |
| 19,5             | 0,50                | 26   |      |    | 42  | 92  | 20                   | 4    | 52 613 195  | 212,80 | 52 614 195  | 255,70 | 52 615 195  | 331,60 |
| 19,5             | 0,50                | 38   | 19,3 | 52 | 54  | 104 | 20                   | 4    |             |        |             |        |             |        |
| 19,5             | 0,50                | 41   | 19,0 | 74 | 76  | 126 | 20                   | 4    |             |        |             |        |             |        |
| 20,0             | 0,50                | 26   |      |    | 42  | 92  | 20                   | 4    | 52 613 200  | 212,80 | 52 614 200  | 264,60 | 52 615 200  | 325,50 |
| 20,0             | 0,50                | 38   | 19,8 | 52 | 54  | 104 | 20                   | 4    |             |        |             |        |             |        |
| 20,0             | 0,50                | 41   | 19,5 | 74 | 76  | 126 | 20                   | 4    |             |        |             |        |             |        |

|                       |   |   |   |
|-----------------------|---|---|---|
| Steel                 | ● | ● | ● |
| Stainless steel       | ○ | ○ | ○ |
| Cast iron             | ● | ● | ● |
| Non ferrous metals    |   |   |   |
| Heat resistant alloys |   |   |   |
| Hardened materials    |   |   |   |

# CircularLine – End Mills for Trochoidal Milling

Trochoidal Milling is a milling strategy enabled by the use of new CAM programming systems and control cycles, which maintains a constant tool circumferential contact and consistent average chip thickness, and ensuring an optimum and efficient machining process.

## Tool Design



### Advantages/Benefits

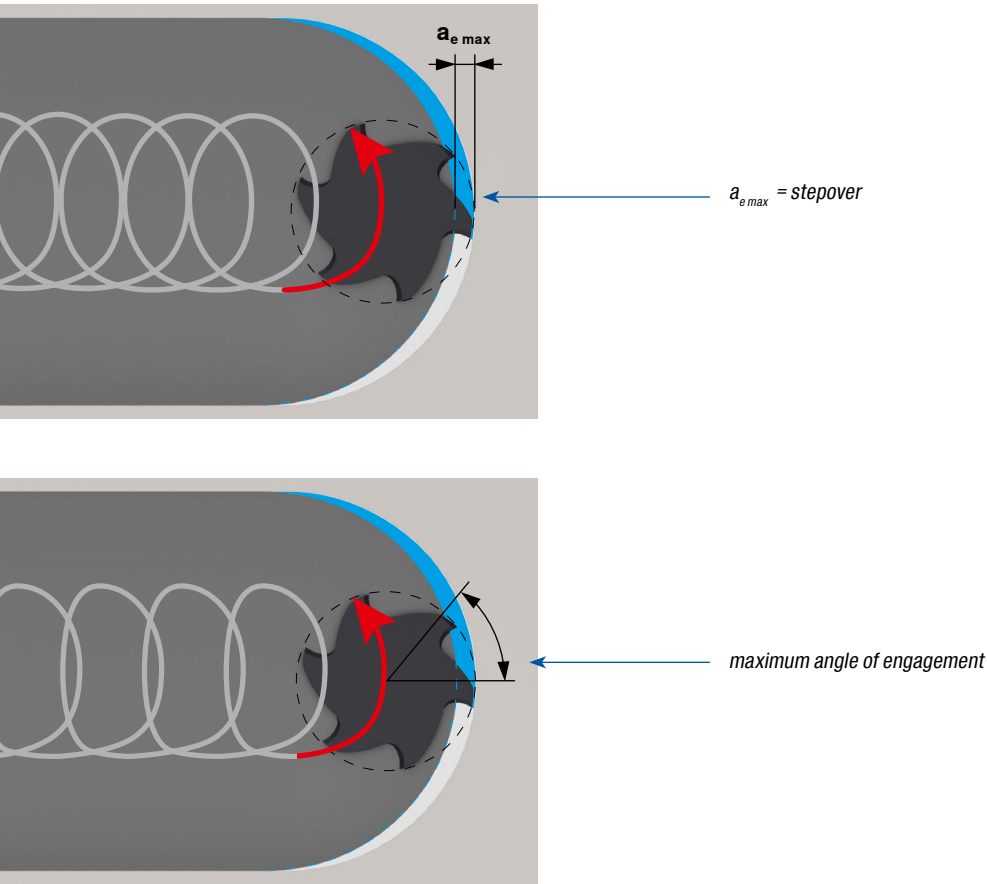
- ▲ Tools with chip breakers for optimum chip transport
- ▲ Universal tool with 5-6 cutting edges for extremely quiet running and a high material removal rate
- ▲ Aluminium tool with 4 cutting edges for high stepover
- ▲ CCR-UNI available in 2 x DC, 3 x DC and 4 x DC cutting lengths
- ▲ CCR-AL available in 3 x DC and 4 x DC cutting lengths
- ▲ Cutting depths up to 4 x DC possible

More information can be found in → **Main Catalogue 2019**

|                       |       |              |         |
|-----------------------|-------|--------------|---------|
| Product range         | 38-47 | Cutting Data | 280-287 |
| Technical Information | 357   |              |         |

## Trochoidal Milling

When programming the various CAM systems different information is required.



### Features & benefits of trochoidal milling

- ▲ Reduced tool wear
- ▲ Higher material removal rate than HPC machining possible
- ▲ Spindle and machine-friendly
- ▲ Suitable for low-power machines
- ▲ Suitable for thin-walled components and unstable workpiece clamping

### Calculation of the average chip thickness

$$h_m \approx f_z \sqrt{\frac{a_e}{DC}}$$

$$f_z \approx h_m \sqrt{\frac{DC}{a_e}}$$

$a_{e\ max}$  = maximum lateral infeed (depending on the material to be machined)

$f_z$  = maximum feed per tooth

$h_m$  = average chip thickness

DC = tool diameter

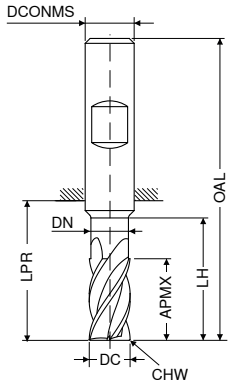


CircularLine – End milling cutter

▲ Chip breaker 0.9 x DC



WNT \ Performance



Factory standard



Factory standard



| DC ø8 | OAL | APMX | DN   | LH | LPR | DCONMS h6 | CHW | ZEFP |
|-------|-----|------|------|----|-----|-----------|-----|------|
| mm    | mm  | mm   | mm   | mm | mm  | mm        | mm  |      |
| 6     | 57  | 13   | 5,8  | 19 | 21  | 6         | 0,2 | 6    |
| 6     | 63  | 19   | 5,8  | 25 | 27  | 6         | 0,2 | 6    |
| 8     | 71  | 25   | 7,7  | 33 | 35  | 8         | 0,2 | 6    |
| 8     | 63  | 21   | 7,7  | 25 | 27  | 8         | 0,2 | 6    |
| 10    | 83  | 31   | 9,7  | 41 | 43  | 10        | 0,2 | 6    |
| 10    | 72  | 22   | 9,7  | 30 | 32  | 10        | 0,2 | 6    |
| 12    | 94  | 37   | 11,6 | 47 | 49  | 12        | 0,2 | 6    |
| 12    | 83  | 26   | 11,6 | 36 | 38  | 12        | 0,2 | 6    |
| 16    | 111 | 49   | 15,5 | 61 | 63  | 16        | 0,2 | 6    |
| 16    | 92  | 36   | 15,5 | 42 | 44  | 16        | 0,2 | 6    |
| 20    | 127 | 61   | 19,5 | 75 | 77  | 20        | 0,2 | 6    |
| 20    | 104 | 41   | 19,5 | 52 | 54  | 20        | 0,2 | 6    |

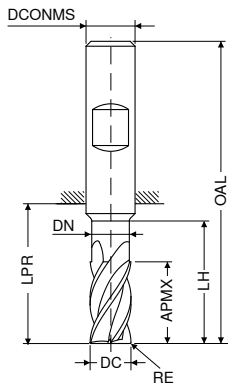
|                       |   |   |
|-----------------------|---|---|
| Steel                 | ● | ● |
| Stainless steel       | ○ | ○ |
| Cast iron             | ● | ● |
| Non ferrous metals    |   |   |
| Heat resistant alloys | ○ | ○ |
| Hardened materials    |   |   |

CircularLine – End milling cutter

▲ Chip breaker 0.9 x DC



WNT \ Performance



Factory standard



| DC ø8 | OAL | RE ±0,05 | APMX | DN   | LH | LPR | DCONMS h6 | ZEFP |
|-------|-----|----------|------|------|----|-----|-----------|------|
| mm    | mm  | mm       | mm   | mm   | mm | mm  | mm        |      |
| 6     | 57  | 1,0      | 13   | 5,8  | 19 | 21  | 6         | 6    |
| 6     | 57  | 1,5      | 13   | 5,8  | 19 | 21  | 6         | 6    |
| 6     | 57  | 0,2      | 13   | 5,8  | 19 | 21  | 6         | 6    |
| 8     | 63  | 1,5      | 21   | 7,7  | 25 | 27  | 8         | 6    |
| 8     | 63  | 1,0      | 21   | 7,7  | 25 | 27  | 8         | 6    |
| 8     | 63  | 2,0      | 21   | 7,7  | 25 | 27  | 8         | 6    |
| 8     | 63  | 0,2      | 21   | 7,7  | 25 | 27  | 8         | 6    |
| 10    | 72  | 1,0      | 22   | 9,7  | 30 | 32  | 10        | 6    |
| 10    | 72  | 1,6      | 22   | 9,7  | 30 | 32  | 10        | 6    |
| 10    | 72  | 1,5      | 22   | 9,7  | 30 | 32  | 10        | 6    |
| 10    | 72  | 2,0      | 22   | 9,7  | 30 | 32  | 10        | 6    |
| 10    | 72  | 0,2      | 22   | 9,7  | 30 | 32  | 10        | 6    |
| 12    | 83  | 1,5      | 26   | 11,6 | 36 | 38  | 12        | 6    |
| 12    | 83  | 1,6      | 26   | 11,6 | 36 | 38  | 12        | 6    |
| 12    | 83  | 2,0      | 26   | 11,6 | 36 | 38  | 12        | 6    |
| 12    | 83  | 1,0      | 26   | 11,6 | 36 | 38  | 12        | 6    |
| 12    | 83  | 3,0      | 26   | 11,6 | 36 | 38  | 12        | 6    |
| 12    | 83  | 0,2      | 26   | 11,6 | 36 | 38  | 12        | 6    |
| 16    | 92  | 1,6      | 36   | 15,5 | 42 | 44  | 16        | 6    |
| 16    | 92  | 4,0      | 36   | 15,5 | 42 | 44  | 16        | 6    |
| 16    | 92  | 1,5      | 36   | 15,5 | 42 | 44  | 16        | 6    |
| 16    | 92  | 2,0      | 36   | 15,5 | 42 | 44  | 16        | 6    |
| 16    | 92  | 1,0      | 36   | 15,5 | 42 | 44  | 16        | 6    |
| 16    | 92  | 3,0      | 36   | 15,5 | 42 | 44  | 16        | 6    |
| 16    | 92  | 0,2      | 36   | 15,5 | 42 | 44  | 16        | 6    |
| 20    | 104 | 1,0      | 41   | 19,5 | 52 | 54  | 20        | 6    |
| 20    | 104 | 2,0      | 41   | 19,5 | 52 | 54  | 20        | 6    |
| 20    | 104 | 1,6      | 41   | 19,5 | 52 | 54  | 20        | 6    |
| 20    | 104 | 3,0      | 41   | 19,5 | 52 | 54  | 20        | 6    |
| 20    | 104 | 1,5      | 41   | 19,5 | 52 | 54  | 20        | 6    |
| 20    | 104 | 4,0      | 41   | 19,5 | 52 | 54  | 20        | 6    |
| 20    | 104 | 0,2      | 41   | 19,5 | 52 | 54  | 20        | 6    |

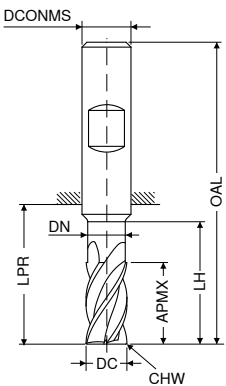
|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ○ |
| Cast iron             | ● |
| Non ferrous metals    |   |
| Heat resistant alloys | ○ |
| Hardened materials    |   |

CircularLine – End milling cutter

▲ Chip breaker 0.9 x DC



WNT \ Performance



Factory standard



| DC ø8 | OAL | APMX | DN   | LH | LPR | DCONMS h6 | CHW | ZEFP |
|-------|-----|------|------|----|-----|-----------|-----|------|
| mm    | mm  | mm   | mm   | mm | mm  | mm        | mm  |      |
| 6     | 67  | 25   | 5,8  | 29 | 31  | 6         | 0,2 | 5    |
| 8     | 76  | 33   | 7,7  | 38 | 40  | 8         | 0,2 | 5    |
| 10    | 89  | 41   | 9,7  | 47 | 49  | 10        | 0,2 | 5    |
| 12    | 102 | 49   | 11,6 | 55 | 57  | 12        | 0,2 | 5    |
| 16    | 123 | 65   | 15,5 | 73 | 75  | 16        | 0,2 | 5    |
| 20    | 143 | 82   | 19,5 | 91 | 93  | 20        | 0,2 | 5    |

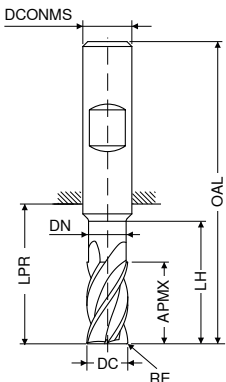
|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ○ |
| Cast iron             | ● |
| Non ferrous metals    |   |
| Heat resistant alloys | ○ |
| Hardened materials    |   |

CircularLine – End milling cutter

▲ Chip breaker 0.9 x DC



WNT \ Performance



Factory standard



| DC ø8 | OAL | RE ±0,05 | APMX | DN   | LH | LPR | DCONMS h6 | ZEFP |
|-------|-----|----------|------|------|----|-----|-----------|------|
| mm    | mm  | mm       | mm   | mm   | mm | mm  | mm        |      |
| 6     | 67  | 1,5      | 25   | 5,8  | 29 | 31  | 6         | 5    |
| 6     | 67  | 0,2      | 25   | 5,8  | 29 | 31  | 6         | 5    |
| 6     | 67  | 1,0      | 25   | 5,8  | 29 | 31  | 6         | 5    |
| 8     | 76  | 1,5      | 33   | 7,7  | 38 | 40  | 8         | 5    |
| 8     | 76  | 2,0      | 33   | 7,7  | 38 | 40  | 8         | 5    |
| 8     | 76  | 0,2      | 33   | 7,7  | 38 | 40  | 8         | 5    |
| 8     | 76  | 1,0      | 33   | 7,7  | 38 | 40  | 8         | 5    |
| 10    | 89  | 1,5      | 41   | 9,7  | 47 | 49  | 10        | 5    |
| 10    | 89  | 2,0      | 41   | 9,7  | 47 | 49  | 10        | 5    |
| 10    | 89  | 1,6      | 41   | 9,7  | 47 | 49  | 10        | 5    |
| 10    | 89  | 0,2      | 41   | 9,7  | 47 | 49  | 10        | 5    |
| 10    | 89  | 1,0      | 41   | 9,7  | 47 | 49  | 10        | 5    |
| 12    | 102 | 1,0      | 49   | 11,6 | 55 | 57  | 12        | 5    |
| 12    | 102 | 2,0      | 49   | 11,6 | 55 | 57  | 12        | 5    |
| 12    | 102 | 3,0      | 49   | 11,6 | 55 | 57  | 12        | 5    |
| 12    | 102 | 1,6      | 49   | 11,6 | 55 | 57  | 12        | 5    |
| 12    | 102 | 0,2      | 49   | 11,6 | 55 | 57  | 12        | 5    |
| 12    | 102 | 1,5      | 49   | 11,6 | 55 | 57  | 12        | 5    |
| 16    | 123 | 1,6      | 65   | 15,5 | 73 | 75  | 16        | 5    |
| 16    | 123 | 3,0      | 65   | 15,5 | 73 | 75  | 16        | 5    |
| 16    | 123 | 2,0      | 65   | 15,5 | 73 | 75  | 16        | 5    |
| 16    | 123 | 4,0      | 65   | 15,5 | 73 | 75  | 16        | 5    |
| 16    | 123 | 1,5      | 65   | 15,5 | 73 | 75  | 16        | 5    |
| 16    | 123 | 0,2      | 65   | 15,5 | 73 | 75  | 16        | 5    |
| 16    | 123 | 1,0      | 65   | 15,5 | 73 | 75  | 16        | 5    |
| 20    | 143 | 1,5      | 82   | 19,5 | 91 | 93  | 20        | 5    |
| 20    | 143 | 3,0      | 82   | 19,5 | 91 | 93  | 20        | 5    |
| 20    | 143 | 2,0      | 82   | 19,5 | 91 | 93  | 20        | 5    |
| 20    | 143 | 4,0      | 82   | 19,5 | 91 | 93  | 20        | 5    |
| 20    | 143 | 1,6      | 82   | 19,5 | 91 | 93  | 20        | 5    |
| 20    | 143 | 0,2      | 82   | 19,5 | 91 | 93  | 20        | 5    |
| 20    | 143 | 1,0      | 82   | 19,5 | 91 | 93  | 20        | 5    |

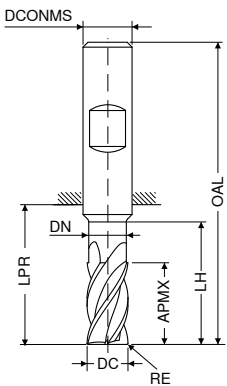
|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ○ |
| Cast iron             | ● |
| Non ferrous metals    |   |
| Heat resistant alloys | ○ |
| Hardened materials    |   |

CircularLine – End milling cutter

▲ Chip breaker 1.8 x DC



WNT \ Performance



DRAGONSKIN



Factory standard



| DC <sub>e8</sub> | RE <sub>±0,05</sub> | APMX | DN   | LH | LPR | OAL | DCONMS <sub>h6</sub> | ZEFP | Article no.  |        |
|------------------|---------------------|------|------|----|-----|-----|----------------------|------|--------------|--------|
| mm               | mm                  | mm   | mm   | mm | mm  | mm  | mm                   |      |              | EUR    |
| 6                | 0,2                 | 19   | 5,8  | 25 | 27  | 63  | 6                    | 6    | 53 592 06002 | 47,06  |
| 6                | 1,0                 | 19   | 5,8  | 25 | 27  | 63  | 6                    | 6    | 53 592 06010 | 48,50  |
| 6                | 1,5                 | 19   | 5,8  | 25 | 27  | 63  | 6                    | 6    | 53 592 06015 | 48,50  |
| 8                | 0,2                 | 25   | 7,7  | 33 | 35  | 71  | 8                    | 6    | 53 592 08002 | 61,29  |
| 8                | 1,0                 | 25   | 7,7  | 33 | 35  | 71  | 8                    | 6    | 53 592 08010 | 62,93  |
| 8                | 1,5                 | 25   | 7,7  | 33 | 35  | 71  | 8                    | 6    | 53 592 08015 | 62,93  |
| 8                | 2,0                 | 25   | 7,7  | 33 | 35  | 71  | 8                    | 6    | 53 592 08020 | 62,93  |
| 10               | 0,2                 | 31   | 9,7  | 41 | 43  | 83  | 10                   | 6    | 53 592 10002 | 85,86  |
| 10               | 1,0                 | 31   | 9,7  | 41 | 43  | 83  | 10                   | 6    | 53 592 10010 | 87,72  |
| 10               | 1,5                 | 31   | 9,7  | 41 | 43  | 83  | 10                   | 6    | 53 592 10015 | 87,72  |
| 10               | 1,6                 | 31   | 9,7  | 41 | 43  | 83  | 10                   | 6    | 53 592 10016 | 87,72  |
| 10               | 2,0                 | 31   | 9,7  | 41 | 43  | 83  | 10                   | 6    | 53 592 10020 | 87,72  |
| 12               | 0,2                 | 37   | 11,6 | 47 | 49  | 94  | 12                   | 6    | 53 592 12002 | 101,30 |
| 12               | 1,0                 | 37   | 11,6 | 47 | 49  | 94  | 12                   | 6    | 53 592 12010 | 103,90 |
| 12               | 1,5                 | 37   | 11,6 | 47 | 49  | 94  | 12                   | 6    | 53 592 12015 | 103,90 |
| 12               | 1,6                 | 37   | 11,6 | 47 | 49  | 94  | 12                   | 6    | 53 592 12016 | 103,90 |
| 12               | 2,0                 | 37   | 11,6 | 47 | 49  | 94  | 12                   | 6    | 53 592 12020 | 103,90 |
| 12               | 3,0                 | 37   | 11,6 | 47 | 49  | 94  | 12                   | 6    | 53 592 12030 | 103,90 |
| 16               | 0,2                 | 49   | 15,5 | 61 | 63  | 111 | 16                   | 6    | 53 592 16002 | 209,40 |
| 16               | 1,0                 | 49   | 15,5 | 61 | 63  | 111 | 16                   | 6    | 53 592 16010 | 211,60 |
| 16               | 1,5                 | 49   | 15,5 | 61 | 63  | 111 | 16                   | 6    | 53 592 16015 | 211,60 |
| 16               | 1,6                 | 49   | 15,5 | 61 | 63  | 111 | 16                   | 6    | 53 592 16016 | 211,60 |
| 16               | 2,0                 | 49   | 15,5 | 61 | 63  | 111 | 16                   | 6    | 53 592 16020 | 211,60 |
| 16               | 3,0                 | 49   | 15,5 | 61 | 63  | 111 | 16                   | 6    | 53 592 16030 | 211,60 |
| 16               | 4,0                 | 49   | 15,5 | 61 | 63  | 111 | 16                   | 6    | 53 592 16040 | 211,60 |
| 20               | 0,2                 | 61   | 19,5 | 75 | 77  | 127 | 20                   | 6    | 53 592 20002 | 293,20 |
| 20               | 1,0                 | 61   | 19,5 | 75 | 77  | 127 | 20                   | 6    | 53 592 20010 | 296,50 |
| 20               | 1,5                 | 61   | 19,5 | 75 | 77  | 127 | 20                   | 6    | 53 592 20015 | 296,50 |
| 20               | 1,6                 | 61   | 19,5 | 75 | 77  | 127 | 20                   | 6    | 53 592 20016 | 296,50 |
| 20               | 2,0                 | 61   | 19,5 | 75 | 77  | 127 | 20                   | 6    | 53 592 20020 | 296,50 |
| 20               | 3,0                 | 61   | 19,5 | 75 | 77  | 127 | 20                   | 6    | 53 592 20030 | 296,50 |
| 20               | 4,0                 | 61   | 19,5 | 75 | 77  | 127 | 20                   | 6    | 53 592 20040 | 296,50 |

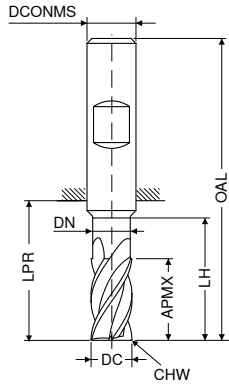
|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       | ○ |
| Cast iron             | ● |
| Non ferrous metals    |   |
| Heat resistant alloys | ○ |
| Hardened materials    |   |

CircularLine – End milling cutter

▲ Chip breaker 1.8 x DC



WNT \ Performance



DRAGONSKIN



Factory standard



| DC <sub>e8</sub> | APMX | DN   | LH  | LPR | OAL | DCONMS <sub>h6</sub> | CHW | ZEFP | Article no. |        |
|------------------|------|------|-----|-----|-----|----------------------|-----|------|-------------|--------|
| mm               | mm   | mm   | mm  | mm  | mm  | mm                   | mm  |      |             | EUR    |
| 6                | 19   | 5,8  | 24  | 30  | 66  | 6                    | 0,2 | 4    | 53 590 060  | 49,48  |
| 6                | 25   | 5,8  | 30  | 35  | 71  | 6                    | 0,2 | 4    | 53 590 080  | 64,37  |
| 8                | 25   | 7,7  | 32  | 37  | 73  | 8                    | 0,2 | 4    | 53 590 100  | 89,72  |
| 8                | 33   | 7,7  | 40  | 44  | 80  | 8                    | 0,2 | 4    | 53 590 120  | 107,90 |
| 10               | 31   | 9,7  | 40  | 49  | 89  | 10                   | 0,2 | 4    | 53 590 160  | 221,50 |
| 10               | 41   | 9,7  | 50  | 55  | 95  | 10                   | 0,2 | 4    | 53 590 200  | 310,90 |
| 12               | 37   | 11,6 | 48  | 56  | 101 | 12                   | 0,2 | 4    |             |        |
| 12               | 49   | 11,6 | 60  | 64  | 109 | 12                   | 0,2 | 4    |             |        |
| 16               | 49   | 15,5 | 64  | 72  | 120 | 16                   | 0,2 | 4    |             |        |
| 16               | 65   | 15,5 | 80  | 84  | 132 | 16                   | 0,2 | 4    |             |        |
| 20               | 62   | 19,5 | 80  | 84  | 134 | 20                   | 0,2 | 4    |             |        |
| 20               | 82   | 19,5 | 100 | 104 | 154 | 20                   | 0,2 | 4    |             |        |



| DC <sub>e8</sub> | RE <sub>±0,05</sub> | APMX | DN   | LH  | LPR | OAL | DCONMS <sub>h6</sub> | ZEFP | Article no.  |        |
|------------------|---------------------|------|------|-----|-----|-----|----------------------|------|--------------|--------|
| mm               | mm                  | mm   | mm   | mm  | mm  | mm  | mm                   |      |              | EUR    |
| 6                | 0,2                 | 19   | 5,8  | 24  | 30  | 66  | 6                    | 4    | 53 594 06002 | 49,48  |
| 6                | 1,0                 | 19   | 5,8  | 24  | 30  | 66  | 6                    | 4    | 53 594 06010 | 50,92  |
| 6                | 1,5                 | 19   | 5,8  | 24  | 30  | 66  | 6                    | 4    | 53 594 06015 | 50,92  |
| 6                | 1,0                 | 25   | 5,8  | 30  | 35  | 71  | 6                    | 4    |              |        |
| 6                | 1,5                 | 25   | 5,8  | 30  | 35  | 71  | 6                    | 4    |              |        |
| 6                | 0,2                 | 25   | 5,8  | 30  | 35  | 71  | 6                    | 4    |              |        |
| 8                | 0,2                 | 25   | 7,7  | 32  | 37  | 73  | 8                    | 4    | 53 594 08002 | 64,37  |
| 8                | 1,5                 | 25   | 7,7  | 32  | 37  | 73  | 8                    | 4    | 53 594 08015 | 66,02  |
| 8                | 2,0                 | 25   | 7,7  | 32  | 37  | 73  | 8                    | 4    | 53 594 08020 | 66,02  |
| 8                | 1,0                 | 25   | 7,7  | 32  | 37  | 73  | 8                    | 4    | 53 594 08010 | 66,02  |
| 8                | 2,0                 | 33   | 7,7  | 40  | 44  | 80  | 8                    | 4    |              |        |
| 8                | 1,0                 | 33   | 7,7  | 40  | 44  | 80  | 8                    | 4    |              |        |
| 8                | 1,5                 | 33   | 7,7  | 40  | 44  | 80  | 8                    | 4    |              |        |
| 8                | 0,2                 | 33   | 7,7  | 40  | 44  | 80  | 8                    | 4    |              |        |
| 10               | 0,2                 | 31   | 9,7  | 40  | 49  | 89  | 10                   | 4    | 53 594 10002 | 89,72  |
| 10               | 1,6                 | 31   | 9,7  | 40  | 49  | 89  | 10                   | 4    | 53 594 10016 | 91,59  |
| 10               | 1,5                 | 31   | 9,7  | 40  | 49  | 89  | 10                   | 4    | 53 594 10015 | 91,59  |
| 10               | 2,0                 | 31   | 9,7  | 40  | 49  | 89  | 10                   | 4    | 53 594 10010 | 91,59  |
| 10               | 1,0                 | 31   | 9,7  | 40  | 49  | 89  | 10                   | 4    |              |        |
| 10               | 2,0                 | 41   | 9,7  | 50  | 55  | 95  | 10                   | 4    |              |        |
| 10               | 1,5                 | 41   | 9,7  | 50  | 55  | 95  | 10                   | 4    |              |        |
| 10               | 1,0                 | 41   | 9,7  | 50  | 55  | 95  | 10                   | 4    |              |        |
| 10               | 1,6                 | 41   | 9,7  | 50  | 55  | 95  | 10                   | 4    |              |        |
| 10               | 0,2                 | 41   | 9,7  | 50  | 55  | 95  | 10                   | 4    |              |        |
| 12               | 0,2                 | 37   | 11,6 | 48  | 56  | 101 | 12                   | 4    | 53 594 12002 | 107,90 |
| 12               | 1,6                 | 37   | 11,6 | 48  | 56  | 101 | 12                   | 4    | 53 594 12016 | 110,10 |
| 12               | 2,0                 | 37   | 11,6 | 48  | 56  | 101 | 12                   | 4    | 53 594 12020 | 110,10 |
| 12               | 1,5                 | 37   | 11,6 | 48  | 56  | 101 | 12                   | 4    | 53 594 12015 | 110,10 |
| 12               | 3,0                 | 37   | 11,6 | 48  | 56  | 101 | 12                   | 4    | 53 594 12030 | 110,10 |
| 12               | 1,0                 | 37   | 11,6 | 48  | 56  | 101 | 12                   | 4    | 53 594 12010 | 110,10 |
| 12               | 3,0                 | 49   | 11,6 | 60  | 64  | 109 | 12                   | 4    |              |        |
| 12               | 1,5                 | 49   | 11,6 | 60  | 64  | 109 | 12                   | 4    |              |        |
| 12               | 1,6                 | 49   | 11,6 | 60  | 64  | 109 | 12                   | 4    |              |        |
| 12               | 1,0                 | 49   | 11,6 | 60  | 64  | 109 | 12                   | 4    |              |        |
| 12               | 2,0                 | 49   | 11,6 | 60  | 64  | 109 | 12                   | 4    |              |        |
| 12               | 0,2                 | 49   | 11,6 | 60  | 64  | 109 | 12                   | 4    |              |        |
| 16               | 0,2                 | 49   | 15,5 | 64  | 72  | 120 | 16                   | 4    | 53 594 16002 | 221,50 |
| 16               | 1,6                 | 49   | 15,5 | 64  | 72  | 120 | 16                   | 4    | 53 594 16016 | 223,80 |
| 16               | 1,5                 | 49   | 15,5 | 64  | 72  | 120 | 16                   | 4    | 53 594 16015 | 223,80 |
| 16               | 2,0                 | 49   | 15,5 | 64  | 72  | 120 | 16                   | 4    | 53 594 16020 | 223,80 |
| 16               | 1,0                 | 49   | 15,5 | 64  | 72  | 120 | 16                   | 4    | 53 594 16010 | 223,80 |
| 16               | 3,0                 | 49   | 15,5 | 64  | 72  | 120 | 16                   | 4    | 53 594 16030 | 223,80 |
| 16               | 4,0                 | 49   | 15,5 | 64  | 72  | 120 | 16                   | 4    | 53 594 16040 | 223,80 |
| 16               | 2,0                 | 65   | 15,5 | 80  | 84  | 132 | 16                   | 4    |              |        |
| 16               | 1,6                 | 65   | 15,5 | 80  | 84  | 132 | 16                   | 4    |              |        |
| 16               | 1,5                 | 65   | 15,5 | 80  | 84  | 132 | 16                   | 4    |              |        |
| 16               | 3,0                 | 65   | 15,5 | 80  | 84  | 132 | 16                   | 4    |              |        |
| 16               | 1,0                 | 65   | 15,5 | 80  | 84  | 132 | 16                   | 4    |              |        |
| 16               | 4,0                 | 65   | 15,5 | 80  | 84  | 132 | 16                   | 4    |              |        |
| 16               | 0,2                 | 65   | 15,5 | 80  | 84  | 132 | 16                   | 4    |              |        |
| 20               | 0,2                 | 62   | 19,5 | 80  | 84  | 134 | 20                   | 4    | 53 594 20002 | 310,90 |
| 20               | 2,0                 | 62   | 19,5 | 80  | 84  | 134 | 20                   | 4    | 53 594 20020 | 314,10 |
| 20               | 1,6                 | 62   | 19,5 | 80  | 84  | 134 | 20                   | 4    | 53 594 20016 | 314,10 |
| 20               | 3,0                 | 62   | 19,5 | 80  | 84  | 134 | 20                   | 4    | 53 594 20030 | 314,10 |
| 20               | 1,5                 | 62   | 19,5 | 80  | 84  | 134 | 20                   | 4    | 53 594 20015 | 314,10 |
| 20               | 4,0                 | 62   | 19,5 | 80  | 84  | 134 | 20                   | 4    | 53 594 20040 | 314,10 |
| 20               | 1,0                 | 62   | 19,5 | 80  | 84  | 134 | 20                   | 4    | 53 594 20010 | 314,10 |
| 20               | 4,0                 | 82   | 19,5 | 100 | 104 | 154 | 20                   | 4    |              |        |
| 20               | 1,6                 | 82   | 19,5 | 100 | 104 | 154 | 20                   | 4    |              |        |
| 20               | 1,5                 | 82   | 19,5 | 100 | 104 | 154 | 20                   | 4    |              |        |
| 20               | 2,0                 | 82   | 19,5 | 100 | 104 | 154 | 20                   | 4    |              |        |
| 20               | 1,0                 | 82   | 19,5 | 100 | 104 | 154 | 20                   | 4    |              |        |
| 20               | 3,0                 | 82   | 19,5 | 100 | 104 | 154 | 20                   | 4    |              |        |
| 20               | 0,2                 | 82   | 19,5 | 100 | 104 | 154 | 20                   | 4    |              |        |

|                       |   |
|-----------------------|---|
| Steel                 | ● |
| Stainless steel       |   |
| Cast iron             |   |
| Non ferrous metals    | ● |
| Heat resistant alloys |   |
| Hardened materials    |   |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed

Calculation

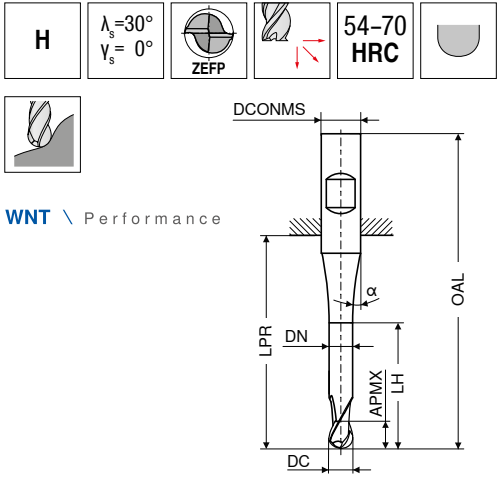
RPM =  $\frac{v_c \times 1000}{\pi \times D}$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
D = Diameter



BlueLine – Ball Nosed Cutter

▲ Radius accuracy: ± 0,005 mm



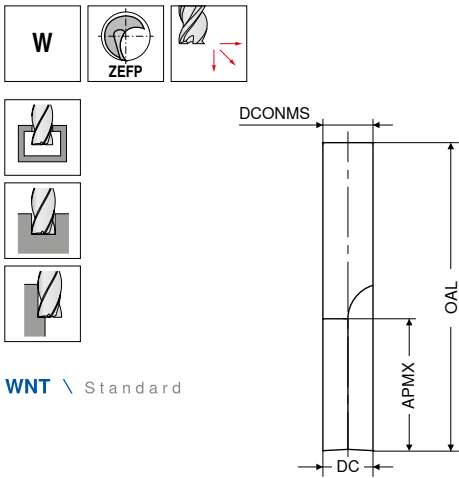
| DC <sub>is</sub> | APMX | DN    | LH   | LPR | OAL | DCONMS <sub>hg</sub> | α° <sub>±0,5</sub> | ZEFP |
|------------------|------|-------|------|-----|-----|----------------------|--------------------|------|
| mm               | mm   | mm    | mm   | mm  | mm  | mm                   |                    |      |
| 0,10             | 0,2  |       |      | 10  | 38  | 3                    | 8,0                | 2    |
| 0,15             | 0,3  |       |      | 10  | 38  | 3                    | 7,5                | 2    |
| 0,20             | 0,4  |       |      | 10  | 38  | 3                    | 7,0                | 2    |
| 0,25             | 0,5  | 0,20  | 0,8  | 10  | 38  | 3                    | 7,0                | 2    |
| 0,30             | 1,0  | 0,25  | 1,3  | 10  | 38  | 3                    | 7,0                | 2    |
| 0,35             | 1,0  | 0,30  | 1,3  | 10  | 38  | 3                    | 7,0                | 2    |
| 0,40             | 1,0  | 0,35  | 1,3  | 10  | 38  | 3                    | 7,0                | 2    |
| 0,50             | 1,5  | 0,40  | 2,0  | 10  | 38  | 3                    | 7,5                | 2    |
| 0,50             | 1,5  | 0,40  | 2,0  | 18  | 54  | 6                    | 10,5               | 2    |
| 0,50             | 1,5  | 0,40  | 2,0  | 47  | 75  | 3                    | 7,0                | 2    |
| 0,50             | 1,5  | 0,40  | 2,0  | 44  | 80  | 6                    | 10,5               | 2    |
| 0,60             | 1,5  | 0,50  | 2,0  | 10  | 38  | 3                    | 7,0                | 2    |
| 0,70             | 2,0  | 0,60  | 2,5  | 10  | 38  | 3                    | 7,5                | 2    |
| 0,80             | 2,0  | 0,70  | 2,5  | 10  | 38  | 3                    | 7,5                | 2    |
| 0,90             | 2,5  | 0,80  | 3,5  | 10  | 38  | 3                    | 7,0                | 2    |
| 1,00             | 2,0  | 0,90  | 3,0  | 22  | 50  | 3                    | 6,0                | 2    |
| 1,00             | 2,0  | 0,90  | 3,0  | 18  | 54  | 6                    | 9,5                | 2    |
| 1,00             | 3,0  | 0,90  | 4,0  | 47  | 75  | 3                    | 6,0                | 2    |
| 1,00             | 3,0  | 0,90  | 4,0  | 44  | 80  | 6                    | 9,5                | 2    |
| 1,10             | 3,0  | 1,00  | 4,0  | 22  | 50  | 3                    | 7,0                | 2    |
| 1,20             | 3,0  | 1,10  | 4,0  | 22  | 50  | 3                    | 7,0                | 2    |
| 1,40             | 3,0  | 1,30  | 4,0  | 22  | 50  | 3                    | 5,0                | 2    |
| 1,50             | 3,0  | 1,40  | 4,0  | 22  | 50  | 3                    | 5,5                | 2    |
| 1,50             | 3,0  | 1,40  | 4,0  | 18  | 54  | 6                    | 9,0                | 2    |
| 1,50             | 4,0  | 1,40  | 6,0  | 47  | 75  | 3                    | 7,0                | 2    |
| 1,50             | 4,0  | 1,40  | 6,0  | 44  | 80  | 6                    | 10,0               | 2    |
| 1,60             | 4,0  | 1,50  | 5,0  | 22  | 50  | 3                    | 5,0                | 2    |
| 1,80             | 4,0  | 1,70  | 5,0  | 22  | 50  | 3                    | 5,0                | 2    |
| 2,00             | 4,0  | 1,90  | 5,5  | 22  | 50  | 3                    | 5,0                | 2    |
| 2,00             | 4,0  | 1,90  | 5,5  | 18  | 54  | 6                    | 9,0                | 2    |
| 2,00             | 6,0  | 1,90  | 8,0  | 47  | 75  | 3                    | 8,0                | 2    |
| 2,00             | 6,0  | 1,90  | 8,0  | 44  | 80  | 6                    | 11,0               | 2    |
| 2,50             | 5,0  | 2,30  | 6,5  | 22  | 50  | 3                    | 7,0                | 2    |
| 2,50             | 5,0  | 2,30  | 6,5  | 18  | 54  | 6                    | 10,0               | 2    |
| 2,50             | 8,0  | 2,30  | 10,0 | 47  | 75  | 3                    | 5,5                | 2    |
| 2,50             | 8,0  | 2,30  | 10,0 | 44  | 80  | 6                    | 10,0               | 2    |
| 3,00             | 6,0  | 2,80  | 8,0  | 22  | 50  | 3                    |                    | 2    |
| 3,00             | 6,0  | 2,80  | 8,0  | 18  | 54  | 6                    | 9,0                | 2    |
| 3,00             | 10,0 | 2,80  | 13,0 | 47  | 75  | 3                    |                    | 2    |
| 3,00             | 10,0 | 2,80  | 15,0 | 44  | 80  | 6                    | 11,0               | 2    |
| 4,00             | 7,0  | 3,80  | 10,0 | 18  | 54  | 6                    | 11,0               | 2    |
| 4,00             | 7,0  | 3,80  | 10,0 | 26  | 54  | 4                    |                    | 2    |
| 4,00             | 13,0 | 3,80  | 20,0 | 47  | 75  | 4                    |                    | 2    |
| 4,00             | 13,0 | 3,80  | 18,0 | 44  | 80  | 6                    | 12,5               | 2    |
| 5,00             | 8,0  | 4,80  | 11,0 | 18  | 54  | 6                    | 8,0                | 2    |
| 5,00             | 8,0  | 4,80  | 11,0 | 26  | 54  | 5                    |                    | 2    |
| 5,00             | 14,0 | 4,80  | 19,0 | 47  | 75  | 5                    |                    | 2    |
| 5,00             | 14,0 | 4,80  | 19,0 | 64  | 100 | 6                    | 13,0               | 2    |
| 6,00             | 10,0 | 5,80  | 15,0 | 18  | 54  | 6                    |                    | 2    |
| 6,00             | 16,0 | 5,80  | 25,0 | 64  | 100 | 6                    |                    | 2    |
| 8,00             | 12,0 | 7,80  | 17,0 | 23  | 59  | 8                    |                    | 2    |
| 8,00             | 22,0 | 7,80  | 35,0 | 64  | 100 | 8                    |                    | 2    |
| 10,00            | 13,0 | 9,80  | 18,0 | 27  | 67  | 10                   |                    | 2    |
| 10,00            | 25,0 | 9,80  | 40,0 | 60  | 100 | 10                   |                    | 2    |
| 12,00            | 16,0 | 11,90 | 21,0 | 28  | 73  | 12                   |                    | 2    |
| 12,00            | 26,0 | 11,80 | 40,0 | 55  | 100 | 12                   |                    | 2    |
| 14,00            | 16,0 | 13,80 | 21,0 | 30  | 75  | 14                   |                    | 2    |
| 14,00            | 26,0 | 13,80 | 40,0 | 55  | 100 | 14                   |                    | 2    |
| 16,00            | 20,0 | 15,80 | 25,0 | 35  | 83  | 16                   |                    | 2    |
| 16,00            | 30,0 | 15,80 | 50,0 | 102 | 150 | 16                   |                    | 2    |
| 20,00            | 25,0 | 19,80 | 30,0 | 43  | 93  | 20                   |                    | 2    |
| 20,00            | 40,0 | 19,80 | 60,0 | 100 | 150 | 20                   |                    | 2    |

|                       |   |   |   |   |
|-----------------------|---|---|---|---|
| Steel                 | ○ | ○ | ○ | ○ |
| Stainless steel       |   |   |   |   |
| Cast iron             |   |   |   |   |
| Non ferrous metals    |   |   |   |   |
| Heat resistant alloys |   |   |   |   |
| Hardened materials    | ● | ● | ● | ● |

|             | Ti2000      | Ti2000      | Ti2000      | Ti2000     |
|-------------|-------------|-------------|-------------|------------|
|             |             |             |             |            |
|             |             |             |             |            |
| Article no. | Article no. | Article no. | Article no. |            |
|             |             |             |             |            |
| 52 256 910  |             |             |             |            |
| 52 256 915  |             |             |             |            |
| 52 256 920  |             |             |             |            |
| 52 256 925  |             |             |             |            |
| 52 256 930  |             |             |             |            |
| 52 256 935  |             |             |             |            |
| 52 256 940  |             |             |             |            |
| 52 256 950  |             |             |             |            |
| 52 256 005  | 52 257 005  |             |             |            |
|             |             | 52 258 950  |             |            |
| 52 256 960  |             | 52 258 005  |             | 52 259 005 |
| 52 256 970  |             |             |             |            |
| 52 256 980  |             |             |             |            |
| 52 256 990  |             |             |             |            |
| 52 256 011  |             |             |             |            |
| 52 256 106  | 52 257 010  |             |             |            |
|             |             | 52 258 011  |             |            |
| 52 256 911  |             | 52 258 010  |             | 52 259 010 |
| 52 256 012  |             |             |             |            |
| 52 256 014  |             |             |             |            |
| 52 256 016  |             |             |             |            |
| 52 256 156  | 52 257 015  |             |             |            |
|             |             | 52 258 016  |             |            |
| 52 256 916  |             | 52 258 015  |             | 52 259 015 |
| 52 256 018  |             |             |             |            |
| 52 256 021  |             |             |             |            |
| 52 256 206  | 52 257 020  |             |             |            |
|             |             | 52 258 021  |             |            |
| 52 256 025  |             | 52 258 020  |             | 52 259 020 |
| 52 256 026  | 52 257 026  |             |             |            |
|             |             | 52 258 026  |             |            |
| 52 256 031  |             | 52 258 025  |             | 52 259 025 |
| 52 256 306  | 52 257 030  |             |             |            |
|             |             | 52 258 031  |             |            |
| 52 256 406  | 52 257 040  | 52 258 030  |             | 52 259 030 |
| 52 256 041  |             |             |             |            |
|             |             | 52 258 041  |             |            |
| 52 256 506  | 52 257 050  | 52 258 040  |             | 52 259 040 |
| 52 256 051  |             |             |             |            |
|             |             | 52 258 051  |             |            |
| 52 256 061  | 52 257 060  | 52 258 050  |             | 52 259 050 |
|             |             | 52 258 060  |             | 52 259 060 |
| 52 256 081  | 52 257 080  | 52 258 080  |             | 52 259 080 |
|             |             |             |             |            |
| 52 256 101  | 52 257 100  | 52 258 100  |             | 52 259 100 |
| 52 256 121  | 52 257 120  | 52 258 120  |             | 52 259 120 |
| 52 256 141  | 52 257 140  | 52 258 140  |             | 52 259 140 |
| 52 256 161  | 52 257 160  | 52 258 160  |             | 52 259 160 |
| 52 256 201  | 52 257 200  | 52 258 200  |             | 52 259 200 |

Cutter for plastics

▲ With polished flutes

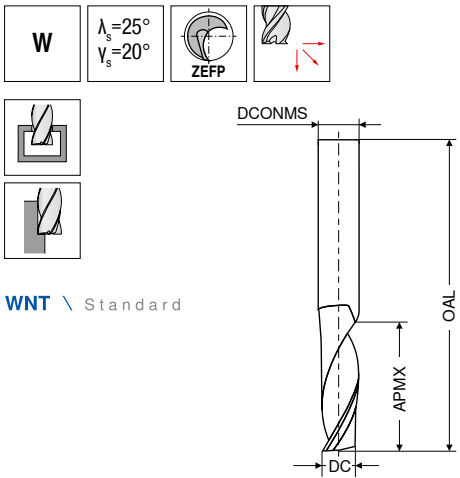


WNT \ Standard

| DC <sub>h10</sub>     | APMX | OAL | DCONMS <sub>h6</sub> | ZEFP | Factory standard |        |
|-----------------------|------|-----|----------------------|------|------------------|--------|
| mm                    | mm   | mm  | mm                   |      | Article no.      | EUR    |
| 1,5                   | 6    | 40  | 3                    | 1    | 50 946 015       | 32,96  |
| 2,0                   | 6    | 40  | 3                    | 1    | 50 946 020       | 32,96  |
| 2,0                   | 10   | 40  | 2                    | 1    | 50 946 022       | 23,70  |
| 2,0                   | 10   | 60  | 6                    | 1    | 50 946 024       | 47,94  |
| 2,0                   | 12   | 60  | 6                    | 1    | 50 946 026       | 49,38  |
| 3,0                   | 12   | 40  | 3                    | 1    | 50 946 030       | 24,91  |
| 3,0                   | 12   | 60  | 6                    | 1    | 50 946 032       | 47,94  |
| 3,0                   | 15   | 60  | 6                    | 1    | 50 946 034       | 47,94  |
| 4,0                   | 15   | 60  | 6                    | 1    | 50 946 040       | 47,94  |
| 4,0                   | 20   | 75  | 6                    | 1    | 50 946 042       | 72,63  |
| 5,0                   | 16   | 60  | 6                    | 1    | 50 946 050       | 47,94  |
| 5,0                   | 28   | 75  | 6                    | 1    | 50 946 052       | 80,46  |
| 6,0                   | 20   | 60  | 6                    | 1    | 50 946 060       | 41,77  |
| 6,0                   | 30   | 60  | 6                    | 1    | 50 946 062       | 47,51  |
| 6,0                   | 35   | 75  | 6                    | 1    | 50 946 064       | 66,89  |
| 8,0                   | 22   | 63  | 8                    | 1    | 50 946 080       | 64,92  |
| 8,0                   | 40   | 100 | 8                    | 1    | 50 946 082       | 104,30 |
| 10,0                  | 25   | 72  | 10                   | 1    | 50 946 100       | 96,54  |
| 10,0                  | 55   | 100 | 10                   | 1    | 50 946 102       | 169,70 |
| 12,0                  | 30   | 83  | 12                   | 1    | 50 946 120       | 125,70 |
| Steel                 |      |     |                      |      |                  |        |
| Stainless steel       |      |     |                      |      |                  |        |
| Cast iron             |      |     |                      |      |                  |        |
| Non ferrous metals    |      |     |                      |      |                  |        |
| Heat resistant alloys |      |     |                      |      |                  |        |
| Hardened materials    |      |     |                      |      |                  |        |

Single flute cutter

▲ With polished chip flutes



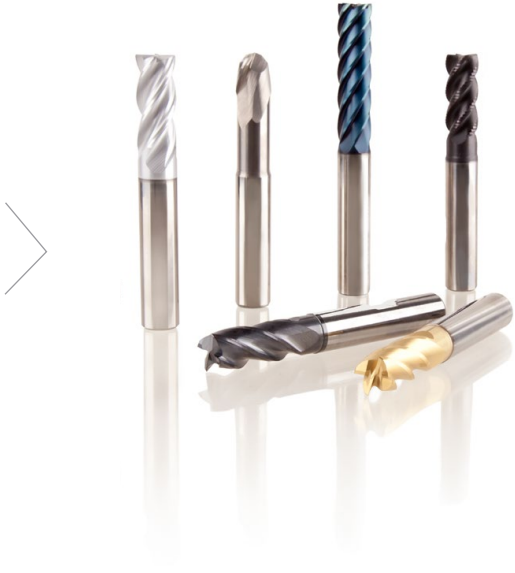
WNT \ Standard

| DC <sub>h10</sub>     | APMX | OAL | DCONMS <sub>h6</sub> | ZEFP | Factory standard |        |
|-----------------------|------|-----|----------------------|------|------------------|--------|
| mm                    | mm   | mm  | mm                   |      | Article no.      | EUR    |
| 1,5                   | 6    | 40  | 3,0                  | 1    | 50 610 015       | 26,78  |
| 2,0                   | 6    | 40  | 3,0                  | 1    | 50 610 019       | 26,78  |
| 2,0                   | 10   | 40  | 2,0                  | 1    | 50 610 020       | 16,65  |
| 2,0                   | 10   | 60  | 6,0                  | 1    | 50 610 022       | 39,56  |
| 2,0                   | 12   | 60  | 6,0                  | 1    | 50 610 024       | 40,66  |
| 2,5                   | 6    | 40  | 2,5                  | 1    | 50 610 025       | 26,78  |
| 3,0                   | 12   | 40  | 3,0                  | 1    | 50 610 030       | 17,86  |
| 3,0                   | 10   | 40  | 6,0                  | 1    | 50 610 032       | 38,79  |
| 3,0                   | 12   | 60  | 6,0                  | 1    | 50 610 034       | 39,56  |
| 3,0                   | 15   | 60  | 6,0                  | 1    | 50 610 036       | 39,56  |
| 4,0                   | 15   | 40  | 4,0                  | 1    | 50 610 040       | 21,60  |
| 4,0                   | 15   | 60  | 6,0                  | 1    | 50 610 042       | 39,56  |
| 4,0                   | 20   | 75  | 6,0                  | 1    | 50 610 044       | 64,03  |
| 5,0                   | 16   | 50  | 5,0                  | 1    | 50 610 050       | 27,66  |
| 5,0                   | 16   | 60  | 6,0                  | 1    | 50 610 052       | 39,56  |
| 5,0                   | 28   | 75  | 6,0                  | 1    | 50 610 054       | 71,75  |
| 6,0                   | 20   | 60  | 6,0                  | 1    | 50 610 060       | 31,96  |
| 6,0                   | 30   | 60  | 6,0                  | 1    | 50 610 062       | 38,79  |
| 6,0                   | 35   | 75  | 6,0                  | 1    | 50 610 064       | 58,08  |
| 8,0                   | 22   | 63  | 8,0                  | 1    | 50 610 080       | 51,58  |
| 8,0                   | 40   | 100 | 8,0                  | 1    | 50 610 084       | 93,13  |
| 10,0                  | 25   | 72  | 10,0                 | 1    | 50 610 100       | 77,59  |
| 10,0                  | 55   | 100 | 10,0                 | 1    | 50 610 105       | 155,50 |
| 12,0                  | 30   | 83  | 12,0                 | 1    | 50 610 120       | 102,90 |
| 14,0                  | 30   | 83  | 14,0                 | 1    | 50 610 140       | 153,20 |
| 16,0                  | 35   | 92  | 16,0                 | 1    | 50 610 160       | 218,30 |
| 18,0                  | 35   | 92  | 18,0                 | 1    | 50 610 180       | 260,10 |
| 20,0                  | 40   | 104 | 20,0                 | 1    | 50 610 200       | 293,20 |
| Steel                 |      |     |                      |      |                  |        |
| Stainless steel       |      |     |                      |      |                  |        |
| Cast iron             |      |     |                      |      |                  |        |
| Non ferrous metals    |      |     |                      |      |                  |        |
| Heat resistant alloys |      |     |                      |      |                  |        |
| Hardened materials    |      |     |                      |      |                  |        |

CERATIZIT Group

With passion and pioneering spirit for carbide

CERATIZIT has been a pioneer in the field of demanding carbide solutions for machining and wear protection for more than 95 years, controlling the entire value chain from powder to the finished end product. With exclusive access to the highest quality carbide raw materials, CERATIZIT offers more than 130 carbide grades and as a full-range supplier manufactures highly specialized cutting tools, indexable inserts, rods made of hard materials and wear parts. The goal remains the same: CERATIZIT provides competitive advantages – through new technological standards, innovative materials and coatings as well as unique carbide products.



Technical support: 1800 93 22 55  
3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed Calculation  $RPM = \frac{v_c \times 1000}{\pi \times D}$   $v_c =$  (See Individual  $v_c$  Charts)  
 $\pi = 3.142$   
 $D =$  Diameter



# Shoulder Milling Like Never Before!

## Double-sided 90° milling system MaxiMill 491

For the first time this system allows an exact 90° profile with 8 usable cutting edges per insert.

The search for a powerful, process-safe and high quality shoulder milling system is over.

With the new double-sided 90° milling system MaxiMill 491 CERATIZIT presents a unique system providing a precise 90° profile with 8 usable cutting edges per insert. Maximum efficiency guaranteed when shoulder milling.

Exact 90° Profile

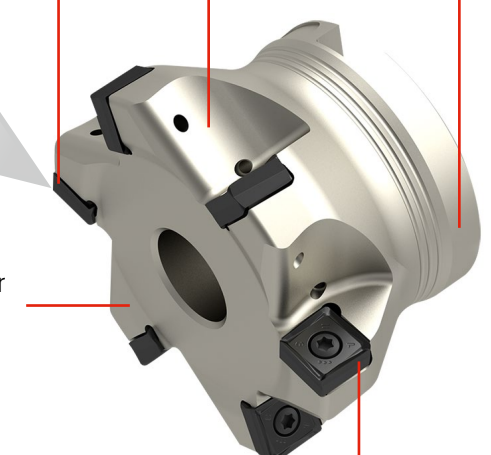


Narrow and wide pocket

Easy handling thanks to the largest possible contact surfaces

Hard wearing nickel plated body

Irregular pitch for quiet machining



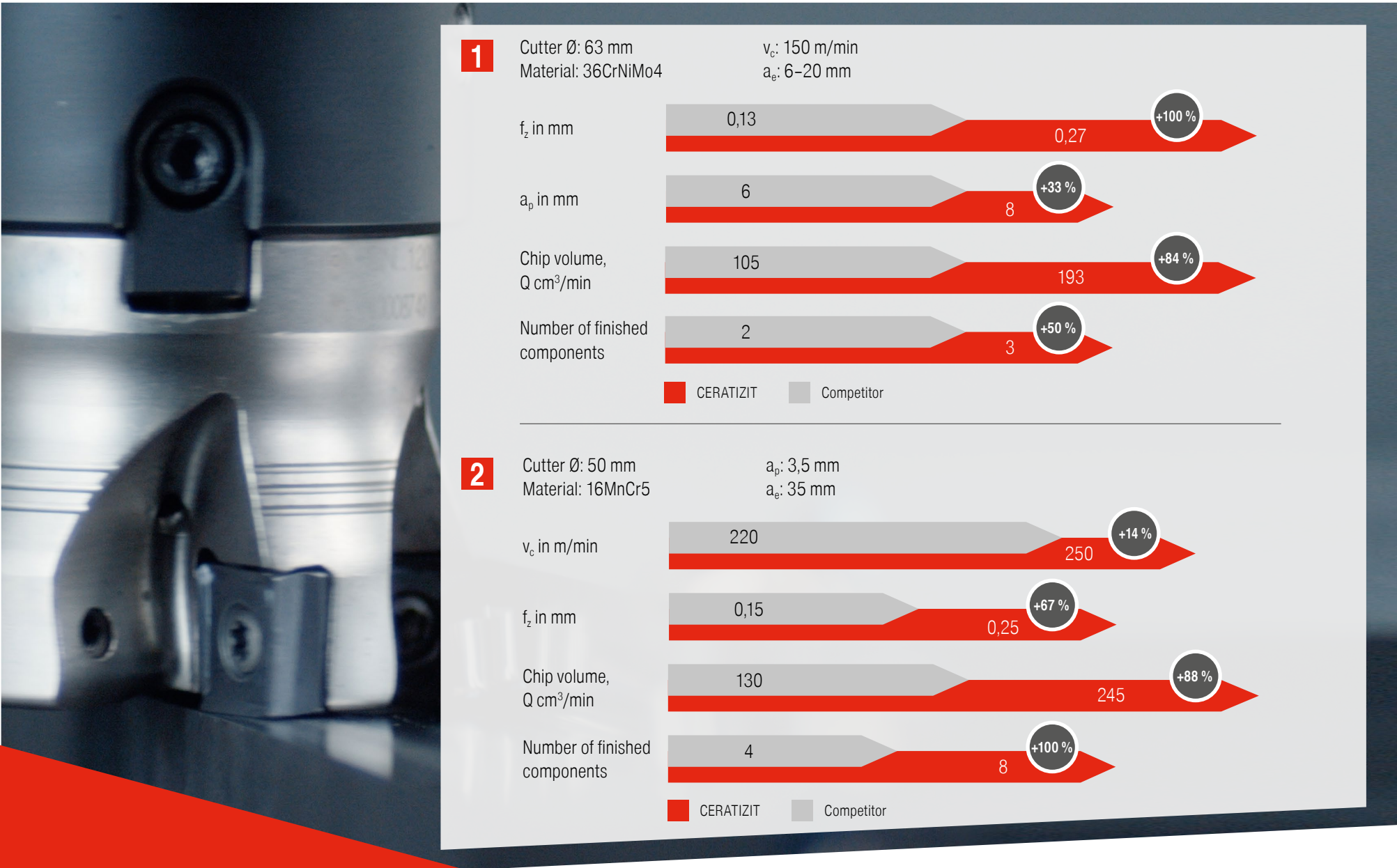
Same diameter but more cutting edges engaged when using size 09 indexable insert

**90° x 8 cutting edges + Dragonskin = More Power**

For machining of Steel | Stainless Steel | Cast Iron

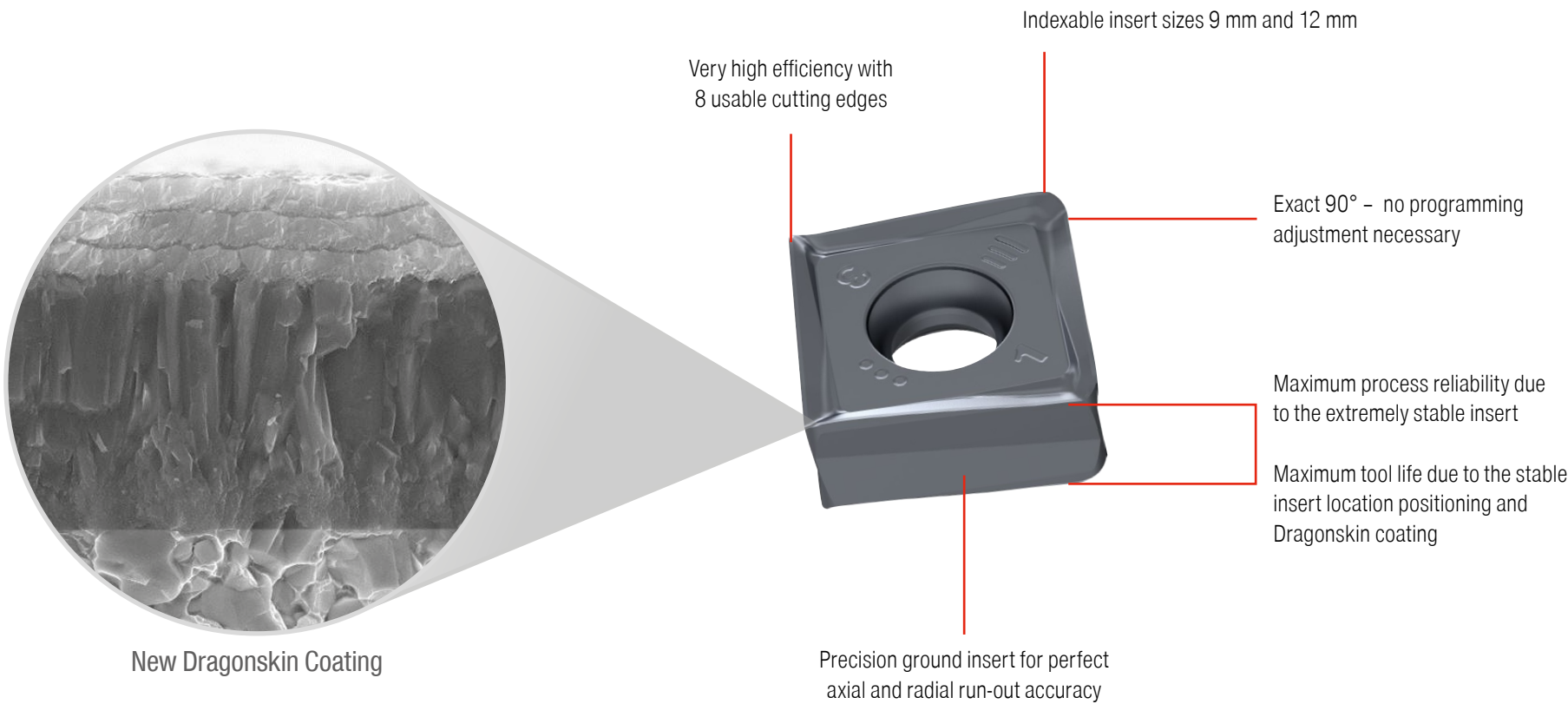


Field test reports



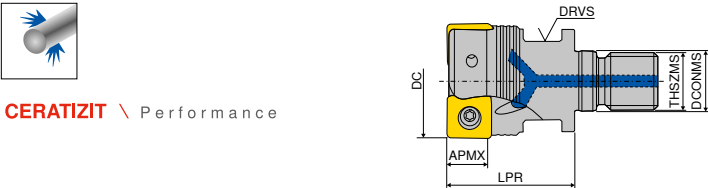
Dragonskin technology with 8 cutting edges for maximum economy

With these extremely stable inserts the highest cutting data is possible, very smooth running even with less powerful machines and thin walled components.





MaxiMill – Screw in cutter G 491

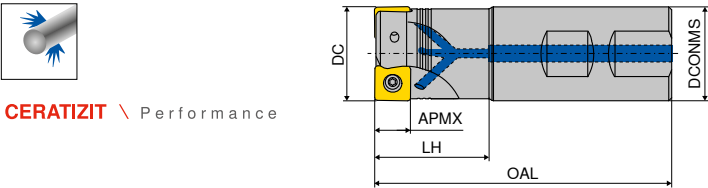


CERATIZIT \ Performance



| ISO designation | DC | LPR | THSZMS | DCONMS | APMX | DRVS | Insert    | ZNF | Article no. |        |
|-----------------|----|-----|--------|--------|------|------|-----------|-----|-------------|--------|
|                 | mm | mm  |        | mm     | mm   | mm   |           |     |             | EUR    |
| G491.25.R.03-09 | 25 | 35  | M12    | 12,5   | 6    | 17   | SNHU 09T3 | 3   | 50 773 125  | 175,65 |
| G491.32.R.03-09 | 32 | 35  | M16    | 17,0   | 6    | 24   | SNHU 09T3 | 3   | 50 773 132  | 178,30 |
| G491.32.R.04-09 | 32 | 35  | M16    | 17,0   | 6    | 24   | SNHU 09T3 | 4   | 50 773 232  | 199,20 |
|                 |    |     |        |        |      |      |           |     |             |        |
| G491.32.R.02-12 | 32 | 35  | M16    | 17,0   | 8    | 24   | SNHU 1204 | 2   | 50 773 032  | 167,80 |

MaxiMill – End milling cutter C 491

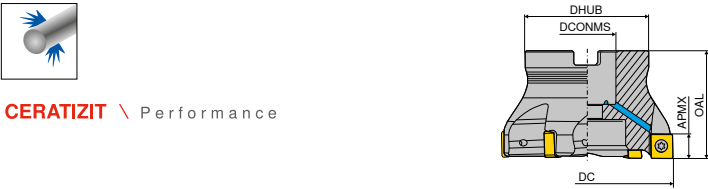


CERATIZIT \ Performance

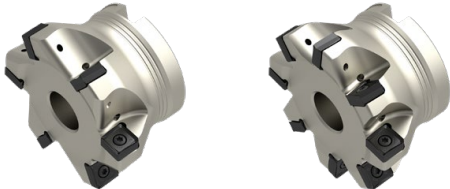


| ISO designation          | DC | OAL | LH | DCONMS <sub>h6</sub> | APMX | Insert    | ZNF | Article no. |        | Article no. |        |
|--------------------------|----|-----|----|----------------------|------|-----------|-----|-------------|--------|-------------|--------|
|                          | mm | mm  | mm | mm                   | mm   |           |     |             | EUR    |             | EUR    |
| C491.25.R.03-09-A-50-225 | 25 | 225 | 50 | 25                   | 6    | SNHU 09T3 | 3   | 50 774 325  | 178,30 | 50 774 425  | 178,30 |
| C491.25.R.03-09-B-32     | 25 | 59  | 32 | 25                   | 6    | SNHU 09T3 | 3   |             |        |             |        |
| C491.32.R.03-09-A-63-250 | 32 | 250 | 63 | 32                   | 6    | SNHU 09T3 | 3   | 50 774 532  | 183,50 | 50 774 432  | 199,20 |
| C491.32.R.04-09-B-40     | 32 | 101 | 40 | 32                   | 6    | SNHU 09T3 | 4   |             |        |             |        |
| C491.32.R.04-09-A-63-250 | 32 | 250 | 63 | 32                   | 6    | SNHU 09T3 | 4   | 50 774 332  | 199,20 | 50 774 632  | 183,50 |
| C491.32.R.03-09-B-40     | 32 | 101 | 40 | 32                   | 6    | SNHU 09T3 | 3   |             |        |             |        |
|                          |    |     |    |                      |      |           |     |             |        |             |        |
| C491.32.R.02-12-A-63-250 | 32 | 250 | 63 | 32                   | 8    | SNHU 1204 | 2   | 50 774 232  | 167,80 |             |        |
| C491.32.R.02-12-B-40     | 32 | 102 | 40 | 32                   | 8    | SNHU 1204 | 2   |             |        | 50 774 032  | 167,80 |

MaxiMill – Shell mill A 491



CERATIZIT \ Performance



| ISO designation  | DC  | OAL | DHUB | DCONMS <sub>h6</sub> | APMX | Insert    | ZNF | Article no.              |        | Article no.              |        |
|------------------|-----|-----|------|----------------------|------|-----------|-----|--------------------------|--------|--------------------------|--------|
|                  | mm  | mm  | mm   | mm                   | mm   |           |     |                          | EUR    |                          | EUR    |
| A491.40.R.03-09  | 40  | 40  | 38   | 16                   | 6    | SNHU 09T3 | 3   | 50 775 240               | 193,95 | 50 776 240               | 225,45 |
| A491.40.R.05-09  | 40  | 40  | 38   | 16                   | 6    | SNHU 09T3 | 5   |                          |        |                          |        |
| A491.50.R.04-09  | 50  | 40  | 43   | 22                   | 6    | SNHU 09T3 | 4   | 50 775 250               | 214,95 | 50 776 250               | 246,40 |
| A491.50.R.06-09  | 50  | 40  | 43   | 22                   | 6    | SNHU 09T3 | 6   |                          |        |                          |        |
| A491.63.R.05-09  | 63  | 40  | 48   | 22                   | 6    | SNHU 09T3 | 5   | 50 775 263               | 256,90 | 50 776 263               | 304,05 |
| A491.63.R.08-09  | 63  | 40  | 48   | 22                   | 6    | SNHU 09T3 | 8   |                          |        |                          |        |
| A491.80.R.06-09  | 80  | 50  | 58   | 27                   | 6    | SNHU 09T3 | 6   | 50 775 280               | 272,65 | 50 776 280               | 335,55 |
| A491.80.R.10-09  | 80  | 50  | 58   | 27                   | 6    | SNHU 09T3 | 10  |                          |        |                          |        |
| A491.100.R.07-09 | 100 | 50  | 78   | 32                   | 6    | SNHU 09T3 | 7   | 50 775 300               | 346,00 | 50 776 300               | 424,65 |
| A491.100.R.12-09 | 100 | 50  | 78   | 32                   | 6    | SNHU 09T3 | 12  |                          |        |                          |        |
| A491.125.R.08-09 | 125 | 63  | 88   | 40                   | 6    | SNHU 09T3 | 8   | 50 775 325               | 419,40 | 50 776 325               | 514,00 |
| A491.125.R.15-09 | 125 | 63  | 88   | 40                   | 6    | SNHU 09T3 | 15  |                          |        |                          |        |
|                  |     |     |      |                      |      |           |     |                          |        |                          |        |
| A491.40.R.03-12  | 40  | 40  | 38   | 16                   | 8    | SNHU 1204 | 3   | 50 775 040               | 193,95 | 50 776 040               | 209,70 |
| A491.40.R.04-12  | 40  | 40  | 38   | 16                   | 8    | SNHU 1204 | 4   |                          |        |                          |        |
| A491.50.R.04-12  | 50  | 40  | 43   | 22                   | 8    | SNHU 1204 | 4   | 50 775 050               | 214,95 | 50 776 050               | 230,70 |
| A491.50.R.05-12  | 50  | 40  | 43   | 22                   | 8    | SNHU 1204 | 5   |                          |        |                          |        |
| A491.63.R.05-12  | 63  | 40  | 48   | 22                   | 8    | SNHU 1204 | 5   | 50 775 063               | 256,90 | 50 776 063               | 272,65 |
| A491.63.R.06-12  | 63  | 40  | 48   | 22                   | 8    | SNHU 1204 | 6   |                          |        |                          |        |
| A491.80.R.06-12  | 80  | 50  | 58   | 27                   | 8    | SNHU 1204 | 6   | 50 775 080               | 272,65 | 50 776 080               | 314,55 |
| A491.80.R.08-12  | 80  | 50  | 58   | 27                   | 8    | SNHU 1204 | 8   |                          |        |                          |        |
| A491.100.R.07-12 | 100 | 50  | 78   | 32                   | 8    | SNHU 1204 | 7   | 50 775 100               | 346,00 | 50 776 100               | 393,25 |
| A491.100.R.10-12 | 100 | 50  | 78   | 32                   | 8    | SNHU 1204 | 10  |                          |        |                          |        |
| A491.125.R.08-12 | 125 | 63  | 88   | 40                   | 8    | SNHU 1204 | 8   | 50 775 125               | 419,40 | 50 776 125               | 482,35 |
| A491.125.R.12-12 | 125 | 63  | 88   | 40                   | 8    | SNHU 1204 | 12  |                          |        |                          |        |
| A491.160.R.09-12 | 160 | 63  | 98   | 40                   | 8    | SNHU 1204 | 9   | 50 775 160 <sup>1)</sup> | 487,60 |                          |        |
| A491.160.R.14-12 | 160 | 63  | 98   | 40                   | 8    | SNHU 1204 | 14  |                          |        | 50 776 160 <sup>1)</sup> | 566,50 |

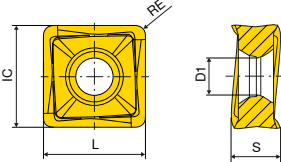
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm

Spare parts

|                   | TORX® blade |            | Key D       |            | Power Screw |            | Molykote    |            | Clamping screw |            | Torque screwdriver |            |
|-------------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|----------------|------------|--------------------|------------|
|                   | Article no. |            | Article no. |            | Article no. |            | Article no. |            | Article no.    |            | Article no.        |            |
|                   | EUR         |            | EUR         |            | EUR         |            | EUR         |            | EUR            |            | EUR                |            |
| SNHU 09T3..       | 4,73        | 80 950 053 | 8,02        | 80 950 119 |             |            | 3,94        | 70 950 303 | 2,78           | 70 950 710 | 118,71             | 80 950 193 |
| SNHU 09T3.. (Ø40) | 4,73        | 80 950 053 | 8,02        | 80 950 119 | 11,23       | 70 950 151 | 3,94        | 70 950 303 | 2,78           | 70 950 710 | 118,71             | 80 950 193 |
| SNHU 1204..       | 4,73        | 80 950 054 | 10,70       | 80 950 128 |             |            | 3,94        | 70 950 303 | 2,83           | 70 950 859 | 118,71             | 80 950 193 |
| SNHU 1204.. (Ø40) | 4,73        | 80 950 054 | 10,70       | 80 950 128 | 11,23       | 70 950 151 | 3,94        | 70 950 303 | 2,83           | 70 950 859 | 118,71             | 80 950 193 |

SNHU

| Designation | IC    | D1   | L     | S    |
|-------------|-------|------|-------|------|
|             | mm    | mm   | mm    | mm   |
| SNHU 09T3.. | 9,15  | 3,85 | 9,15  | 3,70 |
| SNHU 1204.. | 12,20 | 4,40 | 12,20 | 5,00 |



SNHU

CERATIZIT \ Performance

|                       |     | -F50<br>CTPM240                                                                     |       | -F10<br>CTWN215                                                                     |       |
|-----------------------|-----|-------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|-------|
|                       |     | -F50<br>DPX2240                                                                     |       | -F10<br>CWK4615                                                                     |       |
|                       |     | DRAGONSKIN                                                                          |       |                                                                                     |       |
|                       |     |  |       |  |       |
|                       |     | SNHU                                                                                |       | SNHU                                                                                |       |
| ISO                   | RE  | Article no.                                                                         |       | Article no.                                                                         |       |
|                       | mm  | EUR                                                                                 |       | EUR                                                                                 |       |
| 120408FR              | 0,8 |                                                                                     |       | 51 101 358                                                                          | 24,13 |
| 120408SR              | 0,8 | 51 102 408                                                                          | 24,13 |                                                                                     |       |
| 120412FR              | 1,2 |                                                                                     |       | 51 101 362                                                                          | 24,13 |
| 120412SR              | 1,2 | 51 102 412                                                                          | 24,13 |                                                                                     |       |
| 120416FR              | 1,6 |                                                                                     |       | 51 101 366                                                                          | 24,13 |
| 120416SR              | 1,6 | 51 102 416                                                                          | 24,13 |                                                                                     |       |
| 120420FR              | 2,0 |                                                                                     |       | 51 101 370                                                                          | 24,13 |
| 120420SR              | 2,0 | 51 102 420                                                                          | 24,13 |                                                                                     |       |
| Steel                 |     | ○                                                                                   |       |                                                                                     |       |
| Stainless steel       |     | ●                                                                                   |       |                                                                                     |       |
| Cast iron             |     |                                                                                     |       | ○                                                                                   |       |
| Non ferrous metals    |     |                                                                                     |       | ●                                                                                   |       |
| Heat resistant alloys |     |                                                                                     |       |                                                                                     |       |

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|                       |     | -M50<br>CTCP230                                                                     |       | -M50<br>CTPP235                                                                       |       | -M50<br>CTPM240                                                                       |       | -R50<br>CTCK215                                                                       |       | -R50<br>CTPK220                                                                       |       |
|-----------------------|-----|-------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|
|                       |     | -M50<br>DCX1230                                                                     |       | -M50<br>DPX1235                                                                       |       | -M50<br>DPX2240                                                                       |       | -R50<br>DCX3215                                                                       |       | -R50<br>DPX3220                                                                       |       |
|                       |     | DRAGONSKIN                                                                          |       | DRAGONSKIN                                                                            |       | DRAGONSKIN                                                                            |       | DRAGONSKIN                                                                            |       | DRAGONSKIN                                                                            |       |
|                       |     |  |       |  |       |  |       |  |       |  |       |
|                       |     | SNHU                                                                                |       | SNHU                                                                                  |       | SNHU                                                                                  |       | SNHU                                                                                  |       | SNHU                                                                                  |       |
| ISO                   | RE  | Article no.                                                                         |       | Article no.                                                                           |       | Article no.                                                                           |       | Article no.                                                                           |       | Article no.                                                                           |       |
|                       | mm  | EUR                                                                                 |       | EUR                                                                                   |       | EUR                                                                                   |       | EUR                                                                                   |       | EUR                                                                                   |       |
| 120408SR              | 0,8 | 51 100 008                                                                          | 24,13 | 51 100 108                                                                            | 24,13 | 51 100 408                                                                            | 24,13 | 51 103 508                                                                            | 24,13 | 51 103 608                                                                            | 24,13 |
| 120412SR              | 1,2 |                                                                                     |       | 51 100 112                                                                            | 24,13 |                                                                                       |       | 51 103 512                                                                            | 24,13 |                                                                                       |       |
| 120416SR              | 1,6 |                                                                                     |       | 51 100 116                                                                            | 24,13 |                                                                                       |       | 51 103 516                                                                            | 24,13 |                                                                                       |       |
| 120420SR              | 2,0 |                                                                                     |       | 51 100 120                                                                            | 24,13 |                                                                                       |       | 51 103 520                                                                            | 24,13 |                                                                                       |       |
| Steel                 |     | ●                                                                                   |       | ●                                                                                     |       | ○                                                                                     |       | ○                                                                                     |       | ○                                                                                     |       |
| Stainless steel       |     | ○                                                                                   |       | ○                                                                                     |       | ●                                                                                     |       |                                                                                       |       |                                                                                       |       |
| Cast iron             |     |                                                                                     |       |                                                                                       |       |                                                                                       |       | ●                                                                                     |       | ●                                                                                     |       |
| Non ferrous metals    |     |                                                                                     |       |                                                                                       |       |                                                                                       |       |                                                                                       |       |                                                                                       |       |
| Heat resistant alloys |     |                                                                                     |       |                                                                                       |       |                                                                                       |       |                                                                                       |       |                                                                                       |       |

SNHU

CERATIZIT \ Performance

|                       |     | -M50<br>CTCP230                                                                     |       | -M50<br>CTPP235                                                                     |       | -F50<br>CTPM240                                                                       |       | -M50<br>CTPM240                                                                       |       | -R50<br>CTCK215                                                                       |       | -F10<br>CTWN215                                                                       |       |
|-----------------------|-----|-------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|-------|
|                       |     | -M50<br>DCX1230                                                                     |       | -M50<br>DPX1235                                                                     |       | -F50<br>DPX2240                                                                       |       | -M50<br>DPX2240                                                                       |       | -R50<br>DCX3215                                                                       |       | -F10<br>CWK4615                                                                       |       |
|                       |     | DRAGONSKIN                                                                          |       | DRAGONSKIN                                                                          |       | DRAGONSKIN                                                                            |       | DRAGONSKIN                                                                            |       | DRAGONSKIN                                                                            |       |                                                                                       |       |
|                       |     |  |       |  |       |  |       |  |       |  |       |  |       |
|                       |     | SNHU                                                                                |       | SNHU                                                                                |       | SNHU                                                                                  |       | SNHU                                                                                  |       | SNHU                                                                                  |       | SNHU                                                                                  |       |
| ISO                   | RE  | Article no.                                                                         |       | Article no.                                                                         |       | Article no.                                                                           |       | Article no.                                                                           |       | Article no.                                                                           |       | Article no.                                                                           |       |
|                       | mm  | EUR                                                                                 |       | EUR                                                                                 |       | EUR                                                                                   |       | EUR                                                                                   |       | EUR                                                                                   |       | EUR                                                                                   |       |
| 09T308FR              | 0,8 |                                                                                     |       |                                                                                     |       |                                                                                       |       |                                                                                       |       |                                                                                       |       | 51 118 358                                                                            | 19,76 |
| 09T308SR              | 0,8 | 51 120 008                                                                          | 19,76 | 51 120 108                                                                          | 19,76 | 51 119 408                                                                            | 19,76 | 51 120 408                                                                            | 19,76 | 51 121 508                                                                            | 19,76 |                                                                                       |       |
| Steel                 |     | ●                                                                                   |       | ●                                                                                   |       | ○                                                                                     |       | ○                                                                                     |       | ○                                                                                     |       |                                                                                       |       |
| Stainless steel       |     | ○                                                                                   |       | ○                                                                                   |       | ●                                                                                     |       | ●                                                                                     |       | ●                                                                                     |       | ○                                                                                     |       |
| Cast iron             |     |                                                                                     |       |                                                                                     |       |                                                                                       |       |                                                                                       |       |                                                                                       |       |                                                                                       |       |
| Non ferrous metals    |     |                                                                                     |       |                                                                                     |       |                                                                                       |       |                                                                                       |       |                                                                                       |       | ●                                                                                     |       |
| Heat resistant alloys |     |                                                                                     |       |                                                                                     |       |                                                                                       |       |                                                                                       |       |                                                                                       |       |                                                                                       |       |

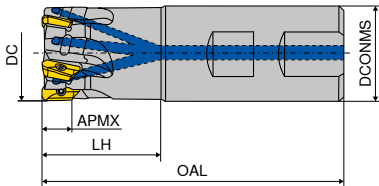


MaxiMill – End milling cutter C 211-11

▲ Insert radius >1,6 mm: Modify cutter body



CERATIZIT \ Performance



| ISO designation            | DC | OAL | LH | DCONMS <sub>H6</sub> | APMX | RPMX   | Insert    | ZNF |
|----------------------------|----|-----|----|----------------------|------|--------|-----------|-----|
|                            | mm | mm  | mm | mm                   | mm   | 1/min. |           |     |
| C211.12.R.01-11-B-20       | 12 | 75  | 20 | 16                   | 10   | 55000  | XD.T 11T3 | 1   |
| C211.16.R.02-11-A-25       | 16 | 75  | 25 | 16                   | 10   | 42000  | XD.T 11T3 | 2   |
| C211.16.R.02-11-B-25       | 16 | 75  | 25 | 16                   | 10   | 42000  | XD.T 11T3 | 2   |
| C211.16.R.02-11-A15-32-165 | 16 | 165 | 32 | 15                   | 10   | 14800  | XD.T 11T3 | 2   |
| C211.16.R.02-11-A-32-165   | 16 | 165 | 32 | 16                   | 10   | 14800  | XD.T 11T3 | 2   |
| C211.20.R.03-11-A-25       | 20 | 77  | 25 | 20                   | 10   | 36900  | XD.T 11T3 | 3   |
| C211.20.R.03-11-B-25       | 20 | 77  | 25 | 20                   | 10   | 36900  | XD.T 11T3 | 3   |
| C211.20.R.03-11-A-32-165   | 20 | 165 | 32 | 20                   | 10   | 15800  | XD.T 11T3 | 3   |
| C211.20.R.02-11-A19-40-200 | 20 | 200 | 40 | 19                   | 10   | 10500  | XD.T 11T3 | 2   |
| C211.20.R.02-11-A-40-200   | 20 | 200 | 40 | 20                   | 10   | 10500  | XD.T 11T3 | 2   |
| C211.25.R.03-11-A-32       | 25 | 90  | 32 | 25                   | 10   | 33200  | XD.T 11T3 | 3   |
| C211.25.R.03-11-B-32       | 25 | 90  | 32 | 25                   | 10   | 33200  | XD.T 11T3 | 3   |
| C211.25.R.04-11-A-32       | 25 | 90  | 32 | 25                   | 10   | 33200  | XD.T 11T3 | 4   |
| C211.25.R.04-11-B-32       | 25 | 90  | 32 | 25                   | 10   | 33200  | XD.T 11T3 | 4   |
| C211.25.R.04-11-A-40-165   | 25 | 165 | 40 | 25                   | 10   | 19900  | XD.T 11T3 | 4   |
| C211.25.R.03-11-A-50-225   | 25 | 225 | 50 | 25                   | 10   | 9400   | XD.T 11T3 | 3   |
| C211.25.R.03-11-A24-50-225 | 25 | 225 | 50 | 24                   | 10   | 9400   | XD.T 11T3 | 3   |
| C211.32.R.05-11-A-40       | 32 | 102 | 40 | 32                   | 10   | 30200  | XD.T 11T3 | 5   |
| C211.32.R.05-11-B-40       | 32 | 102 | 40 | 32                   | 10   | 30200  | XD.T 11T3 | 5   |
| C211.32.R.05-11-A-50-165   | 32 | 165 | 50 | 32                   | 10   | 20900  | XD.T 11T3 | 5   |
| C211.32.R.04-11-A-64-250   | 32 | 250 | 64 | 32                   | 10   | 8500   | XD.T 11T3 | 4   |

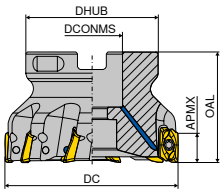
| Article no. |        | Article no. |        |
|-------------|--------|-------------|--------|
|             | EUR    |             | EUR    |
|             |        | 50 737 012  | 102,80 |
| 50 737 116  | 115,25 | 50 737 016  | 115,25 |
| 50 737 316  | 115,25 |             |        |
| 50 737 216  | 115,25 |             |        |
| 50 737 120  | 130,85 | 50 737 020  | 130,85 |
| 50 737 320  | 130,85 |             |        |
| 50 737 620  | 121,50 |             |        |
| 50 737 420  | 121,50 |             |        |
| 50 737 625  | 137,10 |             |        |
| 50 737 125  | 146,45 | 50 737 725  | 137,10 |
| 50 737 325  | 146,45 | 50 737 025  | 146,45 |
| 50 737 425  | 137,10 |             |        |
| 50 737 825  | 137,10 |             |        |
| 50 737 132  | 162,05 | 50 737 032  | 162,05 |
| 50 737 332  | 162,05 |             |        |
| 50 737 432  | 152,65 |             |        |

MaxiMill – Shell mill A 211-11

▲ Insert radius >1,6 mm: Modify cutter body



CERATIZIT \ Performance



| ISO designation | DC | OAL | DCONMS <sub>H6</sub> | DHUB | APMX | RPMX   | Insert    | ZNF |
|-----------------|----|-----|----------------------|------|------|--------|-----------|-----|
|                 | mm | mm  | mm                   | mm   | mm   | 1/min. |           |     |
| A211.40.R.04-11 | 40 | 40  | 16                   | 38   | 10   | 27700  | XD.T 11T3 | 4   |
| A211.40.R.06-11 | 40 | 40  | 16                   | 38   | 10   | 27700  | XD.T 11T3 | 6   |
| A211.50.R.05-11 | 50 | 40  | 22                   | 43   | 10   | 25400  | XD.T 11T3 | 5   |
| A211.50.R.08-11 | 50 | 40  | 22                   | 43   | 10   | 25400  | XD.T 11T3 | 8   |
| A211.63.R.06-11 | 63 | 40  | 22                   | 48   | 10   | 23300  | XD.T 11T3 | 6   |
| A211.63.R.10-11 | 63 | 40  | 22                   | 48   | 10   | 23300  | XD.T 11T3 | 10  |
| A211.80.R.07-11 | 80 | 50  | 27                   | 58   | 10   | 21300  | XD.T 11T3 | 7   |
| A211.80.R.10-11 | 80 | 50  | 27                   | 58   | 10   | 21300  | XD.T 11T3 | 10  |

| Article no. |        | Article no. |        |
|-------------|--------|-------------|--------|
|             | EUR    |             | EUR    |
| 50 738 040  | 158,95 | 50 739 040  | 177,55 |
| 50 738 050  | 186,90 | 50 739 050  | 215,00 |
| 50 738 063  | 215,00 | 50 739 063  | 252,35 |
| 50 738 080  | 243,05 | 50 739 180  | 271,05 |

Spare parts

| DC      | TORX® blade         | Key D               | Power Screw          | Molykote            | Clamping screw      | Torque screwdriver    |
|---------|---------------------|---------------------|----------------------|---------------------|---------------------|-----------------------|
|         | Article no.         | Article no.         | Article no.          | Article no.         | Article no.         | Article no.           |
| 12      | EUR 4,28 80 950 043 | EUR 9,18 80 950 125 | EUR 11,23 70 950 151 | EUR 3,94 70 950 303 | EUR 2,31 70 950 116 | EUR 107,01 80 950 191 |
| 16 - 32 | EUR 4,28 80 950 043 | EUR 9,18 80 950 125 | EUR 15,43 70 950 154 | EUR 3,94 70 950 303 | EUR 3,68 70 950 128 | EUR 107,01 80 950 191 |
| 40      | EUR 4,28 80 950 043 | EUR 9,18 80 950 125 |                      | EUR 3,94 70 950 303 | EUR 3,68 70 950 131 | EUR 107,01 80 950 191 |
| 50      | EUR 4,28 80 950 043 | EUR 9,18 80 950 125 |                      | EUR 3,94 70 950 303 | EUR 3,68 70 950 131 | EUR 107,01 80 950 191 |
| 63 - 80 | EUR 4,28 80 950 043 | EUR 9,18 80 950 125 |                      | EUR 3,94 70 950 303 | EUR 3,68 70 950 131 | EUR 107,01 80 950 191 |

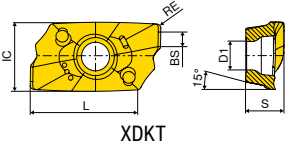
Direct availability to a global innovator.



Team Cutting Tools means access to a leading international expert in the field of carbide and carbide tools for all those involved. With the new partners in the CERATIZIT team, the goals for the future are: A large single product portfolio, even more custom solutions and additional upgraded services. One thing that will always remain the same: direct contact with the customer – thanks to short distances and personal contacts. Now together as a single sales organization.

XDKT / XDHT

| Designation   | IC  | D1  | L    | BS  | S    |
|---------------|-----|-----|------|-----|------|
|               | mm  | mm  | mm   | mm  | mm   |
| XD.T 11T302.. | 6,8 | 2,8 | 10,6 | 2   | 3,80 |
| XD.T 11T304.. | 6,8 | 2,8 | 10,6 | 1,8 | 3,80 |
| XD.T 11T308.. | 6,8 | 2,8 | 10,6 | 1,4 | 3,80 |
| XD.T 11T312.. | 6,8 | 2,8 | 10,6 | 1,4 | 3,80 |
| XD.T 11T316.. | 6,8 | 2,8 | 10,6 | 1,4 | 3,80 |
| XD.T 11T320.. | 6,8 | 2,8 | 10,6 | 1,4 | 3,80 |
| XD.T 11T325.. | 6,8 | 2,8 | 10,6 | 1,4 | 3,80 |
| XD.T 11T332.. | 6,8 | 2,8 | 10,6 | 0,8 | 3,80 |
| XD.T 11T340.. | 6,8 | 2,8 | 10,6 | -   | 3,80 |
| XDHT 11T350.. | 6,8 | 2,8 | 10,6 | -   | 3,80 |
| XDKT 11T332.. | 6,8 | 2,8 | 10,6 | 1,4 | 3,80 |



XDKT / XDHT

CERATIZIT \ Performance

|                       |     | -F40 CTPM245             |       | -F50 CTPM245 |       | -F40 CTC5240             |       | -F20 CTWN215             |       | -27P H216T               |       |
|-----------------------|-----|--------------------------|-------|--------------|-------|--------------------------|-------|--------------------------|-------|--------------------------|-------|
|                       |     | -F40 DPX2245             |       | -F50 DPX2245 |       | -F40 HCF5240             |       | -F20 CWK4615             |       | -ALP CWK26               |       |
|                       |     | DRAGONSKIN               |       | DRAGONSKIN   |       | DRAGONSKIN               |       |                          |       |                          |       |
|                       |     |                          |       |              |       |                          |       |                          |       |                          |       |
|                       |     | XDKT                     |       | XDKT         |       | XDKT                     |       | XDKT                     |       | XDHT                     |       |
| ISO                   | RE  | Article no.              |       | Article no.  |       | Article no.              |       | Article no.              |       | Article no.              |       |
|                       | mm  |                          | EUR   |              | EUR   |                          | EUR   |                          | EUR   |                          | EUR   |
| 11T302FR              | 0,2 |                          |       |              |       |                          |       | 50 478 502               | 15,90 | 50 477 502               | 23,97 |
| 11T304ER              | 0,4 | 51 113 454               | 16,28 |              |       | 50 463 504               | 16,28 |                          |       | 50 477 504               | 23,97 |
| 11T304FR              | 0,4 |                          |       |              |       |                          |       | 50 478 504               | 15,90 |                          |       |
| 11T308ER              | 0,8 | 51 113 458               | 16,28 |              |       | 50 463 500               | 16,28 |                          |       | 50 477 508               | 23,97 |
| 11T308FR              | 0,8 |                          |       |              |       |                          |       | 50 478 508               | 15,90 |                          |       |
| 11T308SR              | 0,8 |                          |       | 51 034 458   | 16,28 |                          |       |                          |       |                          |       |
| 11T312ER              | 1,2 | 51 113 462               | 16,28 |              |       | 50 463 512               | 16,28 |                          |       |                          |       |
| 11T312FR              | 1,2 |                          |       |              |       |                          |       |                          |       | 50 477 512               | 23,97 |
| 11T316ER              | 1,6 | 51 113 466               | 16,28 |              |       | 50 463 516               | 16,28 |                          |       |                          |       |
| 11T316FR              | 1,6 |                          |       |              |       |                          |       |                          |       | 50 477 516               | 23,97 |
| 11T320ER              | 2,0 | 51 113 470 <sup>1)</sup> | 16,28 |              |       |                          |       |                          |       |                          |       |
| 11T320FR              | 2,0 |                          |       |              |       |                          |       | 50 478 520 <sup>1)</sup> | 15,90 | 50 477 520 <sup>1)</sup> | 23,97 |
| 11T325ER              | 2,5 | 51 113 475 <sup>1)</sup> | 16,28 |              |       | 50 463 525 <sup>1)</sup> | 16,28 |                          |       |                          |       |
| 11T325FR              | 2,5 |                          |       |              |       |                          |       | 50 478 525 <sup>1)</sup> | 15,90 | 50 477 525 <sup>1)</sup> | 23,97 |
| 11T332ER              | 3,2 | 51 113 482 <sup>1)</sup> | 16,28 |              |       | 50 463 532 <sup>1)</sup> | 16,28 |                          |       | 50 477 532 <sup>1)</sup> | 23,97 |
| 11T332FR              | 3,2 |                          |       |              |       |                          |       |                          |       |                          |       |
| 11T340ER              | 4,0 | 51 113 490 <sup>1)</sup> | 16,28 |              |       | 50 463 540 <sup>1)</sup> | 16,28 |                          |       | 50 477 540 <sup>1)</sup> | 23,97 |
| 11T340FR              | 4,0 |                          |       |              |       |                          |       |                          |       | 50 477 550 <sup>1)</sup> | 23,97 |
| 11T350FR              | 5,0 |                          |       |              |       |                          |       |                          |       |                          |       |
| Steel                 |     |                          |       |              |       |                          |       |                          |       |                          |       |
| Stainless steel       |     |                          |       |              |       |                          |       |                          |       |                          |       |
| Cast iron             |     |                          |       |              |       |                          |       |                          |       |                          |       |
| Non ferrous metals    |     |                          |       |              |       |                          |       |                          |       |                          |       |
| Heat resistant alloys |     |                          |       |              |       |                          |       |                          |       |                          |       |

1) Insert radius >1.6 mm: Modify cutter body

XDKT

CERATIZIT \ Performance

|                       |     | -M50 CTCP220 |       | -M50 CTPP225 |       | -M50 CTCP230             |       | -M50 CTPP235             |       | -M50 CTPM225 |       | -M50 CTCM235 |       | -M50 CTPM240             |       | -M50 CTCK215 |       | -M50 CTPK220 |       |
|-----------------------|-----|--------------|-------|--------------|-------|--------------------------|-------|--------------------------|-------|--------------|-------|--------------|-------|--------------------------|-------|--------------|-------|--------------|-------|
|                       |     | -M50 DCX1220 |       | -M50 DPX1225 |       | -M50 DCX1230             |       | -M50 DPX1235             |       | -M50 DPX2225 |       | -M50 DCX2235 |       | -M50 DPX2240             |       | -M50 DCX3215 |       | -M50 DPX3220 |       |
|                       |     | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN               |       | DRAGONSKIN               |       | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN               |       | DRAGONSKIN   |       | DRAGONSKIN   |       |
|                       |     |              |       |              |       |                          |       |                          |       |              |       |              |       |                          |       |              |       |              |       |
|                       |     | XDKT         |       | XDKT         |       | XDKT                     |       | XDKT                     |       | XDKT         |       | XDKT         |       | XDKT                     |       | XDKT         |       | XDKT         |       |
| ISO                   | RE  | Article no.  |       | Article no.  |       | Article no.              |       | Article no.              |       | Article no.  |       | Article no.  |       | Article no.              |       | Article no.  |       | Article no.  |       |
|                       | mm  |              | EUR   |              | EUR   |                          | EUR   |                          | EUR   |              | EUR   |              | EUR   |                          | EUR   |              | EUR   |              | EUR   |
| 11T304SR              | 0,4 |              |       |              |       | 51 037 004               | 12,65 | 51 037 104               | 12,65 |              |       |              |       | 51 037 404               | 12,65 | 51 037 504   | 12,65 |              |       |
| 11T308SR              | 0,8 | 51 037 258   | 12,65 | 51 037 058   | 12,65 | 51 037 008               | 12,65 | 51 037 108               | 12,65 | 51 037 208   | 12,65 | 51 037 308   | 12,65 | 51 037 408               | 12,65 | 51 037 508   | 12,65 | 51 037 608   | 12,65 |
| 11T312SR              | 1,2 |              |       |              |       | 51 037 012               | 12,65 |                          |       |              |       |              |       | 51 037 412               | 12,65 |              |       |              |       |
| 11T320SR              | 2,0 |              |       |              |       | 51 037 020 <sup>1)</sup> | 12,65 | 51 037 120 <sup>1)</sup> | 12,65 |              |       |              |       | 51 037 420 <sup>1)</sup> | 12,65 |              |       |              |       |
| 11T325SR              | 2,5 |              |       |              |       | 51 037 025 <sup>1)</sup> | 12,65 | 51 037 125 <sup>1)</sup> | 12,65 |              |       |              |       |                          |       |              |       |              |       |
| 11T332SR              | 3,2 |              |       |              |       |                          |       |                          |       |              |       |              |       | 51 037 432 <sup>1)</sup> | 12,65 |              |       |              |       |
| Steel                 |     |              |       |              |       |                          |       |                          |       |              |       |              |       |                          |       |              |       |              |       |
| Stainless steel       |     |              |       |              |       |                          |       |                          |       |              |       |              |       |                          |       |              |       |              |       |
| Cast iron             |     |              |       |              |       |                          |       |                          |       |              |       |              |       |                          |       |              |       |              |       |
| Non ferrous metals    |     |              |       |              |       |                          |       |                          |       |              |       |              |       |                          |       |              |       |              |       |
| Heat resistant alloys |     |              |       |              |       |                          |       |                          |       |              |       |              |       |                          |       |              |       |              |       |

1) Insert radius >1.6 mm: Modify cutter body

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed Calculation

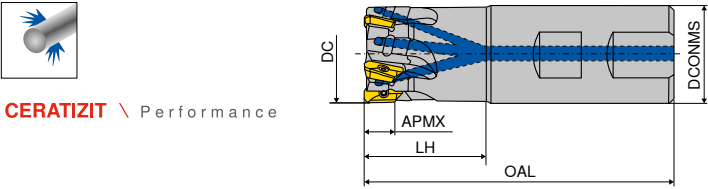
RPM =  $\frac{v_c \times 1000}{\pi \times D}$

v<sub>c</sub> = (See Individual v<sub>c</sub> Charts)  
π = 3.142  
D = Diameter



MaxiMill – End milling cutter C 211-15

▲ Insert radius >2,5 mm: Modify cutter body



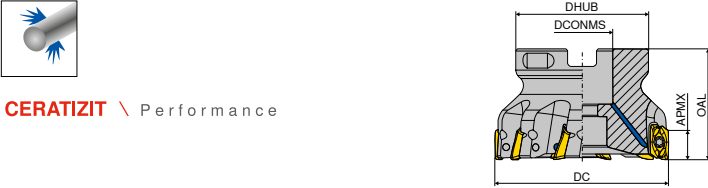
CERATIZIT \ Performance

| ISO designation          | DC | OAL | LH | DCONMS | APMX | RPMX   | Insert    | ZNF |
|--------------------------|----|-----|----|--------|------|--------|-----------|-----|
|                          | mm | mm  | mm | mm     | mm   | 1/min. |           |     |
| C211.25.R.02-15-B20-32   | 25 | 83  | 32 | 20     | 14   | 26560  | XD.T 1505 | 2   |
| C211.25.R.02-15-A-32     | 25 | 90  | 32 | 25     | 14   | 26560  | XD.T 1505 | 2   |
| C211.25.R.02-15-B-32     | 25 | 90  | 32 | 25     | 14   | 26560  | XD.T 1505 | 2   |
| C211.25.R.02-15-A-50-225 | 25 | 225 | 50 | 25     | 14   | 7520   | XD.T 1505 | 2   |
| C211.32.R.03-15-B25-40   | 32 | 96  | 40 | 25     | 14   | 22160  | XD.T 1505 | 3   |
| C211.32.R.03-15-A-40     | 32 | 103 | 40 | 32     | 14   | 24160  | XD.T 1505 | 3   |
| C211.32.R.03-15-B-40     | 32 | 103 | 40 | 32     | 14   | 24160  | XD.T 1505 | 3   |
| C211.32.R.03-15-A-63-250 | 32 | 250 | 63 | 32     | 14   | 6800   | XD.T 1505 | 3   |
| C211.40.R.04-15-A-50     | 40 | 110 | 50 | 32     | 14   | 22160  | XD.T 1505 | 4   |
| C211.40.R.04-15-B32-50   | 40 | 110 | 50 | 32     | 14   | 22160  | XD.T 1505 | 4   |
| C211.40.R.03-15-A-50-275 | 40 | 275 | 50 | 32     | 14   | 6120   | XD.T 1505 | 3   |

|             |             |                   |
|-------------|-------------|-------------------|
|             | A           | B                 |
| Article no. | Article no. | Article no.       |
|             | EUR         | EUR               |
| 50 747 225  | 132,35      | 50 747 125 132,35 |
| 50 747 325  | 123,35      | 50 747 025 132,35 |
| 50 747 232  | 147,35      | 50 747 132 147,35 |
| 50 747 332  | 138,40      | 50 747 032 147,35 |
| 50 747 240  | 162,50      |                   |
| 50 747 340  | 153,35      | 50 747 040 162,50 |

MaxiMill – Shell mill A 211-15

▲ Insert radius >2,5 mm: Modify cutter body



CERATIZIT \ Performance

| ISO designation  | DC  | OAL | DCONMS H6 | DHUB | APMX | RPMX   | Insert    | ZNF |
|------------------|-----|-----|-----------|------|------|--------|-----------|-----|
|                  | mm  | mm  | mm        | mm   | mm   | 1/min. |           |     |
| A211.40.R.03-15  | 40  | 40  | 16        | 38   | 14   | 22160  | XD.T 1505 | 3   |
| A211.40.R.04-15  | 40  | 40  | 16        | 38   | 14   | 22160  | XD.T 1505 | 4   |
| A211.50.R.03-15  | 50  | 40  | 22        | 43   | 14   | 20320  | XD.T 1505 | 3   |
| A211.50.R.05-15  | 50  | 40  | 22        | 43   | 14   | 20320  | XD.T 1505 | 5   |
| A211.63.R.04-15  | 63  | 45  | 22        | 48   | 14   | 18640  | XD.T 1505 | 4   |
| A211.63.R.06-15  | 63  | 45  | 22        | 48   | 14   | 18640  | XD.T 1505 | 6   |
| A211.80.R.05-15  | 80  | 50  | 27        | 58   | 14   | 17040  | XD.T 1505 | 5   |
| A211.80.R.08-15  | 80  | 50  | 27        | 58   | 14   | 17040  | XD.T 1505 | 8   |
| A211.100.R.06-15 | 100 | 50  | 32        | 78   | 14   | 15680  | XD.T 1505 | 6   |
| A211.100.R.10-15 | 100 | 50  | 32        | 78   | 14   | 15680  | XD.T 1505 | 10  |
| A211.125.R.07-15 | 125 | 63  | 40        | 88   | 14   | 14320  | XD.T 1505 | 7   |
| A211.125.R.11-15 | 125 | 63  | 40        | 88   | 14   | 14320  | XD.T 1505 | 11  |
| A211.160.R.08-15 | 160 | 63  | 40        | 93   | 14   | 13200  | XD.T 1505 | 8   |
| A211.160.R.12-15 | 160 | 63  | 40        | 93   | 14   | 13200  | XD.T 1505 | 12  |

|                   |                   |
|-------------------|-------------------|
| Article no.       | Article no.       |
| EUR               | EUR               |
| 50 748 040 144,40 | 50 749 040 162,50 |
| 50 748 050 171,45 | 50 749 050 189,50 |
| 50 748 063 207,50 | 50 749 063 225,75 |
| 50 748 080 234,60 | 50 749 080 252,60 |
| 50 748 100 261,75 | 50 749 100 279,75 |
| 50 748 125 276,70 | 50 749 125 294,75 |
| 50 748 160 387,65 | 50 749 160 405,70 |

Spare parts

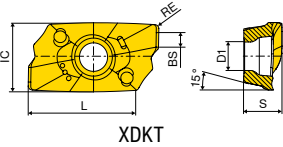
DC

|          |          |            |           |            |           |            |          |            |          |            |            |            |
|----------|----------|------------|-----------|------------|-----------|------------|----------|------------|----------|------------|------------|------------|
| 40       | EUR 4,73 | 80 950 054 | EUR 10,70 | 80 950 128 | EUR 11,23 | 70 950 151 | EUR 3,94 | 70 950 303 | EUR 2,86 | 70 950 839 | EUR 118,71 | 80 950 193 |
| 50       | EUR 4,73 | 80 950 054 | EUR 10,70 | 80 950 128 | EUR 15,43 | 70 950 154 | EUR 3,94 | 70 950 303 | EUR 2,86 | 70 950 839 | EUR 118,71 | 80 950 193 |
| 63 - 160 | EUR 4,73 | 80 950 054 | EUR 10,70 | 80 950 128 |           |            |          | 70 950 303 | EUR 2,86 | 70 950 839 | EUR 118,71 | 80 950 193 |

|                     |                      |                      |                     |                     |                       |
|---------------------|----------------------|----------------------|---------------------|---------------------|-----------------------|
| TORX® blade         | Key D                | Power Screw          | Molykote            | Clamping screw      | Torque screwdriver    |
| Article no.         | Article no.          | Article no.          | Article no.         | Article no.         | Article no.           |
| EUR 4,73 80 950 054 | EUR 10,70 80 950 128 | EUR 11,23 70 950 151 | EUR 3,94 70 950 303 | EUR 2,86 70 950 839 | EUR 118,71 80 950 193 |

XDKT

| Designation   | IC  | D1  | L    | BS  | S    |
|---------------|-----|-----|------|-----|------|
|               | mm  | mm  | mm   | mm  | mm   |
| XDKT 150508.. | 9,3 | 4,4 | 14,8 | 1,6 | 5,56 |
| XDKT 150532.. | 9,3 | 4,4 | 14,8 | 1,9 | 5,56 |
| XDKT 150540.. | 9,3 | 4,4 | 14,8 | 1,2 | 5,56 |



XDKT

CERATIZIT \ Performance

|          |     |                  |                  |                  |              |
|----------|-----|------------------|------------------|------------------|--------------|
|          | RE  |                  | -F40 CTPM245     | -F40 CTC5240     | -F20 CTWN215 |
|          | mm  |                  | -F40 DPX2245     | -F40 HCF5240     | -F20 CWK4615 |
|          |     |                  | DRAGONSKIN       | DRAGONSKIN       |              |
|          |     |                  | XDKT             | XDKT             | XDKT         |
| ISO      |     | Article no.      | Article no.      | Article no.      | Article no.  |
|          |     | EUR              | EUR              | EUR              | EUR          |
| 150508ER | 0,8 | 51 114 458 20,31 | 50 473 508 20,31 | 50 479 508 19,94 |              |
| 150508FR | 0,8 |                  |                  |                  |              |
| 150532ER | 3,2 | 51 114 482 20,31 | 50 473 532 20,31 |                  |              |
| 150540ER | 4,0 | 51 114 490 20,31 | 50 473 540 20,31 |                  |              |

|                       |   |
|-----------------------|---|
| Steel                 | • |
| Stainless steel       | • |
| Cast iron             | • |
| Non ferrous metals    | • |
| Heat resistant alloys | • |

- 1) Insert radius >2.5 mm: Modify cutter body  
2) Insert radius >1.6 mm: Modify cutter body

XDKT

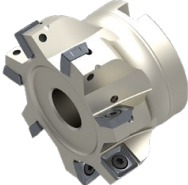
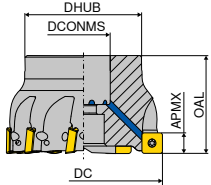
CERATIZIT \ Performance

|                       |     | -M50<br>CTCP220 |       | -M50<br>CTPP225 |       | -M50<br>CTCP230 |       | -M50<br>CTPP235 |       | -M50<br>CTPM225 |       | -M50<br>CTCM235 |       | -M50<br>CTPM240 |       | -M50<br>CTCK215 |       | -M50<br>CTPK220 |       |
|-----------------------|-----|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|
|                       |     | -M50<br>DCX1220 |       | -M50<br>DPX1225 |       | -M50<br>DCX1230 |       | -M50<br>DPX1235 |       | -M50<br>DPX2225 |       | -M50<br>DCX2235 |       | -M50<br>DPX2240 |       | -M50<br>DCX3215 |       | -M50<br>DPX3220 |       |
|                       |     | DRAGONSKIN      |       | DRAGONSKIN      |       | DRAGONSKIN      |       | DRAGONSKIN      |       | DRAGONSKIN      |       | DRAGONSKIN      |       | DRAGONSKIN      |       | DRAGONSKIN      |       | DRAGONSKIN      |       |
|                       |     | XDKT            |       | XDKT            |       | XDKT            |       | XDKT            |       | XDKT            |       | XDKT            |       | XDKT            |       | XDKT            |       | XDKT            |       |
| ISO                   | RE  | Article no.     |       | Article no.     |       | Article no.     |       | Article no.     |       | Article no.     |       | Article no.     |       | Article no.     |       | Article no.     |       | Article no.     |       |
|                       | mm  | EUR             |       | EUR             |       | EUR             |       | EUR             |       | EUR             |       | EUR             |       | EUR             |       | EUR             |       | EUR             |       |
| 150508SR              | 0,8 | 51 038 258      | 16,88 | 51 038 058      | 16,88 | 51 038 008      | 16,88 | 51 038 108      | 16,88 | 51 038 208      | 16,88 | 51 038 308      | 16,88 | 51 038 408      | 16,88 | 51 038 508      | 16,88 | 51 038 608      | 16,88 |
| 150512SR              | 1,2 |                 |       |                 |       | 51 038 012      | 16,88 | 51 038 112      | 16,88 |                 |       |                 |       | 51 038 412      | 16,88 |                 |       |                 |       |
| 150516SR              | 1,6 |                 |       |                 |       | 51 038 016      | 16,88 | 51 038 116      | 16,88 |                 |       |                 |       | 51 038 416      | 16,88 |                 |       |                 |       |
| 150520SR              | 2,0 |                 |       |                 |       |                 |       | 51 038 120      | 16,88 |                 |       |                 |       |                 |       |                 |       |                 |       |
| 150530SR              | 3,0 |                 |       |                 |       | 51 038 030      | 16,88 | 51 038 130      | 16,88 |                 |       |                 |       | 51 038 430      | 16,88 |                 |       |                 |       |
| 150540SR              | 4,0 |                 |       |                 |       | 51 038 040      | 16,88 | 51 038 140      | 16,88 |                 |       |                 |       | 51 038 440      | 16,88 |                 |       |                 |       |
| Steel                 |     | ●               |       | ●               |       | ●               |       | ●               |       | ○               |       | ○               |       | ○               |       | ○               |       | ○               |       |
| Stainless steel       |     |                 |       |                 |       | ○               |       | ○               |       | ●               |       | ●               |       | ●               |       |                 |       |                 |       |
| Cast iron             |     |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       | ●               |       | ●               |       |
| Non ferrous metals    |     |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |
| Heat resistant alloys |     |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |

MaxiMill – Shell mill A 490-12



CERATIZIT \ Performance

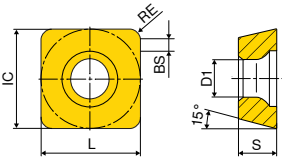


| ISO designation  | DC  | DHUB | DCONMS | OAL | APMX | Insert      | ZNF | Article no. |        |
|------------------|-----|------|--------|-----|------|-------------|-----|-------------|--------|
|                  |     |      |        |     |      |             |     | EUR         |        |
| A490.50.R.05-12  | 50  | 43   | 22     | 40  | 11   | SD.. 1205.. | 5   | 50 703 550  | 194,95 |
| A490.63.R.06-12  | 63  | 48   | 22     | 40  | 11   | SD.. 1205.. | 6   | 50 703 563  | 214,45 |
| A490.80.R.07-12  | 80  | 58   | 27     | 50  | 11   | SD.. 1205.. | 7   | 50 703 580  | 296,15 |
| A490.100.R.08-12 | 100 | 75   | 32     | 50  | 11   | SD.. 1205.. | 8   | 50 703 600  | 325,30 |
| A490.125.R.10-12 | 125 | 88   | 40     | 63  | 11   | SD.. 1205.. | 10  | 50 703 625  | 348,65 |

| Spare parts<br>DC | Article no. |       | Article no. |      | Article no. |      | Article no. |        |
|-------------------|-------------|-------|-------------|------|-------------|------|-------------|--------|
|                   | EUR         |       | EUR         |      | EUR         |      | EUR         |        |
| 50 - 125          | M8x30       | 11,23 | 70 950 151  | 3,94 | 70 950 303  | 1,76 | 70 950 280  | 118,71 |

SDMT / SDHT

| Designation    | IC   | D1  | L    | BS  | S    |
|----------------|------|-----|------|-----|------|
|                | mm   | mm  | mm   | mm  | mm   |
| SDHT 120508F.. | 12,7 | 5,5 | 12,7 | 2,2 | 5,00 |
| SDHT 120512S.. | 12,7 | 5,5 | 12,7 | 1,8 | 5,00 |
| SDMT 120508E.. | 12,7 | 5,5 | 12,7 | 3,0 | 5,00 |
| SDMT 1205ZZS.. | 12,7 | 5,5 | 12,7 | 0,9 | 5,00 |



SDMT / SDHT

CERATIZIT \ Performance

|                       |     | -29<br>CTCP230 |       | -29<br>CTPP235 |       | -31<br>CTCK215 |       | -33<br>CTPM240 |       | -F50<br>CTPM245 |       | -M31<br>CTC5240 |       | -27P<br>H216T |       |
|-----------------------|-----|----------------|-------|----------------|-------|----------------|-------|----------------|-------|-----------------|-------|-----------------|-------|---------------|-------|
|                       |     | -29<br>DCX1230 |       | -29<br>DPX1235 |       | -31<br>DCX3215 |       | -33<br>DPX2240 |       | -F50<br>DPX2245 |       | -M31<br>HCF5240 |       | -ALP<br>CWK26 |       |
|                       |     | DRAGONSKIN     |       | DRAGONSKIN     |       | DRAGONSKIN     |       | DRAGONSKIN     |       | DRAGONSKIN      |       | DRAGONSKIN      |       |               |       |
|                       |     | SDMT           |       | SDMT           |       | SDMT           |       | SDHT           |       | SDMT            |       | SDMT            |       | SDHT          |       |
| ISO                   | RE  | Article no.    |       | Article no.    |       | Article no.    |       | Article no.    |       | Article no.     |       | Article no.     |       | Article no.   |       |
|                       | mm  | EUR            |       | EUR            |       | EUR            |       | EUR            |       | EUR             |       | EUR             |       | EUR           |       |
| 120508ER              | 0,8 |                |       |                |       |                |       |                |       | 51 110 458      | 16,59 | 50 580 508      | 16,59 | 50 426 555    | 16,44 |
| 120508FR              | 0,8 |                |       |                |       |                |       |                |       |                 |       |                 |       |               |       |
| 120512SR              | 1,2 |                |       |                |       |                |       | 51 028 412     | 16,44 |                 |       |                 |       |               |       |
| 1205ZZSN              | 0,8 | 51 081 020     | 14,18 | 51 081 120     | 14,18 | 51 059 521     | 13,73 |                |       |                 |       |                 |       |               |       |
| Steel                 |     | ●              |       | ●              |       | ○              |       | ○              |       | ●               |       | ●               |       |               |       |
| Stainless steel       |     | ○              |       | ○              |       |                |       | ●              |       | ●               |       |                 |       |               |       |
| Cast iron             |     |                |       |                |       | ●              |       |                |       |                 |       |                 |       | ○             |       |
| Non ferrous metals    |     |                |       |                |       |                |       |                |       |                 |       |                 |       | ●             |       |
| Heat resistant alloys |     |                |       |                |       |                |       |                |       |                 |       | ●               |       |               |       |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

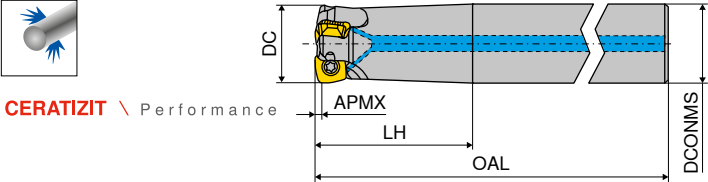
Speed  
Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
 $D$  = Diameter



MaxiMill – End milling cutter C HFC

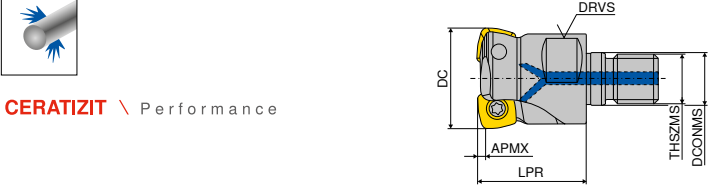


CERATIZIT \ Performance



| ISO designation          | DC | OAL | LH | DCONMS <sub>H6</sub> | APMX | RPMX   | Insert      | ZNF | Article no. |       |
|--------------------------|----|-----|----|----------------------|------|--------|-------------|-----|-------------|-------|
|                          | mm | mm  | mm | mm                   | mm   | 1/min. |             |     |             | EUR   |
| CHFC.25.R.02-09-A-50-225 | 25 | 225 | 50 | 25                   | 1    | 9000   | XDLX 09T3.. | 2   | 50 681 025  | 69,00 |
| CHFC.25.R.03-09-A-50-225 | 25 | 225 | 50 | 25                   | 1    | 9000   | XDLX 09T3.. | 3   | 50 681 125  | 74,00 |
| CHFC.32.R.03-09-A-63-250 | 32 | 250 | 63 | 32                   | 1    | 8100   | XDLX 09T3.. | 3   | 50 681 032  | 77,00 |
| CHFC.32.R.02-12-A-63-250 | 32 | 250 | 63 | 32                   | 2    | 6480   | XOLX 1204.. | 2   | 50 681 132  | 72,00 |
| CHFC.35.R.03-12-A-63-250 | 35 | 250 | 63 | 32                   | 2    | 6480   | XOLX 1204.. | 3   | 50 681 035  | 77,00 |

MaxiMill – Screw in cutter G HFC

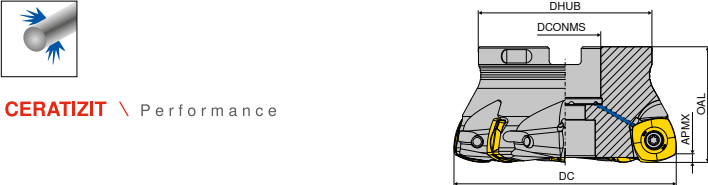


CERATIZIT \ Performance

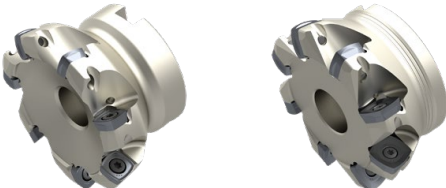


| ISO designation | DC | LPR | DCONMS | THSZMS | DRVS | APMX | RPMX   | Insert      | ZNF | Article no. |       |
|-----------------|----|-----|--------|--------|------|------|--------|-------------|-----|-------------|-------|
|                 | mm | mm  | mm     |        | mm   | mm   | 1/min. |             |     |             | EUR   |
| GHFC.25.R.02-09 | 25 | 35  | 12,5   | M12    | 17   | 1    | 30000  | XDLX 09T3.. | 2   | 50 682 025  | 69,00 |
| GHFC.25.R.03-09 | 25 | 35  | 12,5   | M12    | 17   | 1    | 30000  | XDLX 09T3.. | 3   | 50 682 125  | 74,00 |
| GHFC.32.R.03-09 | 32 | 35  | 17,0   | M16    | 24   | 1    | 27000  | XDLX 09T3.. | 3   | 50 682 032  | 77,00 |
| GHFC.32.R.02-12 | 32 | 35  | 17,0   | M16    | 24   | 2    | 21600  | XOLX 1204.. | 2   | 50 682 132  | 72,00 |
| GHFC.35.R.03-12 | 35 | 35  | 17,0   | M16    | 24   | 2    | 21360  | XOLX 1204.. | 3   | 50 682 035  | 77,00 |

MaxiMill – Shell mill A HFC



CERATIZIT \ Performance



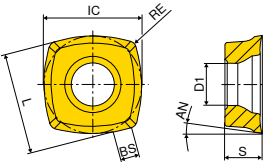
| ISO designation  | DC  | OAL | DCONMS <sub>H6</sub> | DHUB | APMX | RPMX   | Insert      | ZNF | Article no. |        | Article no.              |        |
|------------------|-----|-----|----------------------|------|------|--------|-------------|-----|-------------|--------|--------------------------|--------|
|                  | mm  | mm  | mm                   | mm   | mm   | 1/min. |             |     |             | EUR    |                          | EUR    |
| AHFC.32.R.03-09  | 32  | 40  | 16                   | 38   | 1,0  | 27700  | XDLX 09T3.. | 3   | 50 683 032  | 77,00  |                          |        |
| AHFC.35.R.04-09  | 35  | 40  | 16                   | 38   | 1,0  | 26700  | XDLX 09T3.. | 4   | 50 683 035  | 82,00  |                          |        |
| AHFC.40.R.04-09  | 40  | 40  | 16                   | 38   | 1,0  | 26400  | XDLX 09T3.. | 4   | 50 683 140  | 86,00  |                          |        |
| AHFC.42.R.05-09  | 42  | 40  | 16                   | 38   | 1,0  | 26100  | XDLX 09T3.. | 5   | 50 683 142  | 91,00  |                          |        |
| AHFC.50.R.05-09  | 50  | 40  | 22                   | 43   | 1,0  | 23500  | XDLX 09T3.. | 5   | 50 683 150  | 101,00 |                          |        |
| AHFC.52.R.06-09  | 52  | 40  | 22                   | 43   | 1,0  | 23000  | XDLX 09T3.. | 6   | 50 683 152  | 106,00 |                          |        |
| AHFC.63.R.06-09  | 63  | 40  | 22                   | 48   | 1,0  | 20500  | XDLX 09T3.. | 6   | 50 683 163  | 116,00 |                          |        |
| AHFC.40.R.03-12  | 40  | 40  | 16                   | 38   | 2,0  | 21120  | XOLX 1204.. | 3   | 50 683 040  | 81,00  |                          |        |
| AHFC.42.R.04-12  | 42  | 40  | 16                   | 38   | 2,0  | 20880  | XOLX 1204.. | 4   | 50 683 042  | 86,00  |                          |        |
| AHFC.50.R.04-12  | 50  | 40  | 22                   | 43   | 2,0  | 18800  | XOLX 1204.. | 4   | 50 683 050  | 96,00  |                          |        |
| AHFC.52.R.05-12  | 52  | 40  | 22                   | 43   | 2,0  | 18400  | XOLX 1204.. | 5   | 50 683 052  | 101,00 |                          |        |
| AHFC.63.R.05-12  | 63  | 40  | 22                   | 48   | 2,0  | 16400  | XOLX 1204.. | 5   | 50 683 063  | 111,00 |                          |        |
| AHFC.66.R.06-12  | 66  | 40  | 22                   | 48   | 2,0  | 16000  | XOLX 1204.. | 6   | 50 683 066  | 116,00 |                          |        |
| AHFC.80.R.07-12  | 80  | 50  | 27                   | 58   | 2,0  | 14000  | XOLX 1204.. | 7   | 50 683 080  | 131,00 |                          |        |
| AHFC.100.R.08-12 | 100 | 50  | 32                   | 78   | 2,0  | 12000  | XOLX 1204.. | 8   | 50 683 100  | 146,00 |                          |        |
| AHFC.63.R.05-19  | 63  | 40  | 22                   | 48   | 3,3  | 5500   | XOLX 1906.. | 5   |             |        | 50 683 263               | 116,00 |
| AHFC.80.R.06-19  | 80  | 50  | 27                   | 58   | 3,3  | 4700   | XOLX 1906.. | 6   |             |        | 50 683 280               | 141,00 |
| AHFC.100.R.08-19 | 100 | 52  | 32                   | 78   | 3,3  | 4100   | XOLX 1906.. | 8   |             |        | 50 683 300               | 168,00 |
| AHFC.125.R.10-19 | 125 | 63  | 40                   | 88   | 3,3  | 3600   | XOLX 1906.. | 10  |             |        | 50 683 325               | 211,00 |
| AHFC.160.R.11-19 | 160 | 63  | 40                   | 98   | 3,3  | 3100   | XOLX 1906.. | 11  |             |        | 50 683 360 <sup>1)</sup> | 255,00 |

1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm

| Spare parts             | Power Screw |       | Molykote    |      | Clamping screw |      | Torque screwdriver |        |
|-------------------------|-------------|-------|-------------|------|----------------|------|--------------------|--------|
|                         | Article no. | EUR   | Article no. | EUR  | Article no.    | EUR  | Article no.        | EUR    |
| XDLX 09T3..             |             |       |             |      |                |      |                    |        |
| XDLX 09T3.. (Ø32 – Ø42) | M8x30       | 11,23 | 70 950 151  | 3,94 | M3,5x7,2       | 2,83 | 70 950 110         |        |
| XOLX 1204..             |             |       |             |      | M3,5x7,2       | 2,83 | 70 950 110         |        |
| XOLX 1204.. (Ø40 – Ø42) | M8x30       | 11,23 | 70 950 151  | 3,94 | M4,5x10,5      | 1,76 | 70 950 280         | 118,71 |
| XOLX 1906..             |             |       |             |      | M4,5x10,5      | 1,76 | 70 950 280         | 118,71 |
|                         |             |       |             |      | M5x14          | 3,68 | 70 950 302         | 118,71 |

XDLX / XOLX

| Designation   | IC    | D1  | L  | BS  | S    |
|---------------|-------|-----|----|-----|------|
|               | mm    | mm  | mm | mm  | mm   |
| XDLX 09T308.. | 9,52  | 4,4 | 9  | 1,9 | 3,97 |
| XOLX 120410.. | 12,70 | 5,5 | 12 | 1,3 | 4,76 |



XDLX

CERATIZIT \ Performance

| ISO                                                                                                                                    | RE  | Article no. |           | Article no. |           | Article no. |           | Article no. |           |
|----------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
|                                                                                                                                        | mm  |             |           |             |           |             |           |             |           |
| 09T308SR                                                                                                                               | 0,8 | 51 016 258  | EUR 11,45 | 51 016 058  | EUR 11,45 | 51 016 008  | EUR 11,45 | 51 016 108  | EUR 11,45 |
| <div><div>Steel</div><div>Stainless steel</div><div>Cast iron</div><div>Non ferrous metals</div><div>Heat resistant alloys</div></div> |     |             |           |             |           |             |           |             |           |

XDLX

CERATIZIT \ Performance

| ISO                                                                                                                                    | RE  | Article no. |           | Article no. |           | Article no. |           | Article no. |           | Article no. |           | Article no. |           |
|----------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
|                                                                                                                                        | mm  |             |           |             |           |             |           |             |           |             |           |             |           |
| 09T308ER                                                                                                                               | 0,8 | 51 115 458  | EUR 13,82 | 51 016 208  | EUR 11,45 | 51 016 308  | EUR 11,45 | 51 016 408  | EUR 11,45 | 51 016 458  | EUR 13,82 | 51 016 508  | EUR 11,45 |
| 09T308SR                                                                                                                               | 0,8 |             |           |             |           |             |           |             |           |             |           | 50 503 558  | EUR 13,82 |
| <div><div>Steel</div><div>Stainless steel</div><div>Cast iron</div><div>Non ferrous metals</div><div>Heat resistant alloys</div></div> |     |             |           |             |           |             |           |             |           |             |           |             |           |

XOLX

CERATIZIT \ Performance

| ISO                                                                                                                                    | RE  | Article no. |           | Article no. |           | Article no. |           | Article no. |           | Article no. |           |
|----------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
|                                                                                                                                        | mm  |             |           |             |           |             |           |             |           |             |           |
| 120410SR                                                                                                                               | 1,0 | 51 017 260  | EUR 13,73 | 51 017 060  | EUR 13,73 | 51 017 010  | EUR 13,73 | 51 017 110  | EUR 13,73 | 51 018 110  | EUR 13,73 |
| <div><div>Steel</div><div>Stainless steel</div><div>Cast iron</div><div>Non ferrous metals</div><div>Heat resistant alloys</div></div> |     |             |           |             |           |             |           |             |           |             |           |

XOLX

CERATIZIT \ Performance

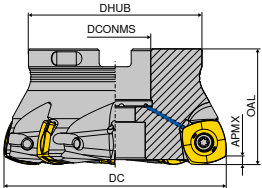
| ISO                                                                                                                                    | RE  | Article no. |           | Article no. |           | Article no. |           | Article no. |           | Article no. |           | Article no. |           |
|----------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
|                                                                                                                                        | mm  |             |           |             |           |             |           |             |           |             |           |             |           |
| 120410ER                                                                                                                               | 1,0 | 51 022 460  | EUR 16,16 | 51 017 210  | EUR 13,73 | 51 017 310  | EUR 13,73 | 51 017 410  | EUR 13,73 | 51 017 460  | EUR 16,16 | 51 017 510  | EUR 13,73 |
| 120410SR                                                                                                                               | 1,0 |             |           |             |           |             |           |             |           |             |           | 50 504 558  | EUR 16,16 |
| <div><div>Steel</div><div>Stainless steel</div><div>Cast iron</div><div>Non ferrous metals</div><div>Heat resistant alloys</div></div> |     |             |           |             |           |             |           |             |           |             |           |             |           |



MaxiMill – Shell mill A HFC



CERATIZIT \ Performance



| ISO designation  | DC  | OAL | DCONMS <sub>H6</sub> | DHUB | APMX | RPMX   | Insert      | ZNF |
|------------------|-----|-----|----------------------|------|------|--------|-------------|-----|
|                  | mm  | mm  | mm                   | mm   | mm   | 1/min. |             |     |
| AHFC.63.R.05-19  | 63  | 40  | 22                   | 48   | 3,3  | 5500   | XOLX 1906.. | 5   |
| AHFC.80.R.06-19  | 80  | 50  | 27                   | 58   | 3,3  | 4700   | XOLX 1906.. | 6   |
| AHFC.100.R.08-19 | 100 | 52  | 32                   | 78   | 3,3  | 4100   | XOLX 1906.. | 8   |
| AHFC.125.R.10-19 | 125 | 63  | 40                   | 88   | 3,3  | 3600   | XOLX 1906.. | 10  |
| AHFC.160.R.11-19 | 160 | 63  | 40                   | 98   | 3,3  | 3100   | XOLX 1906.. | 11  |

| Article no.              |        |
|--------------------------|--------|
|                          | EUR    |
| 50 683 263               | 116,00 |
| 50 683 280               | 141,00 |
| 50 683 300               | 168,00 |
| 50 683 325               | 211,00 |
| 50 683 360 <sup>1)</sup> | 255,00 |

1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm

Spare parts

| Insert      | Article no. | EUR    |
|-------------|-------------|--------|
| XOLX 1906.. | 80 950 037  | 4,28   |
|             | Article no. | EUR    |
|             | 80 950 114  | 8,96   |
|             | Article no. | EUR    |
|             | 70 950 303  | 3,94   |
|             | Article no. | EUR    |
|             | 70 950 302  | 3,68   |
|             | Article no. | EUR    |
|             | 80 950 193  | 118,71 |

TORX® blade

Article no.

EUR 4,28

Key D

Article no.

EUR 8,96

Molykote

Article no.

EUR 3,94

Clamping screw

Article no.

EUR 3,68

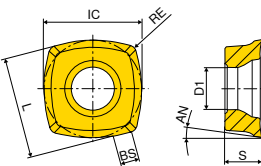
Torque screwdriver

Article no.

EUR 118,71

XOLX

| Designation | IC    | D1 | L  | S    | AN |
|-------------|-------|----|----|------|----|
|             | mm    | mm | mm | mm   | °  |
| XOLX 1906.. | 19,14 | 6  | 19 | 6,35 | 10 |



XOLX

CERATIZIT \ Performance

| ISO      | RE  |
|----------|-----|
|          | mm  |
| 190615ER | 1,5 |

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

-F40  
CTPM245

-F40  
DPX2245

DRAGONSKIN

XOLX

Article no.

51 022 465

EUR 24,53

-F40  
CTC5240

-F40  
HCF5240

DRAGONSKIN

XOLX

Article no.

50 504 515

EUR 24,53

XOLX

CERATIZIT \ Performance

| ISO      | RE  |
|----------|-----|
|          | mm  |
| 190615SR | 1,5 |

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

-M50  
CTCP230

-M50  
DCX1230

DRAGONSKIN

XOLX

Article no.

51 017 015

EUR 19,95

-M50  
CTPP235

-M50  
DPX1235

DRAGONSKIN

XOLX

Article no.

51 017 115

EUR 19,95

-M50  
CTPM240

-M50  
DPX2240

DRAGONSKIN

XOLX

Article no.

51 017 415

EUR 19,95

-M50  
CTCK215

-M50  
DCX3215

DRAGONSKIN

XOLX

Article no.

51 017 515

EUR 19,95

74

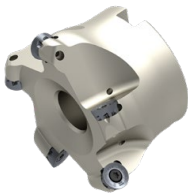
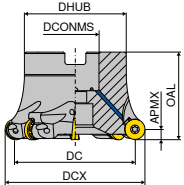
Customer Service Centre  
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MaxiMill – Shell mill A 251 RS



CERATIZIT \ Performance



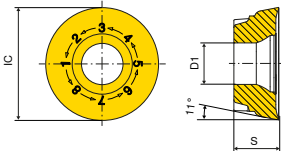
| ISO designation     | DCX | DC | OAL | APMX | DHUB | DCONMS <sub>H6</sub> | RPMX   | Insert      | ZNF | Article no. |        |
|---------------------|-----|----|-----|------|------|----------------------|--------|-------------|-----|-------------|--------|
|                     | mm  | mm | mm  | mm   | mm   | mm                   | 1/min. |             |     |             | EUR    |
| A251.40.R.03-10-RS  | 40  | 30 | 40  | 5    | 38   | 16                   | 15900  | RP.X 10T3.. | 3   | 50 686 240  | 157,80 |
| A251.40.R.05-10-RS  | 40  | 30 | 40  | 5    | 38   | 16                   | 16000  | RP.X 10T3.. | 5   | 50 686 140  | 177,85 |
| A251.42.R.06-10-RS  | 42  | 32 | 40  | 5    | 38   | 16                   | 16000  | RP.X 10T3.. | 6   | 50 686 142  | 204,40 |
| A251.50.R.04-10-RS  | 50  | 40 | 40  | 5    | 43   | 22                   | 12700  | RP.X 10T3.. | 4   | 50 686 350  | 173,30 |
| A251.50.R.06-10-RS  | 50  | 40 | 40  | 5    | 43   | 22                   | 12500  | RP.X 10T3.. | 6   | 50 686 150  | 211,50 |
| A251.52.R.06-10-RS  | 52  | 42 | 40  | 5    | 43   | 22                   | 12500  | RP.X 10T3.. | 6   | 50 686 152  | 211,50 |
| A251.40.R.04-12-RS  | 40  | 28 | 40  | 6    | 38   | 16                   | 15900  | RP.X 1204.. | 4   | 50 686 340  | 163,60 |
| A251.50.R.04-12-RS  | 50  | 38 | 40  | 6    | 43   | 22                   | 12700  | RP.X 1204.. | 4   | 50 686 250  | 168,85 |
| A251.50.R.05-12-RS  | 50  | 38 | 40  | 6    | 43   | 22                   | 12500  | RP.X 1204.. | 5   | 50 686 050  | 198,55 |
| A251.63.R.06-12-RS  | 63  | 51 | 40  | 6    | 48   | 22                   | 10000  | RP.X 1204.. | 6   | 50 686 063  | 245,15 |
| A251.80.R.05-12-RS  | 80  | 68 | 50  | 6    | 58   | 27                   | 7950   | RP.X 1204.. | 5   | 50 686 180  | 223,75 |
| A251.80.R.07-12-RS  | 80  | 68 | 50  | 6    | 58   | 27                   | 8000   | RP.X 1204.. | 7   | 50 686 080  | 276,55 |
| A251.100.R.06-12-RS | 100 | 88 | 50  | 6    | 78   | 32                   | 6350   | RP.X 1204.. | 6   | 50 686 100  | 249,70 |
| A251.100.R.10-12-RS | 100 | 88 | 50  | 6    | 78   | 32                   | 6350   | RP.X 1204.. | 10  | 50 686 200  | 364,80 |

Spare parts

| Insert      | Article no. |      | Article no. |       | Article no. |            | Article no. |      |
|-------------|-------------|------|-------------|-------|-------------|------------|-------------|------|
| RP.X 10T3.. | T10         | 8,23 | 80 950 112  | M8x30 | 11,23       | 70 950 151 | M3x7,3      | 2,31 |
| RP.X 1204.. | T15         | 8,35 | 80 950 113  | M8x30 | 11,23       | 70 950 151 | M3,5x8,6    | 2,83 |

RPHX

| Designation | IC | D1  | S    |
|-------------|----|-----|------|
|             | mm | mm  | mm   |
| RPHX 10T3.. | 10 | 3,4 | 3,97 |
| RPHX 1204.. | 12 | 4,4 | 4,76 |



RPHX

CERATIZIT \ Performance

| ISO                   | -F50 CTPP235 |            | -F50 CTPM225 |            | -F50 CTCM235 |            | -F50 CTPM240 |            | -M30 CTPM225 |            | -M30 CTCM235 |            | -M30 CTPM240 |            | -M50 CTPM240 |            |
|-----------------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|
|                       | DPX1235      | DRAGONSKIN | DPX2225      | DRAGONSKIN | DCX2235      | DRAGONSKIN | DPX2240      | DRAGONSKIN | DPX2225      | DRAGONSKIN | DCX2235      | DRAGONSKIN | DPX2240      | DRAGONSKIN | DPX2240      | DRAGONSKIN |
| 1204MOEN              | 51 051 125   | 12,65      | 51 051 225   | 12,65      | 51 051 325   | 12,65      | 51 051 425   | 12,65      | 51 049 225   | 12,65      | 51 049 325   | 12,65      | 51 049 425   | 12,65      | 51 050 425   | 12,65      |
| 1204MOSN              |              |            |              |            |              |            |              |            |              |            |              |            |              |            |              |            |
| Steel                 | ●            |            | ○            |            | ○            |            | ○            |            | ○            |            | ○            |            | ○            |            | ○            |            |
| Stainless steel       |              | ○          |              | ●          |              | ●          |              | ●          |              | ●          |              | ●          |              | ●          |              | ●          |
| Cast iron             |              |            |              |            |              |            |              |            |              |            |              |            |              |            |              |            |
| Non ferrous metals    |              |            |              |            |              |            |              |            |              |            |              |            |              |            |              |            |
| Heat resistant alloys |              |            |              |            |              |            |              |            |              |            |              |            |              |            |              |            |

RPHX

CERATIZIT \ Performance

| ISO                   | -SN CTPM225 |            | -F50 CTPM245 |            | -M50 CTPM245 |            | -SN CTCK215 |            | -M31 CTC5240 |            | -27P H216T |       |
|-----------------------|-------------|------------|--------------|------------|--------------|------------|-------------|------------|--------------|------------|------------|-------|
|                       | DPX2225     | DRAGONSKIN | DPX2245      | DRAGONSKIN | DPX2245      | DRAGONSKIN | DCX3215     | DRAGONSKIN | HCF5240      | DRAGONSKIN | ALP        | CWK26 |
| 10T3M4SN              | 51 051 470  | 14,57      | 51 050 470   | 14,57      | 51 050 470   | 14,57      | 50 493 551  | 14,57      |              |            |            |       |
| 10T3M8EN              |             |            |              |            |              |            |             |            |              |            |            |       |
| 10T3M8SN              |             |            |              |            |              |            |             |            |              |            |            |       |
| 1204M4SN              |             |            |              |            |              |            |             |            |              |            |            |       |
| 1204M6SN              |             |            |              |            |              |            |             |            |              |            |            |       |
| 1204M8EN              |             |            |              |            |              |            |             |            |              |            |            |       |
| 1204M8SN              |             |            |              |            |              |            |             |            |              |            |            |       |
| 1204MOFN              |             |            |              |            |              |            |             |            |              |            |            |       |
| 1204MOSN              | 51 052 225  | 12,65      | 51 051 477   | 16,06      | 51 050 477   | 16,06      | 51 052 525  | 12,65      | 50 493 582   | 16,06      | 50 483 602 | 14,62 |
| Steel                 | ○           |            | ●            |            | ●            |            | ○           |            |              |            |            |       |
| Stainless steel       |             | ●          |              | ●          |              | ●          |             |            |              |            |            |       |
| Cast iron             |             |            |              |            |              |            | ●           |            |              |            | ○          |       |
| Non ferrous metals    |             |            |              |            |              |            |             |            |              |            |            | ●     |
| Heat resistant alloys |             |            |              |            |              |            |             |            | ●            |            |            |       |

1) Insert with 4 indexes

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed Calculation

$$RPM = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
 $D$  = Diameter

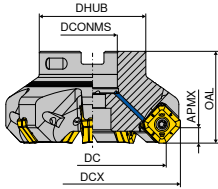


MaxiMill – A 271 Face mill

▲ 8 cutting edges per insert



CERATIZIT \ Performance



| ISO designation  | DC  | OAL | APMX | DCX   | DCONMS | DHUB | Insert    | ZNF |
|------------------|-----|-----|------|-------|--------|------|-----------|-----|
|                  | mm  | mm  | mm   | mm    | mm     | mm   |           |     |
| A271.50.R.04-17  | 50  | 40  | 8,4  | 66,1  | 22     | 43   | SAKU 1706 | 4   |
| A271.63.R.06-17  | 63  | 40  | 8,4  | 79,1  | 22     | 48   | SAKU 1706 | 6   |
| A271.80.R.07-17  | 80  | 50  | 8,4  | 96,1  | 27     | 58   | SAKU 1706 | 7   |
| A271.100.R.08-17 | 100 | 50  | 6,8  | 116,1 | 32     | 78   | SAKU 1706 | 8   |
| A271.125.R.10-17 | 125 | 63  | 8,4  | 141,1 | 40     | 88   | SAKU 1706 | 10  |

| Article no. |        |
|-------------|--------|
|             | EUR    |
| 50 767 050  | 198,85 |
| 50 767 063  | 279,45 |
| 50 767 080  | 319,75 |
| 50 767 100  | 368,15 |
| 50 767 125  | 424,50 |

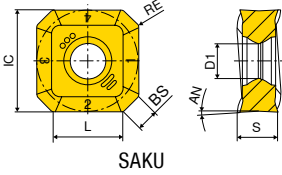
Spare parts  
DC

50 - 125

|                                                                                                    |                                                                                              |                                                                                                 |                                                                                                       |                                                                                                           |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <br>TORX® blade | <br>Key D | <br>Molykote | <br>Clamping screw | <br>Torque screwdriver |
| Article no.                                                                                        | Article no.                                                                                  | Article no.                                                                                     | Article no.                                                                                           | Article no.                                                                                               |
| EUR 4,28                                                                                           | EUR 8,96                                                                                     | EUR 3,94                                                                                        | EUR 3,68                                                                                              | EUR 118,71                                                                                                |
| 80 950 037                                                                                         | 80 950 114                                                                                   | 70 950 303                                                                                      | 70 950 302                                                                                            | 80 950 193                                                                                                |

SAKU

| Designation | IC | D1  | L     | BS  | S    | AN |
|-------------|----|-----|-------|-----|------|----|
|             | mm | mm  | mm    | mm  | mm   | °  |
| SAKU 1706.. | 17 | 5,8 | 11,85 | 3,7 | 6,35 | 3  |



SAKU

CERATIZIT \ Performance

| ISO      | RE     | Article no. | EUR   |
|----------|--------|-------------|-------|
| 1706ABSR | mm 0,8 | 51 004 270  | 26,22 |

|                                                                                                                                                    |                                                                                                                                                    |                                                                                                                                                    |                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>-F50 CTCP220</b><br>-F50 DCX1220<br>DRAGONSKIN<br><br>SAKU | <b>-F50 CTPP225</b><br>-F50 DPX1225<br>DRAGONSKIN<br><br>SAKU | <b>-F50 CTCP230</b><br>-F50 DCX1230<br>DRAGONSKIN<br><br>SAKU | <b>-F50 CTPP235</b><br>-F50 DPX1235<br>DRAGONSKIN<br><br>SAKU |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

|                       |   |   |   |   |
|-----------------------|---|---|---|---|
| Steel                 | ● | ● | ● | ● |
| Stainless steel       |   |   | ○ | ○ |
| Cast iron             |   |   |   |   |
| Non ferrous metals    |   |   |   |   |
| Heat resistant alloys |   |   |   |   |

More inserts can be found on → **Page 77.**



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Tool Supply 24/7

If you install a Tool-O-Mat it means that we take on all the procurement and stocking costs for you. You have 100 % availability of all tools at all times and without expenditure.

SAKU

CERATIZIT \ Performance

|                       |     | -F50 CTPM225 |       | -F50 CTCM235 |       | -F50 CTPM240 |       | -F50 CTPM245 |       | -F50 CTC5240 |       |
|-----------------------|-----|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                       |     | -F50 DPX2225 |       | -F50 DCX2235 |       | -F50 DPX2240 |       | -F50 DPX2245 |       | -F50 HCF5240 |       |
|                       |     | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       |
|                       |     | SAKU         |       | SAKU         |       | SAKU         |       | SAKU         |       | SAKU         |       |
| ISO                   | RE  | Article no.  |       | Article no.  |       | Article no.  |       | Article no.  |       | Article no.  |       |
|                       | mm  | EUR          |       | EUR          |       | EUR          |       | EUR          |       | EUR          |       |
| 1706ABSR              | 0,8 | 51 004 220   | 26,22 | 51 004 320   | 26,22 | 51 004 420   | 26,22 | 51 004 470   | 32,26 | 50 306 520   | 32,26 |
| Steel                 |     | ○            |       | ○            |       | ○            |       | ●            |       |              |       |
| Stainless steel       |     | ●            |       | ●            |       | ●            |       | ●            |       |              |       |
| Cast iron             |     |              |       |              |       |              |       |              |       |              |       |
| Non ferrous metals    |     |              |       |              |       |              |       |              |       |              |       |
| Heat resistant alloys |     |              |       |              |       |              |       |              |       | ●            |       |

SAKU

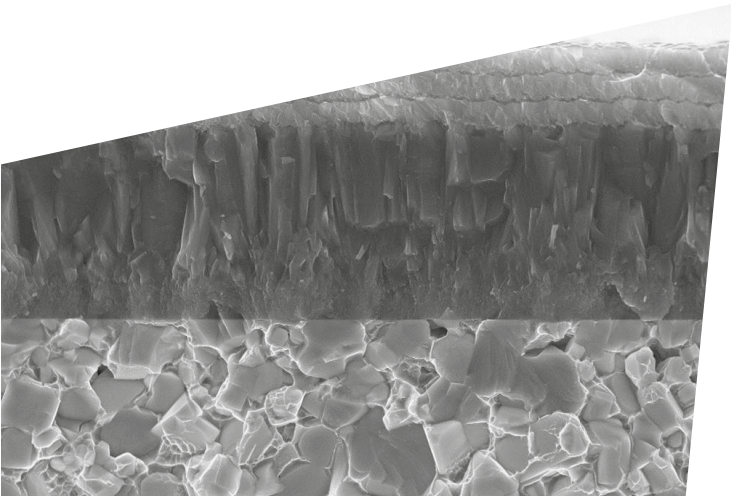
CERATIZIT \ Performance

|                       |     | -M50 CTCP220 |       | -M50 CTPP225 |       | -M50 CTCP230 |       | -M50 CTPP235 |       |
|-----------------------|-----|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                       |     | -M50 DCX1220 |       | -M50 DPX1225 |       | -M50 DCX1230 |       | -M50 DPX1235 |       |
|                       |     | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       |
|                       |     | SAKU         |       | SAKU         |       | SAKU         |       | SAKU         |       |
| ISO                   | RE  | Article no.  |       | Article no.  |       | Article no.  |       | Article no.  |       |
|                       | mm  | EUR          |       | EUR          |       | EUR          |       | EUR          |       |
| 1706ABSR              | 0,8 | 51 005 270   | 26,22 | 51 005 070   | 26,22 | 51 005 020   | 26,22 | 51 005 120   | 26,22 |
| Steel                 |     | ●            |       | ●            |       | ●            |       | ●            |       |
| Stainless steel       |     |              |       |              |       | ○            |       | ○            |       |
| Cast iron             |     |              |       |              |       |              |       |              |       |
| Non ferrous metals    |     |              |       |              |       |              |       |              |       |
| Heat resistant alloys |     |              |       |              |       |              |       |              |       |

SAKU

CERATIZIT \ Performance

|                       |     | -M50 CTPM225 |       | -M50 CTCM235 |       | -M50 CTPM240 |       | -M50 CTCK215 |       | -M50 CTPK220 |       | -R50 CTCK215 |       | -R50 CTPK220 |       |
|-----------------------|-----|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                       |     | -M50 DPX2225 |       | -M50 DCX2235 |       | -M50 DPX2240 |       | -M50 DCX3215 |       | -M50 DPX3220 |       | -R50 DCX3215 |       | -R50 DPX3220 |       |
|                       |     | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       | DRAGONSKIN   |       |
|                       |     | SAKU         |       | SAKU         |       | SAKU         |       | SAKU         |       | SAKU         |       | SAKU         |       | SAKU         |       |
| ISO                   | RE  | Article no.  |       | Article no.  |       | Article no.  |       | Article no.  |       | Article no.  |       | Article no.  |       | Article no.  |       |
|                       | mm  | EUR          |       | EUR          |       | EUR          |       | EUR          |       | EUR          |       | EUR          |       | EUR          |       |
| 1706ABSR              | 0,8 | 51 005 220   | 26,22 | 51 005 320   | 26,22 | 51 005 420   | 26,22 | 51 005 520   | 26,22 | 51 005 620   | 26,22 | 51 058 520   | 26,22 | 51 058 620   | 26,22 |
| Steel                 |     | ○            |       | ○            |       | ○            |       | ○            |       | ○            |       | ○            |       | ○            |       |
| Stainless steel       |     | ●            |       | ●            |       | ●            |       |              |       |              |       |              |       |              |       |
| Cast iron             |     |              |       |              |       |              |       | ●            |       | ●            |       | ●            |       | ●            |       |
| Non ferrous metals    |     |              |       |              |       |              |       |              |       |              |       |              |       |              |       |
| Heat resistant alloys |     |              |       |              |       |              |       |              |       |              |       |              |       |              |       |



Dragonskin Coating

DRAGONSKIN

The coatings for the highest performance

The product category Dragonskin is intended to help make tools easily recognizable and quick to find using CERATIZIT's high-performance coating technology. All products that are marked with the Dragonskin icon represent unmatched performance, maximum tool life and maximum process reliability.

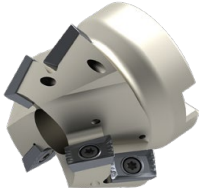
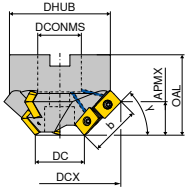


MaxiMill – Chamfer Cutter A 242

- ▲ Caution: Use only inserts with a corner radius of less than 1.6 mm
- ▲ ZEFP = number of inserts
- ▲ ZNP = tooth rows



CERATIZIT \ Performance



| KAPR | ZEFP | DCX $\pm 0,3$ | DC | b $\pm 0,3$<br>mm | OAL | APMX $\pm 0,3$ | DCONMS | DHUB | ZNP | Insert      | ZNF |
|------|------|---------------|----|-------------------|-----|----------------|--------|------|-----|-------------|-----|
| °    |      | mm            | mm |                   | mm  | mm             | mm     | mm   |     |             |     |
| 15   | 6    | 92,2          | 35 | 29,6              | 50  | 7,6            | 27     | 62,5 | 2   | LD.. 1504.. | 3   |
| 30   | 6    | 86,3          | 35 | 29,6              | 50  | 14,8           | 27     | 62,5 | 2   | LD.. 1504.. | 3   |
| 45   | 6    | 76,9          | 35 | 29,6              | 50  | 20,9           | 27     | 62,5 | 2   | LD.. 1504.. | 3   |
| 60   | 6    | 64,6          | 35 | 29,6              | 50  | 25,6           | 22     | 62,5 | 2   | LD.. 1504.. | 3   |
| 75   | 6    | 50,3          | 35 | 29,6              | 60  | 28,5           | 22     | 49,0 | 2   | LD.. 1504.. | 3   |

| Article no.              |            |
|--------------------------|------------|
| 50 768 015               | EUR 188,20 |
| 50 768 030               | EUR 188,20 |
| 50 768 045               | EUR 188,20 |
| 50 768 060 <sup>1)</sup> | EUR 188,20 |
| 50 768 075 <sup>1)</sup> | EUR 188,20 |

1) Version with Powerscrew

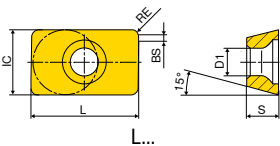
Spare parts  
KAPR

|         |          |            |           |            |          |            |          |            |          |            |
|---------|----------|------------|-----------|------------|----------|------------|----------|------------|----------|------------|
| 15 - 45 | EUR 8,35 | 80 950 113 | EUR 15,43 | 70 950 154 | EUR 3,94 | 70 950 303 | EUR 2,83 | 70 950 304 | EUR 3,67 | 83 950 125 |
| 60 - 75 | EUR 8,35 | 80 950 113 | EUR 15,43 | 70 950 154 | EUR 3,94 | 70 950 303 | EUR 2,83 | 70 950 304 | EUR 3,67 | 83 950 125 |

|                                                                                              |                                                                                                    |                                                                                                 |                                                                                                       |                                                                                                       |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>Key D | <br>Power Screw | <br>Molykote | <br>Clamping screw | <br>Clamping screw |
| Article no.                                                                                  | Article no.                                                                                        | Article no.                                                                                     | Article no.                                                                                           | Article no.                                                                                           |
| EUR 8,35 80 950 113                                                                          | EUR 15,43 70 950 154                                                                               | EUR 3,94 70 950 303                                                                             | EUR 2,83 70 950 304                                                                                   | EUR 3,67 83 950 125                                                                                   |

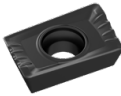
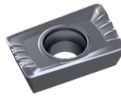
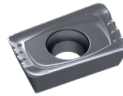
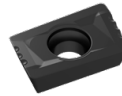
LDFT / LDFW

| Designation   | IC   | D1  | L  | BS  | S    |
|---------------|------|-----|----|-----|------|
|               | mm   | mm  | mm | mm  | mm   |
| LDF. 1504PD.. | 9,52 | 4,4 | 15 | 1,2 | 4,76 |
| LDFT 1504PD.. | 9,52 | 4,4 | 15 | 0,8 | 4,76 |



LDFT / LDFW

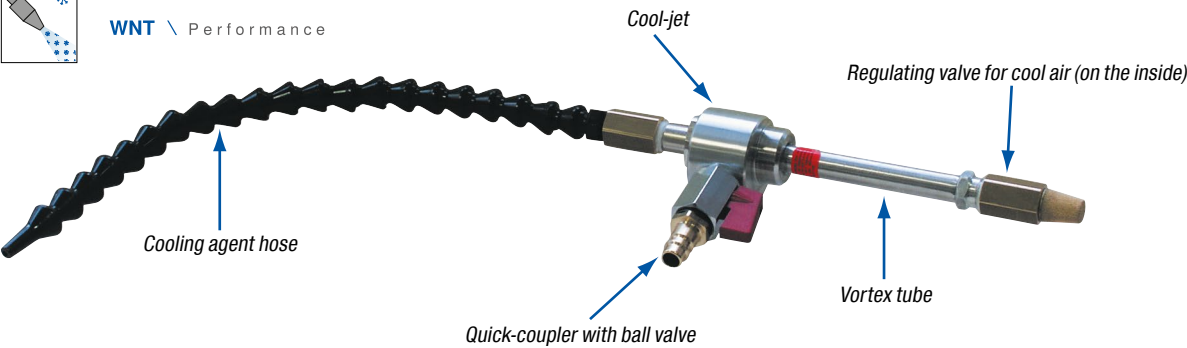
CERATIZIT \ Performance

| ISO                   | -29<br>CTCP230                                                                                | -29<br>CTPP235                                                                                | -33<br>CTPM240                                                                                | CTCK215                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                       | -29<br>DCX1230<br>DRAGONSKIN                                                                  | -29<br>DPX1235<br>DRAGONSKIN                                                                  | -33<br>DPX2240<br>DRAGONSKIN                                                                  | DCX3215<br>DRAGONSKIN                                                                         |
|                       | <br>LDFT | <br>LDFT | <br>LDFT | <br>LDFW |
|                       | Article no.                                                                                   | Article no.                                                                                   | Article no.                                                                                   | Article no.                                                                                   |
| 1504PDSR              | 51 079 020 EUR 17,22                                                                          | 51 079 120 EUR 17,22                                                                          | 51 042 420 EUR 16,44                                                                          | 51 043 520 EUR 14,37                                                                          |
| Steel                 | ●                                                                                             | ●                                                                                             | ○                                                                                             | ○                                                                                             |
| Stainless steel       | ○                                                                                             | ○                                                                                             | ●                                                                                             | ●                                                                                             |
| Cast iron             |                                                                                               |                                                                                               |                                                                                               |                                                                                               |
| Non ferrous metals    |                                                                                               |                                                                                               |                                                                                               |                                                                                               |
| Heat resistant alloys |                                                                                               |                                                                                               |                                                                                               |                                                                                               |

Cool-jet



WNT \ Performance



|                                 |                       |
|---------------------------------|-----------------------|
| Cool-jet                        | Article no.           |
| 3-7 bar air pressure, at -46 °C | 81 900 100 EUR 525,69 |

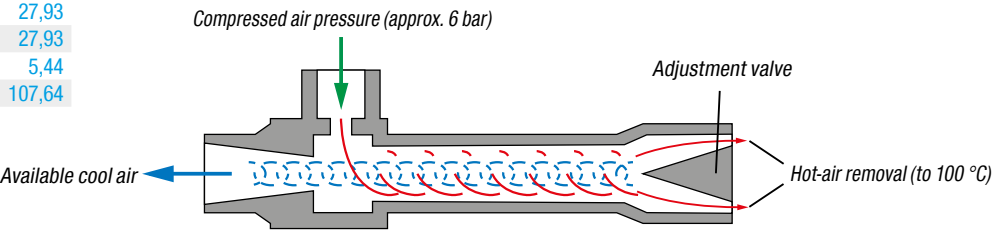
|                                                                  |                       |
|------------------------------------------------------------------|-----------------------|
| Accessories                                                      | Article no.           |
| Magnetic plate Ø 80 mm without clamping arm                      | 81 900 101 EUR 27,93  |
| Spare tube, length 300 mm                                        | 81 900 104 EUR 27,93  |
| Jet silencer (air filter)                                        | 81 900 105 EUR 5,44   |
| Complete set (with magnetic set and clamping arm), weight 0,4 kg | 81 900 107 EUR 107,64 |

Utilizable air temperature measured at the effective discharge of the vortex tube (not the nozzle end)

| Entrance pressure | 3 bar | -31 °C | up to | -6 °C  |
|-------------------|-------|--------|-------|--------|
|                   | 4 bar | -35 °C | up to | -8 °C  |
|                   | 5 bar | -39 °C | up to | -10 °C |
|                   | 6 bar | -42 °C | up to | -11 °C |
|                   | 7 bar | -46 °C | up to | -13 °C |

In order to operate the regulating valve, the silencer must be unscrewed – there is a burn danger! The valve of the hot air side can reach up to 100 °C: Before contact, allow cooling!

Air consumption at an inlet temperature of + 21 °C and an inlet pressure of 6.9 bar: 7,08 l / sec. (25.5 m³ / h)

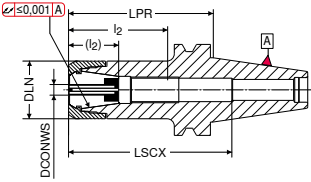


ER Precision Collet chuck

- ▲ for standard or sealed nuts
- ▲ maximum size collet to ISO tolerance field H10
- ▲ for clamping a roll key is required
- ▲ p<sub>max</sub> = 80 bar

Scope of supply:

Holder **without** nut, **without** backstop



AD  
G 2,5 n<sub>max</sub> 25000

| Adapter | DCONWS | LPR | DLN | LSCX | l <sub>2</sub> (l <sub>2</sub> )<br>mm | for collet  | Article no. |        |
|---------|--------|-----|-----|------|----------------------------------------|-------------|-------------|--------|
|         |        |     |     |      |                                        |             |             | EUR    |
| BT 40   | 1 - 10 | 75  | 30  | 90   | 38 - 53 (29 - 39)                      | 426E (ER16) | 84 524 210  | 90,50  |
| BT 40   | 1 - 10 | 90  | 30  | 120  | 30 - 50 (29 - 36)                      | 426E (ER16) | 84 524 310  | 100,60 |
| BT 40   | 1 - 10 | 120 | 30  | 140  | 29 - 45 (29 - 35)                      | 426E (ER16) | 84 524 410  | 135,70 |
| BT 40   | 1 - 10 | 150 | 30  | 180  | 29 - 45 (29 - 32)                      | 426E (ER16) | 84 524 510  | 149,80 |
| BT 40   | 2 - 16 | 60  | 40  | 92   | 44 - 64 (36 - 46)                      | 430E (ER25) | 84 524 116  | 95,53  |
| BT 40   | 2 - 16 | 75  | 40  | 100  | 42 - 59 (36 - 41)                      | 430E (ER25) | 84 524 216  | 90,50  |
| BT 40   | 2 - 16 | 90  | 40  | 91   | 42 - 59 (36 - 41)                      | 430E (ER25) | 84 524 316  | 100,60 |
| BT 40   | 2 - 16 | 120 | 40  | 91   | 40 - 65 (36 - 47)                      | 430E (ER25) | 84 524 416  | 145,80 |
| BT 40   | 2 - 16 | 150 | 40  | 100  | 40 - 64 (36 - 45)                      | 430E (ER25) | 84 524 516  | 159,90 |
| BT 40   | 2 - 16 | 200 | 40  | 150  | 40 - 64 (36 - 45)                      | 430E (ER25) | 84 524 616  | 200,10 |
| BT 40   | 2 - 20 | 60  | 50  | 55   | 45 - 64 (42 - 46)                      | 470E (ER32) | 84 524 120  | 95,53  |
| BT 40   | 2 - 20 | 75  | 50  | 100  | 42 - 76 (42 - 52)                      | 470E (ER32) | 84 524 220  | 90,50  |
| BT 40   | 2 - 20 | 90  | 50  | 100  | 42 - 76 (42 - 52)                      | 470E (ER32) | 84 524 320  | 100,60 |
| BT 40   | 2 - 20 | 120 | 50  | 110  | 42 - 71 (42 - 53)                      | 470E (ER32) | 84 524 420  | 145,80 |
| BT 40   | 2 - 20 | 150 | 50  | 110  | 42 - 71 (42 - 53)                      | 470E (ER32) | 84 524 520  | 159,90 |

**i** LSCX = clamping depth without back stop screw for shanks  
l<sub>2</sub> = with back stop screw 1, dimension in brackets ( ) = with back stop screw 2  
dimension LPR when using tightening nuts with seals 4 mm longer

Roll key

- ▲ Version CP = for Centro-P lock nuts
- ▲ Version STD = for standard lock nuts

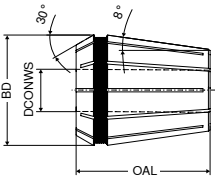
WNT \ Performance



| for lock nut                       | DLN | Article no. |       |
|------------------------------------|-----|-------------|-------|
|                                    |     |             | EUR   |
| 426E / ER 16 CP                    | 30  | 84 950 027  | 60,16 |
| 430E / ER 25 CP                    | 40  | 84 950 054  | 60,32 |
| 470E / ER 32 CP + STD / OZ 462E CP | 50  | 84 950 056  | 60,32 |

Precision ER collet for precision collet chuck

- ▲ DIN ISO 15488-B (old DIN 6499-B)
- ▲ 12 times slotted
- ▲ Double taper clamping
- ▲ Coloured ring as identification of precision collet
- ▲ ER08: 5 µm runout and repeatability



| DCONWS | BD = 17<br>OAL = 27,5<br>426 E / ER16 |       | BD = 26<br>OAL = 34<br>430 E / ER25 |       | BD = 33<br>OAL = 40<br>470 E / ER32 |       |
|--------|---------------------------------------|-------|-------------------------------------|-------|-------------------------------------|-------|
|        | Article no.                           |       | Article no.                         |       | Article no.                         |       |
| mm     |                                       | EUR   |                                     | EUR   |                                     | EUR   |
| 1,0    | 84 596 010                            | 61,84 |                                     |       |                                     |       |
| 1,1    | 84 596 011                            | 97,00 |                                     |       |                                     |       |
| 1,2    | 84 596 012                            | 97,00 |                                     |       |                                     |       |
| 1,4    | 84 596 014                            | 97,00 |                                     |       |                                     |       |
| 1,5    | 84 596 015                            | 61,84 |                                     |       |                                     |       |
| 1,6    | 84 596 016                            | 97,00 |                                     |       |                                     |       |
| 1,8    | 84 596 018                            | 97,00 |                                     |       |                                     |       |
| 2,0    | 84 596 020                            | 46,52 | 84 597 020                          | 48,01 | 84 598 020                          | 49,27 |
| 2,2    | 84 596 022                            | 85,97 |                                     |       |                                     |       |
| 2,4    | 84 596 024                            | 85,97 |                                     |       |                                     |       |
| 2,5    | 84 596 025                            | 46,52 | 84 597 025                          | 48,01 |                                     |       |
| 2,6    | 84 596 026                            | 85,97 |                                     |       |                                     |       |
| 2,8    | 84 596 028                            | 85,97 |                                     |       |                                     |       |
| 3,0    | 84 596 030                            | 39,72 | 84 597 030                          | 40,72 | 84 598 030                          | 41,22 |
| 3,2    | 84 596 032                            | 76,42 |                                     |       |                                     |       |
| 3,4    | 84 596 034                            | 76,42 |                                     |       |                                     |       |
| 3,5    | 84 596 035                            | 56,82 | 84 597 035                          | 59,82 |                                     |       |
| 3,6    | 84 596 036                            | 76,42 |                                     |       |                                     |       |
| 3,8    | 84 596 038                            | 76,42 |                                     |       |                                     |       |
| 4,0    | 84 596 040                            | 39,72 | 84 597 040                          | 40,72 | 84 598 040                          | 41,22 |
| 4,5    | 84 596 045                            | 56,82 | 84 597 045                          | 59,82 |                                     |       |
| 5,0    | 84 596 050                            | 39,72 | 84 597 050                          | 40,72 | 84 598 050                          | 41,22 |
| 5,5    | 84 596 055                            | 56,82 | 84 597 055                          | 59,82 |                                     |       |
| 5,6    | 84 596 056                            | 76,42 |                                     |       |                                     |       |
| 6,0    | 84 596 060                            | 39,72 | 84 597 060                          | 40,72 | 84 598 060                          | 41,22 |
| 6,3    | 84 596 063                            | 76,42 |                                     |       |                                     |       |
| 6,5    | 84 596 065                            | 56,82 | 84 597 065                          | 59,82 |                                     |       |

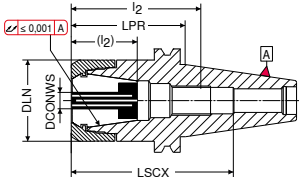
**i** Clamping range covered: H10 corresponding to shank Ø DCONWS

ER Precision Collet chuck

- ▲ for standard or sealed nuts
- ▲ maximum size collet to ISO tolerance field H10
- ▲ for clamping a roll key is required
- ▲ p<sub>max</sub> = 80 bar

Scope of supply:

Holder **without** nut, **without** backstop

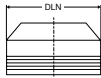


AD/B  
G 2,5 n<sub>max</sub> 25000

| Adapter | DCONWS | LPR | DLN | LSCX | l <sub>2</sub> (l <sub>2</sub> )<br>mm | for collet  | Article no. |        |
|---------|--------|-----|-----|------|----------------------------------------|-------------|-------------|--------|
|         |        |     |     |      |                                        |             |             | EUR    |
| SK 40   | 1 - 10 | 130 | 30  | 140  | 28 - 50 (14 - 34)                      | 426E (ER16) | 84 414 510  | 137,80 |
| SK 40   | 1 - 10 | 160 | 30  | 200  | 28 - 45 (16 - 31)                      | 426E (ER16) | 84 414 910  | 155,80 |
| SK 40   | 2 - 16 | 45  | 40  | 85   | 35 - 60 (20 - 42)                      | 430E (ER25) | 84 414 816  | 109,60 |
| SK 40   | 2 - 16 | 130 | 40  | 140  | 38 - 67 (21 - 49)                      | 430E (ER25) | 84 414 516  | 147,80 |
| SK 40   | 2 - 16 | 160 | 40  | 118  | 35 - 60 (20 - 42)                      | 430E (ER25) | 84 414 916  | 165,90 |
| SK 40   | 2 - 20 | 130 | 50  | 114  | 50 - 74 (36 - 55)                      | 470E (ER32) | 84 414 620  | 147,80 |
| SK 40   | 2 - 20 | 160 | 50  | 119  | 52 - 70 (32 - 52)                      | 470E (ER32) | 84 414 920  | 165,90 |
| SK 50   | 2 - 20 | 100 | 50  | 150  | 53 - 81 (35 - 63)                      | 470E (ER32) | 84 414 520  | 200,10 |
| SK 50   | 2 - 20 | 160 | 50  | 200  | 53 - 83 (35 - 65)                      | 470E (ER32) | 84 414 720  | 286,60 |

**i** Your local Technical Sales Engineer carries a Demo Kit in his car - ASK FOR A DEMO

ER Standard lock nut for precision collet chuck



for seals

| for collet  | clamping range<br>mm | DLN<br>mm | TQX<br>Nm | Article no. |       |
|-------------|----------------------|-----------|-----------|-------------|-------|
|             |                      |           |           |             | EUR   |
| 426E (ER16) | 1 - 10               | 30        | 50        | 84 950 001  | 28,15 |
| 430E (ER25) | 2 - 16               | 40        | 85        | 84 950 003  | 31,16 |
| 470E (ER32) | 2 - 20               | 50        | 135       | 84 950 005  | 33,15 |

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

v<sub>c</sub> = (See Individual v<sub>c</sub> Charts)  
π = 3.142  
D = Diameter

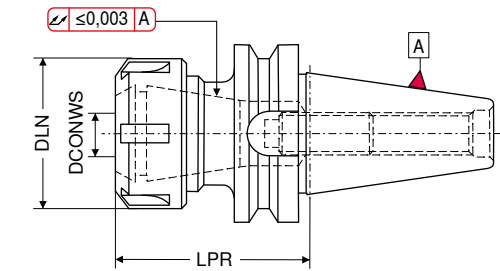


ER-Collet chuck

Scope of supply:

Holder with lock nut and adjustable back stop

WNT \ Standard



AD/B  
G 6,3 n<sub>max</sub> 8000



AD/B  
G 2,5 n<sub>max</sub> 18000

|       | Adapter | DCONWS | LPR | DLN | TQX | for collet  | Article no. |       | Article no. |       |
|-------|---------|--------|-----|-----|-----|-------------|-------------|-------|-------------|-------|
|       |         |        |     |     |     |             |             | EUR   |             | EUR   |
| short | BT 40   | 1 - 10 | 60  | 32  | 56  | 426E (ER16) | 82 508 110  | 57,13 | 82 509 110  | 65,94 |
|       | BT 40   | 1 - 16 | 70  | 42  | 104 | 430E (ER25) | 82 508 116  | 59,71 | 82 509 116  | 68,69 |
|       | BT 40   | 2 - 20 | 70  | 50  | 136 | 470E (ER32) | 82 508 120  | 59,89 | 82 509 120  | 68,88 |
|       | BT 40   | 3 - 26 | 70  | 63  | 176 | 472E (ER40) | 82 508 126  | 62,27 | 82 509 126  | 71,26 |
| long  | BT 40   | 1 - 10 | 120 | 32  | 56  | 426E (ER16) | 82 508 410  | 62,64 | 82 509 410  | 71,53 |
|       | BT 40   | 1 - 16 | 120 | 42  | 104 | 430E (ER25) | 82 508 416  | 65,21 | 82 509 416  | 74,20 |
|       | BT 40   | 2 - 20 | 120 | 50  | 136 | 470E (ER32) | 82 508 420  | 65,39 | 82 509 420  | 74,38 |

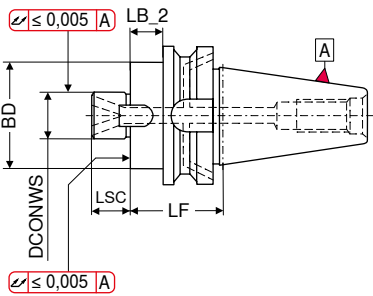
Shell mill adapter

▲ With fixed drive dogs and enlarged contact face for milling cutters with transverse groove

Scope of supply:

Toolholder with retaining screw

WNT \ Standard



AD/B  
G 6,3 n<sub>max</sub> 8000

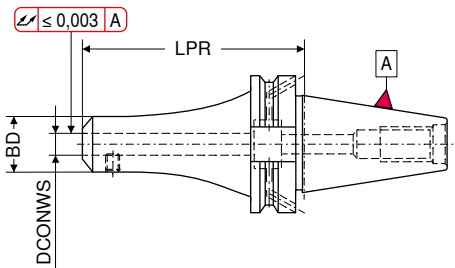
|       | Adapter | DCONWS | LB_2 | LF | BD | LSC | Article no. |       |
|-------|---------|--------|------|----|----|-----|-------------|-------|
|       |         |        |      |    |    |     |             | EUR   |
| short | BT 40   | 16     | 25   | 52 | 38 | 17  | 82 514 116  | 56,49 |
|       | BT 40   | 22     | 25   | 52 | 48 | 19  | 82 514 122  | 59,80 |
|       | BT 40   | 27     | 25   | 52 | 58 | 21  | 82 514 127  | 60,98 |
|       | BT 40   | 32     | 23   | 50 | 78 | 24  | 82 514 132  | 64,20 |
|       | BT 40   | 40     | 23   | 50 | 88 | 27  | 82 514 140  | 69,80 |

1) with cross screw and 4 holes M12, Pitch Circle diameter = 66.7 mm, coolant outlet on the outer diameter of the spigot (DCONWS)!

Cylindrical shank adapter (Weldon)

▲ For shanks according to DIN 6535 HB / 1835 B with lateral clamping flat

WNT \ Standard



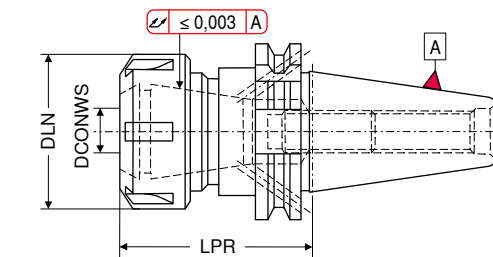
|            | Adapter | DCONWS <sub>H4</sub> | LPR | BD | Article no. |       | Article no. |       | Article no. |       | Article no. |       |
|------------|---------|----------------------|-----|----|-------------|-------|-------------|-------|-------------|-------|-------------|-------|
|            |         |                      |     |    |             | EUR   |             | EUR   |             | EUR   |             | EUR   |
| short      | BT 40   | 6                    | 50  | 25 | 82 502 106  | 40,91 | 82 501 106  | 48,88 | 82 503 106  | 57,78 | 82 504 106  | 65,75 |
|            | BT 40   | 8                    | 50  | 28 | 82 502 108  | 40,91 | 82 501 108  | 48,88 | 82 503 108  | 57,78 | 82 504 108  | 65,75 |
|            | BT 40   | 10                   | 63  | 35 | 82 502 110  | 38,61 | 82 501 110  | 46,59 | 82 503 110  | 55,40 | 82 504 110  | 63,37 |
|            | BT 40   | 12                   | 63  | 42 | 82 502 112  | 38,61 | 82 501 112  | 46,59 | 82 503 112  | 55,40 | 82 504 112  | 63,37 |
|            | BT 40   | 14                   | 63  | 44 | 82 502 114  | 38,61 | 82 501 114  | 46,59 | 82 503 114  | 55,40 | 82 504 114  | 63,37 |
|            | BT 40   | 16                   | 63  | 48 | 82 502 116  | 41,82 | 82 501 116  | 49,80 | 82 503 116  | 63,10 | 82 504 116  | 71,07 |
|            | BT 40   | 18                   | 63  | 50 | 82 502 118  | 41,82 | 82 501 118  | 49,80 | 82 503 118  | 63,10 | 82 504 118  | 71,07 |
|            | BT 40   | 20                   | 63  | 52 | 82 502 120  | 41,82 | 82 501 120  | 49,80 | 82 503 120  | 63,10 | 82 504 120  | 71,07 |
|            | BT 40   | 25                   | 100 | 65 | 82 502 125  | 45,86 | 82 501 125  | 53,74 | 82 503 125  | 67,13 | 82 504 125  | 75,02 |
|            | BT 40   | 32                   | 100 | 72 | 82 502 132  | 49,89 | 82 501 132  | 57,96 | 82 503 132  | 73,83 |             |       |
|            | BT 40   | 40                   | 120 | 90 | 82 502 140  | 54,57 |             |       |             |       |             |       |
| long       | BT 40   | 6                    | 100 | 25 | 82 502 506  | 42,64 | 82 501 506  | 50,54 |             |       |             |       |
|            | BT 40   | 8                    | 100 | 28 | 82 502 508  | 42,64 | 82 501 508  | 50,54 |             |       |             |       |
|            | BT 40   | 10                   | 100 | 35 | 82 502 510  | 40,26 | 82 501 510  | 48,24 |             |       |             |       |
|            | BT 40   | 12                   | 100 | 42 | 82 502 512  | 40,26 | 82 501 512  | 48,24 |             |       |             |       |
|            | BT 40   | 14                   | 100 | 44 | 82 502 514  | 39,99 | 82 501 514  | 47,96 |             |       |             |       |
|            | BT 40   | 16                   | 100 | 48 | 82 502 516  | 44,21 | 82 501 516  | 52,18 |             |       |             |       |
|            | BT 40   | 18                   | 100 | 50 | 82 502 518  | 44,02 | 82 501 518  | 51,91 |             |       |             |       |
|            | BT 40   | 20                   | 100 | 52 | 82 502 520  | 44,21 | 82 501 520  | 52,18 |             |       |             |       |
| extra-long | BT 40   | 6                    | 160 | 25 | 82 502 606  | 49,07 | 82 501 606  | 57,04 |             |       |             |       |
|            | BT 40   | 8                    | 160 | 28 | 82 502 608  | 49,07 | 82 501 608  | 57,04 |             |       |             |       |
|            | BT 40   | 10                   | 160 | 35 | 82 502 610  | 46,49 | 82 501 610  | 54,48 |             |       |             |       |
|            | BT 40   | 12                   | 160 | 42 | 82 502 612  | 46,49 | 82 501 612  | 54,48 |             |       |             |       |
|            | BT 40   | 14                   | 160 | 44 | 82 502 614  | 46,49 | 82 501 614  | 54,48 |             |       |             |       |
|            | BT 40   | 16                   | 160 | 48 | 82 502 616  | 46,68 | 82 501 616  | 54,75 |             |       |             |       |
|            | BT 40   | 18                   | 160 | 50 | 82 502 618  | 46,68 | 82 501 618  | 54,75 |             |       |             |       |
|            | BT 40   | 20                   | 160 | 52 | 82 502 620  | 46,68 | 82 501 620  | 54,75 |             |       |             |       |
|            | BT 40   | 25                   | 160 | 65 | 82 502 625  | 49,89 | 82 501 625  | 57,96 |             |       |             |       |

**i** Spare parts can be found in → Main catalogue, chapter 16.

**Scope of supply:**

Holder with lock nut and adjustable back stop

WNT \ Standard



AD/B  
G 6,3 n<sub>max</sub> 8000



AD/B  
G 2,5 n<sub>max</sub> 18000

|       | Adapter | DCONWS | LPR | DLN | TQX | for collet  | Article no. |       | Article no. |       |
|-------|---------|--------|-----|-----|-----|-------------|-------------|-------|-------------|-------|
|       |         | mm     | mm  | mm  | Nm  |             |             | EUR   |             | EUR   |
| short | SK 40   | 1 - 10 | 60  | 32  | 56  | 426E (ER16) | 82 414 110  | 57,13 | 82 415 110  | 65,94 |
|       | SK 40   | 1 - 16 | 70  | 42  | 104 | 430E (ER25) | 82 414 116  | 59,71 | 82 415 116  | 68,69 |
|       | SK 40   | 2 - 20 | 70  | 50  | 136 | 470E (ER32) | 82 414 120  | 59,89 | 82 415 120  | 68,88 |
|       | SK 40   | 3 - 26 | 70  | 63  | 176 | 472E (ER40) | 82 414 126  | 62,27 | 82 415 126  | 71,26 |
| long  | SK 40   | 1 - 10 | 120 | 32  | 56  | 426E (ER16) | 82 414 410  | 62,64 | 82 415 410  | 71,53 |
|       | SK 40   | 1 - 16 | 120 | 42  | 104 | 430E (ER25) | 82 414 416  | 65,21 | 82 415 416  | 74,20 |
|       | SK 40   | 2 - 20 | 120 | 50  | 136 | 470E (ER32) | 82 414 420  | 65,39 | 82 415 420  | 74,38 |

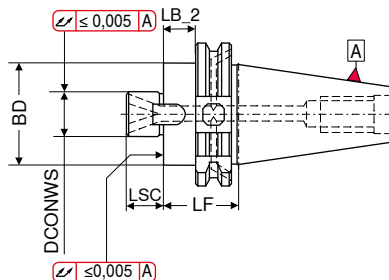
## Shell mill adapter

▲ Screwed drive dogs

**Scope of supply:**

Toolholder with retaining screw

WNT \ Standard



AD/B  
G 6,3 n<sub>max</sub> 8000

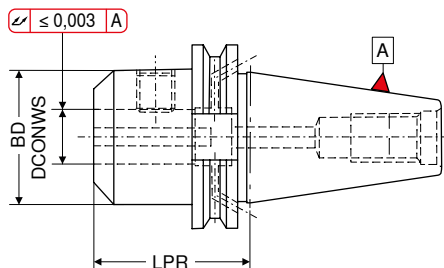
|       | Adapter | DCONWS | LB_2 | LF | BD | LSC | Article no.              |       |
|-------|---------|--------|------|----|----|-----|--------------------------|-------|
|       |         | mm     | mm   | mm | mm | mm  |                          | EUR   |
| short | SK 40   | 16     | 25   | 44 | 38 | 17  | 82 428 116               | 56,49 |
|       | SK 40   | 22     | 25   | 44 | 48 | 19  | 82 428 122               | 59,89 |
|       | SK 40   | 27     | 36   | 55 | 58 | 21  | 82 428 127               | 60,98 |
|       | SK 40   | 32     | 31   | 50 | 78 | 24  | 82 428 132               | 64,20 |
|       | SK 40   | 40     | 31   | 50 | 88 | 27  | 82 428 140 <sup>1)</sup> | 69,80 |

1) with cross screw and 4 holes M12, Pitch Circle diameter = 66.7 mm, coolant outlet on the outer diameter of the spigot (DCONWS)!

## Cylindrical shank adapter (Weldon)

▲ For shanks according to DIN 6535 HB / 1835 B with lateral clamping flat

WNT \ Standard



|            | Adapter | DCONWS <sub>H4</sub> | LPR | BD |
|------------|---------|----------------------|-----|----|
|            |         | mm                   | mm  | mm |
| short      | SK 40   | 6                    | 50  | 25 |
|            | SK 40   | 8                    | 50  | 28 |
|            | SK 40   | 10                   | 50  | 35 |
|            | SK 40   | 12                   | 50  | 42 |
|            | SK 40   | 14                   | 50  | 44 |
|            | SK 40   | 16                   | 63  | 48 |
|            | SK 40   | 18                   | 63  | 50 |
|            | SK 40   | 20                   | 63  | 52 |
|            | SK 40   | 25                   | 100 | 65 |
|            | SK 40   | 32                   | 100 | 72 |
| long       | SK 40   | 40                   | 120 | 90 |
|            | SK 40   | 6                    | 100 | 25 |
|            | SK 40   | 8                    | 100 | 28 |
|            | SK 40   | 10                   | 100 | 35 |
|            | SK 40   | 12                   | 100 | 42 |
|            | SK 40   | 14                   | 100 | 44 |
|            | SK 40   | 16                   | 100 | 48 |
|            | SK 40   | 18                   | 100 | 50 |
| extra-long | SK 40   | 20                   | 100 | 52 |
|            | SK 40   | 6                    | 160 | 25 |
|            | SK 40   | 8                    | 160 | 28 |
|            | SK 40   | 10                   | 160 | 35 |
|            | SK 40   | 12                   | 160 | 42 |
|            | SK 40   | 14                   | 160 | 44 |
|            | SK 40   | 16                   | 160 | 48 |
|            | SK 40   | 18                   | 160 | 50 |
|            | SK 40   | 20                   | 160 | 52 |
| SK 40      | 25      | 160                  | 65  |    |



AD/B  
G 6,3 n<sub>max</sub> 8000



AD/B  
G 2,5 n<sub>max</sub> 18000



AD/Be  
G 6,3 n<sub>max</sub> 8000



AD/Be  
G 2,5 n<sub>max</sub> 18000

| Article no. |       | Article no. |       | Article no. |       | Article no. |       |
|-------------|-------|-------------|-------|-------------|-------|-------------|-------|
| EUR         |       | EUR         |       | EUR         |       | EUR         |       |
| 82 402 106  | 40,91 | 82 401 106  | 48,88 | 82 403 106  | 57,78 | 82 404 106  | 65,75 |
| 82 402 108  | 40,91 | 82 401 108  | 48,88 | 82 403 108  | 57,78 | 82 404 108  | 65,75 |
| 82 402 110  | 38,61 | 82 401 110  | 46,59 | 82 403 110  | 55,40 | 82 404 110  | 63,37 |
| 82 402 112  | 38,61 | 82 401 112  | 46,59 | 82 403 112  | 55,40 | 82 404 112  | 63,37 |
| 82 402 114  | 38,61 | 82 401 114  | 46,59 | 82 403 114  | 55,40 | 82 404 114  | 63,37 |
| 82 402 116  | 41,82 | 82 401 116  | 49,80 | 82 403 116  | 63,10 | 82 404 116  | 71,07 |
| 82 402 118  | 41,82 | 82 401 118  | 49,80 | 82 403 118  | 63,10 | 82 404 118  | 71,07 |
| 82 402 120  | 41,82 | 82 401 120  | 49,80 | 82 403 120  | 63,10 | 82 404 120  | 71,07 |
| 82 402 125  | 45,86 | 82 401 125  | 53,74 | 82 403 125  | 67,13 | 82 404 125  | 75,02 |
| 82 402 132  | 49,89 | 82 401 132  | 57,96 | 82 403 132  | 73,83 |             |       |
| 82 402 140  | 54,57 |             |       |             |       |             |       |
|             |       |             |       |             |       |             |       |
| 82 402 506  | 42,64 | 82 401 506  | 50,54 |             |       |             |       |
| 82 402 508  | 42,64 | 82 401 508  | 50,54 |             |       |             |       |
| 82 402 510  | 40,26 | 82 401 510  | 48,24 |             |       |             |       |
| 82 402 512  | 40,26 | 82 401 512  | 48,24 |             |       |             |       |
| 82 402 514  | 39,99 | 82 401 514  | 47,96 |             |       |             |       |
| 82 402 516  | 44,21 | 82 401 516  | 52,18 |             |       |             |       |
| 82 402 518  | 44,02 | 82 401 518  | 51,91 |             |       |             |       |
| 82 402 520  | 44,21 | 82 401 520  | 52,18 |             |       |             |       |
|             |       |             |       |             |       |             |       |
| 82 402 606  | 49,07 | 82 401 606  | 57,04 |             |       |             |       |
| 82 402 608  | 49,07 | 82 401 608  | 57,04 |             |       |             |       |
| 82 402 610  | 46,49 | 82 401 610  | 54,48 |             |       |             |       |
| 82 402 612  | 46,49 | 82 401 612  | 54,48 |             |       |             |       |
| 82 402 614  | 46,49 | 82 401 614  | 54,48 |             |       |             |       |
| 82 402 616  | 46,68 | 82 401 616  | 54,75 |             |       |             |       |
| 82 402 618  | 46,68 | 82 401 618  | 54,75 |             |       |             |       |
| 82 402 620  | 46,68 | 82 401 620  | 54,75 |             |       |             |       |
| 82 402 625  | 49,89 | 82 401 625  | 57,96 |             |       |             |       |

 Spare parts can be found in → **Main catalogue, chapter 16.**

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

## Speed Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi = 3.142$   
 $D$  = Diameter



## BT-FC adapters with face contact

Enhanced process security and stability through additional face contact on the machine spindle

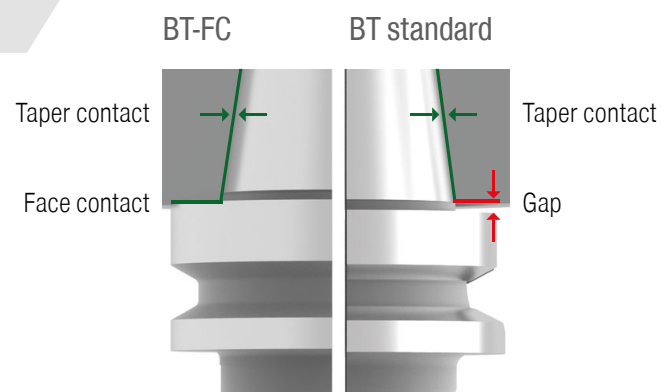


## Operating principle of the BT-FC adapter

The spindle system with face contact is becoming increasingly common in machining centres and many machine manufacturers have adopted this system due to its outstanding performance. BT-FC is a double-contact system, which establishes contact with the flange in addition to the taper contact, thereby generating an additional face contact. The great advantages of this system are higher process security and a longer service life.

### You benefit from:

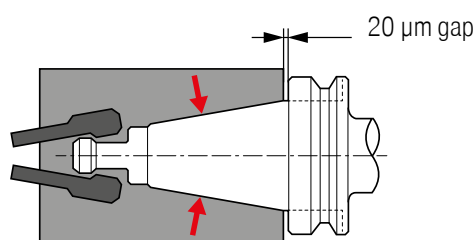
- ▲ Greater stability  
due to improved flexural rigidity during machining
- ▲ HIGHER PROCESS SECURITY  
as there is no movement in the Z-axis
- ▲ Lower spindle wear  
thanks to minimised vibrations



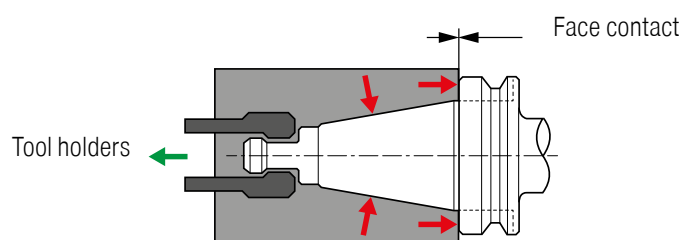
# MAXIMUM ACCURACY

through minimum elastic deformation

Unclamped



Clamped

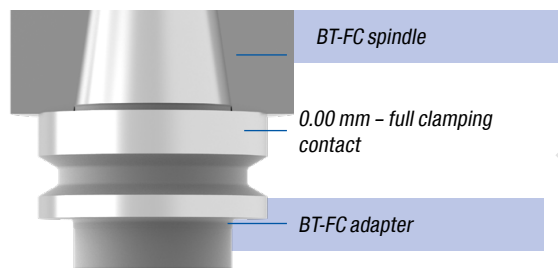


When unclamped, only the adapter taper is in contact with the spindle; there is still a gap of approx. 20 µm between the flat surface and the spindle. When clamped by means of the pull stud, the spindle undergoes elastic deformation so that the flat surface of the adapter is also in contact with the spindle nose, in addition to the taper. Only elastic deformation allows this over-defined system to be utilised accurately.

## Combination options

To take full advantage of BT-FC adapters, the tool spindle must also have a ground face contact surface. BT-FC and standard MAS BT systems can be combined without any problems, but in this situation you do not enjoy the full benefit of the BT-FC system.

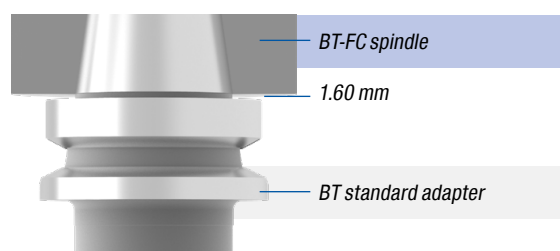
### Recommended and optimum use of the BT-FC system



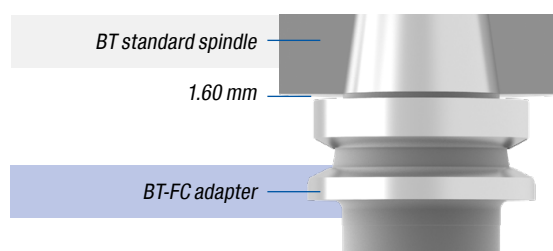
The flat surface is fully in contact, utilising all the advantages of the system.

### Combination options with the standard MAS BT system

Option 1



Option 2

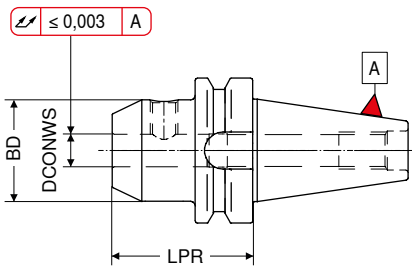


Both versions can be used without problems, but these combinations do not offer any advantages over the standard MAS BT system.

Cylindrical shank adapter (Weldon) – BT-FC

- ▲ with face contact
- ▲ for shanks according to DIN 6535 / 1835 B with lateral clamping flat

WNT \ Standard



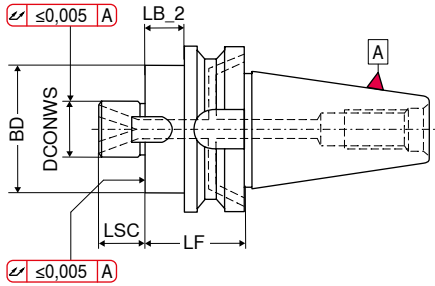
AD  
G 2,5 n<sub>max</sub> 25000

|       | Adapter  | DCONWS <sub>H4</sub> | LPR | BD | Article no. | EUR    |
|-------|----------|----------------------|-----|----|-------------|--------|
|       |          | mm                   | mm  | mm |             |        |
| short | BT-FC 30 | 6                    | 50  | 25 | 84 552 006  | 75,18  |
|       | BT-FC 30 | 8                    | 50  | 28 | 84 552 008  | 75,18  |
|       | BT-FC 30 | 10                   | 50  | 35 | 84 552 010  | 75,18  |
|       | BT-FC 30 | 12                   | 50  | 42 | 84 552 012  | 75,18  |
|       | BT-FC 30 | 16                   | 63  | 48 | 84 552 016  | 80,63  |
|       | BT-FC 30 | 20                   | 63  | 52 | 84 552 020  | 80,63  |
|       | BT-FC 40 | 6                    | 50  | 25 | 84 552 106  | 95,32  |
|       | BT-FC 40 | 8                    | 50  | 28 | 84 552 108  | 92,17  |
|       | BT-FC 40 | 10                   | 63  | 35 | 84 552 110  | 92,17  |
|       | BT-FC 40 | 12                   | 63  | 42 | 84 552 112  | 92,17  |
|       | BT-FC 40 | 16                   | 63  | 48 | 84 552 116  | 92,17  |
|       | BT-FC 40 | 20                   | 63  | 52 | 84 552 120  | 92,17  |
|       | BT-FC 40 | 25                   | 90  | 65 | 84 552 125  | 122,70 |
|       | BT-FC 40 | 32                   | 100 | 72 | 84 552 132  | 122,70 |
|       | BT-FC 50 | 6                    | 63  | 25 | 84 552 306  | 141,60 |
|       | BT-FC 50 | 8                    | 63  | 28 | 84 552 308  | 137,40 |
|       | BT-FC 50 | 10                   | 63  | 35 | 84 552 310  | 137,40 |
|       | BT-FC 50 | 12                   | 80  | 42 | 84 552 312  | 137,40 |
|       | BT-FC 50 | 16                   | 80  | 48 | 84 552 316  | 137,40 |
|       | BT-FC 50 | 20                   | 80  | 52 | 84 552 320  | 137,40 |
|       | BT-FC 50 | 25                   | 100 | 65 | 84 552 325  | 157,30 |
|       | BT-FC 50 | 32                   | 105 | 72 | 84 552 332  | 157,30 |

Shell mill adapter – BT-FC

- ▲ with face contact
- ▲ with fixed drive dogs and enlarged contact face for milling cutters with transverse slot

WNT \ Standard



AD  
G 6,3 n<sub>max</sub> 15000

|       | Adapter  | DCONWS | LB_2 | LF | BD | LSC | Article no. | EUR    |
|-------|----------|--------|------|----|----|-----|-------------|--------|
|       |          | mm     | mm   | mm | mm | mm  |             |        |
| short | BT-FC 30 | 16     | 18   | 40 | 40 | 17  | 84 562 016  | 82,73  |
|       | BT-FC 30 | 22     | 18   | 40 | 50 | 19  | 84 562 022  | 82,73  |
|       | BT-FC 30 | 27     | 18   | 40 | 60 | 21  | 84 562 027  | 82,73  |
|       | BT-FC 30 | 32     | 28   | 50 | 80 | 24  | 84 562 032  | 82,73  |
|       | BT-FC 40 | 16     | 8    | 35 | 40 | 17  | 84 562 116  | 99,50  |
|       | BT-FC 40 | 22     | 8    | 35 | 50 | 19  | 84 562 122  | 99,50  |
|       | BT-FC 40 | 27     | 8    | 35 | 60 | 21  | 84 562 127  | 99,50  |
|       | BT-FC 40 | 32     | 23   | 50 | 80 | 24  | 84 562 132  | 99,50  |
|       | BT-FC 40 | 40     | 23   | 50 | 89 | 27  | 84 562 140  | 99,50  |
|       | BT-FC 50 | 22     | 12   | 50 | 50 | 19  | 84 562 322  | 115,40 |
|       | BT-FC 50 | 27     | 12   | 50 | 60 | 21  | 84 562 327  | 115,40 |
|       | BT-FC 50 | 32     | 12   | 50 | 80 | 24  | 84 562 332  | 122,70 |
|       | BT-FC 50 | 40     | 17   | 55 | 89 | 27  | 84 562 340  | 122,70 |

ER Precision Collet chuck – BT-FC

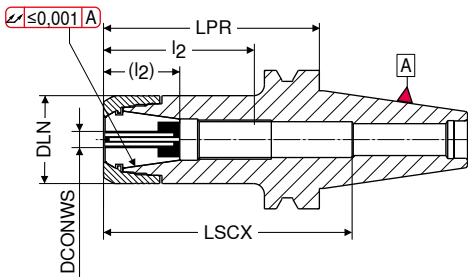
- ▲ with face contact
- ▲ for standard or sealed nuts
- ▲ maximum clamping range covered according to ISO tolerance field H10
- ▲ for clamping a roll key is required
- ▲ p<sub>max</sub> = 80 bar

Scope of supply:

Holder **without** nut, **without** backstop



WNT \ Performance



AD  
G 2,5 n<sub>max</sub> 25000

| Adapter  | DCONWS | LPR | BD | LSCX | l <sub>2</sub> (l <sub>2</sub> )<br>mm | for collet  | Article no. | EUR    |
|----------|--------|-----|----|------|----------------------------------------|-------------|-------------|--------|
|          |        | mm  | mm | mm   |                                        |             |             |        |
| BT-FC 30 | 1 - 10 | 75  | 30 | 97   | 28 - 45 (14 - 31)                      | 426E (ER16) | 84 525 002  | 150,10 |
| BT-FC 30 | 2 - 16 | 75  | 40 | 72   | 38 - 56 (23 - 39)                      | 430E (ER25) | 84 525 012  | 150,00 |
| BT-FC 30 | 2 - 20 | 75  | 45 | 84   | 42 - 62 (24 - 45)                      | 470E (ER32) | 84 525 022  | 150,00 |
| BT-FC 40 | 1 - 10 | 75  | 30 | 90   | 38 - 53 (29 - 39)                      | 426E (ER16) | 84 525 102  | 153,10 |
| BT-FC 40 | 2 - 16 | 75  | 40 | 100  | 42 - 59 (36 - 41)                      | 430E (ER25) | 84 525 112  | 153,10 |
| BT-FC 40 | 2 - 20 | 75  | 50 | 100  | 42 - 76 (42 - 52)                      | 470E (ER32) | 84 525 122  | 153,10 |

- i** LSCX = clamping depth without back stop screw for shanks
- l<sub>2</sub> = with back stop screw 1, dimension in brackets ( ) = with back stop screw 2
- dimension LPR when using tightening nuts with seals 4 mm longer

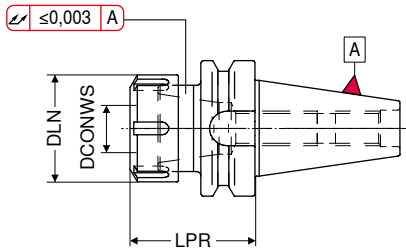
ER Collet chuck – BT-FC

- ▲ with face contact

Scope of supply:

Toolholder including nut

WNT \ Standard



AD  
G 2,5 n<sub>max</sub> 20000

|       | Adapter  | DCONWS | LPR | DLN | TQX | for collet  | Article no. | EUR    |
|-------|----------|--------|-----|-----|-----|-------------|-------------|--------|
|       |          | mm     | mm  | mm  | Nm  |             |             |        |
| short | BT-FC 30 | 1 - 10 | 63  | 28  | 56  | 426E (ER16) | 84 557 010  | 84,83  |
|       | BT-FC 30 | 1 - 16 | 60  | 42  | 104 | 430E (ER25) | 84 557 016  | 84,83  |
|       | BT-FC 30 | 2 - 20 | 60  | 50  | 136 | 470E (ER32) | 84 557 020  | 84,83  |
|       | BT-FC 40 | 1 - 10 | 63  | 28  | 56  | 426E (ER16) | 84 557 110  | 106,90 |
|       | BT-FC 40 | 1 - 16 | 60  | 42  | 104 | 430E (ER25) | 84 557 116  | 106,90 |
|       | BT-FC 40 | 2 - 20 | 60  | 50  | 136 | 470E (ER32) | 84 557 120  | 106,90 |
|       | BT-FC 50 | 1 - 16 | 70  | 42  | 104 | 430E (ER25) | 84 557 316  | 145,70 |
|       | BT-FC 50 | 2 - 20 | 70  | 50  | 136 | 470E (ER32) | 84 557 320  | 145,70 |
| long  | BT-FC 50 | 1 - 10 | 100 | 28  | 56  | 426E (ER16) | 84 557 310  | 145,70 |

**i** Spare parts can be found in → **Main catalogue, chapter 16.**

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

v<sub>c</sub> = (See Individual v<sub>c</sub> Charts)  
π = 3.142  
D = Diameter

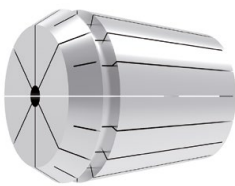
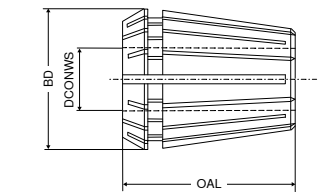


ER precision collet

- ▲ DIN ISO 15488-B (old DIN 6499-B)
- ▲ Double taper collet
- ▲ 16 times slotted

ER-B  
20 µm

WNT \ Standard



| DCONWS            | mm | BD = 17<br>OAL = 27,5<br>426 E / ER16 |        | BD = 21<br>OAL = 31,5<br>428 E / ER20 |        | BD = 26<br>OAL = 34<br>430 E / ER25 |        | BD = 33<br>OAL = 40<br>470 E / ER32 |        | BD = 41<br>OAL = 46<br>472 E / ER40 |        |
|-------------------|----|---------------------------------------|--------|---------------------------------------|--------|-------------------------------------|--------|-------------------------------------|--------|-------------------------------------|--------|
|                   |    | Article no.                           |        | Article no.                           |        | Article no.                         |        | Article no.                         |        | Article no.                         |        |
|                   |    |                                       | EUR    |                                       | EUR    |                                     | EUR    |                                     | EUR    |                                     | EUR    |
| 1                 |    | 82 673 01000                          | 15,62  | 82 674 01000 <sup>1)</sup>            | 16,15  |                                     |        |                                     |        | 82 677 03000                        | 17,09  |
| 2                 |    | 82 673 02000                          | 15,62  | 82 674 02000 <sup>1)</sup>            | 16,15  | 82 675 02000 <sup>1)</sup>          | 16,77  | 82 676 03000                        | 13,53  | 82 677 04000                        | 17,09  |
| 3                 |    | 82 673 03000                          | 12,69  | 82 674 03000                          | 11,74  | 82 675 03000                        | 12,58  | 82 676 04000                        | 13,53  | 82 677 05000                        | 17,09  |
| 4                 |    | 82 673 04000                          | 12,69  | 82 674 04000                          | 11,74  | 82 675 04000                        | 12,58  | 82 676 05000                        | 13,53  | 82 677 06000                        | 17,09  |
| 5                 |    | 82 673 05000                          | 12,69  | 82 674 05000                          | 11,74  | 82 675 05000                        | 12,58  | 82 676 06000                        | 13,53  | 82 677 07000                        | 17,09  |
| 6                 |    | 82 673 06000                          | 12,69  | 82 674 06000                          | 11,74  | 82 675 06000                        | 12,58  | 82 676 07000                        | 13,53  | 82 677 08000                        | 17,09  |
| 7                 |    | 82 673 07000                          | 12,69  | 82 674 07000                          | 11,74  | 82 675 07000                        | 12,58  | 82 676 08000                        | 13,53  | 82 677 09000                        | 17,09  |
| 8                 |    | 82 673 08000                          | 12,69  | 82 674 08000                          | 11,74  | 82 675 08000                        | 12,58  | 82 676 09000                        | 13,53  | 82 677 10000                        | 17,09  |
| 9                 |    | 82 673 09000                          | 12,69  | 82 674 09000                          | 11,74  | 82 675 09000                        | 12,58  | 82 676 10000                        | 13,53  | 82 677 11000                        | 17,09  |
| 10                |    | 82 673 10000                          | 12,69  | 82 674 10000                          | 11,74  | 82 675 10000                        | 12,58  | 82 676 11000                        | 13,53  | 82 677 12000                        | 17,09  |
| 11                |    |                                       |        | 82 674 11000                          | 11,74  | 82 675 11000                        | 12,58  | 82 676 12000                        | 13,53  | 82 677 13000                        | 17,09  |
| 12                |    |                                       |        | 82 674 12000                          | 11,74  | 82 675 12000                        | 12,58  | 82 676 13000                        | 13,53  | 82 677 14000                        | 17,09  |
| 13                |    |                                       |        | 82 674 13000                          | 11,74  | 82 675 13000                        | 12,58  | 82 676 14000                        | 13,53  | 82 677 15000                        | 17,09  |
| 14                |    |                                       |        |                                       |        | 82 675 14000                        | 12,58  | 82 676 15000                        | 13,53  | 82 677 16000                        | 17,09  |
| 15                |    |                                       |        |                                       |        | 82 675 15000                        | 12,58  | 82 676 16000                        | 13,53  | 82 677 17000                        | 17,09  |
| 16                |    |                                       |        |                                       |        | 82 675 16000                        | 12,58  | 82 676 17000                        | 13,53  | 82 677 18000                        | 17,09  |
| 17                |    |                                       |        |                                       |        |                                     |        | 82 676 18000                        | 13,53  | 82 677 19000                        | 17,09  |
| 18                |    |                                       |        |                                       |        |                                     |        | 82 676 19000                        | 13,53  | 82 677 20000                        | 17,09  |
| 19                |    |                                       |        |                                       |        |                                     |        | 82 676 20000                        | 13,53  | 82 677 21000                        | 17,09  |
| 20                |    |                                       |        |                                       |        |                                     |        |                                     |        | 82 677 22000                        | 17,09  |
| 21                |    |                                       |        |                                       |        |                                     |        |                                     |        | 82 677 23000                        | 17,09  |
| 22                |    |                                       |        |                                       |        |                                     |        |                                     |        | 82 677 24000                        | 17,09  |
| 23                |    |                                       |        |                                       |        |                                     |        |                                     |        | 82 677 25000                        | 17,09  |
| 24                |    |                                       |        |                                       |        |                                     |        |                                     |        | 82 677 26000                        | 17,09  |
| 25                |    |                                       |        |                                       |        |                                     |        |                                     |        | 82 677 99900                        | 411,10 |
| 26                |    |                                       |        |                                       |        |                                     |        |                                     |        |                                     |        |
| Set in wooden box |    | 82 673 99900                          | 140,60 | 82 674 99900                          | 151,00 | 82 675 99900                        | 198,20 | 82 676 99900                        | 243,30 |                                     |        |

1) not included in the set

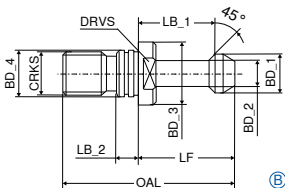
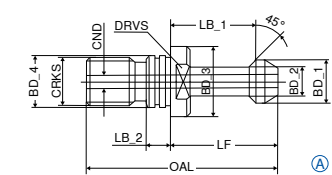
Pull stud for tool holders according to JIS B 6339

- ▲ MAS-BT 45° Form A and B

Scope of supply:

including O-Ring

WNT \ Standard



| Adapter | BD_1 | BD_2 | BD_3 | BD_4 | CRKS | OAL | LF | LB_1 | LB_2 | CND | DRVS | TQX | form | Article no. |      | Article no. |       |
|---------|------|------|------|------|------|-----|----|------|------|-----|------|-----|------|-------------|------|-------------|-------|
|         | mm   | mm   | mm   | mm   |      | mm  | mm | mm   | mm   | mm  | mm   | Nm  |      |             | EUR  |             | EUR   |
| BT 30   | 11   | 7    | 16,5 | 12,5 | M12  | 43  | 23 | 18   | 4,0  | 2,2 | 13   | 60  | A    | 82 530 030  | 9,44 | 82 534 030  | 10,04 |
| BT 30   | 11   | 7    | 16,5 | 12,5 | M12  | 43  | 23 | 18   | 4,0  |     | 13   | 60  | B    |             |      |             |       |
| BT 40   | 15   | 10   | 23,0 | 17,0 | M16  | 60  | 35 | 28   | 5,5  | 4,0 | 19   | 90  | A    | 82 530 040  | 5,91 | 82 534 040  | 7,61  |
| BT 40   | 15   | 10   | 23,0 | 17,0 | M16  | 60  | 35 | 28   | 5,5  |     | 19   | 90  | B    |             |      |             |       |
| BT 50   | 23   | 17   | 38,0 | 25,0 | M24  | 85  | 45 | 35   | 8,0  | 6,0 | 30   | 145 | A    | 82 530 050  | 9,52 | 82 534 050  | 10,32 |
| BT 50   | 23   | 17   | 38,0 | 25,0 | M24  | 85  | 45 | 35   | 8,0  |     | 30   | 145 | B    |             |      |             |       |

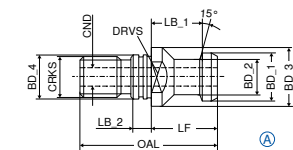
Pull studs for tool holders according to DIN 69871

- ▲ DIN 69872 form A and B
- ▲ For tools with or without axial coolant supply

Scope of supply:

including O-Ring

WNT \ Standard



| Adapter | BD_1 | BD_2 | BD_3 | BD_4 | CRKS | OAL | LF | LB_1 | LB_2 | CND  | DRVS | TQX | form | Article no. |      |      |
|---------|------|------|------|------|------|-----|----|------|------|------|------|-----|------|-------------|------|------|
|         | mm   | mm   | mm   | mm   |      | mm  | mm | mm   | mm   | mm   | mm   | Nm  |      |             |      | EUR  |
| SK 30   | 13   | 9    | 17   | 13   | M12  | 44  | 24 | 19   | 5    | 3,5  | 14   | 60  | A    | 82 468 030  | 9,44 | 5,16 |
| SK 40   | 19   | 14   | 23   | 17   | M16  | 54  | 26 | 20   | 7    | 7,0  | 19   | 90  | A    |             |      |      |
| SK 50   | 28   | 21   | 36   | 25   | M24  | 74  | 34 | 25   | 10   | 11,5 | 30   | 145 | A    |             |      |      |

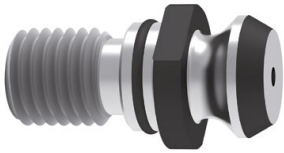
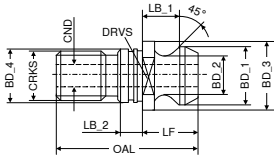
Pull studs for tool holders according to DIN 69871

▲ Similar to ISO / DIS 7388 (ANSI-CAT only for SK 40) Form A

Scope of supply:

SK 50 including O-ring  
SK 40 without O-ring groove

WNT \ Standard



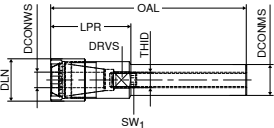
| Adapter | BD_1  | BD_2  | BD_3 | BD_4 | CRKS | OAL   | LF    | LB_1  | LB_2 | CND  | DRVS | TQX |
|---------|-------|-------|------|------|------|-------|-------|-------|------|------|------|-----|
|         | mm    | mm    | mm   | mm   |      | mm    | mm    | mm    | mm   | mm   | mm   | Nm  |
| SK 40   | 18,95 | 12,95 | 22,5 | 17   | M16  | 41,26 | 16,40 | 11,15 | 4,0  | 6,0  | 19   | 90  |
| SK 50   | 29,10 | 19,60 | 37,0 | 25   | M24  | 65,50 | 25,55 | 17,95 | 5,5  | 11,5 | 30   | 145 |

| Article no. |      |
|-------------|------|
|             | EUR  |
| 82 487 040  | 5,46 |
| 82 487 050  | 7,84 |

ER collet chuck with mini clamping nut

▲ with cylindrical shank

WNT \ Standard



AD

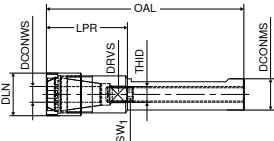
| DCONMS <sub>h6</sub> | DCONWS | OAL | LPR | DLN | THID     | DRVS | SW <sub>1</sub> | for collet   |
|----------------------|--------|-----|-----|-----|----------|------|-----------------|--------------|
| mm                   | mm     | mm  | mm  | mm  |          | mm   | mm              |              |
| 8                    | 1 - 5  | 79  | 24  | 12  |          | 9    |                 | 4004E (ER08) |
| 12                   | 1 - 5  | 155 | 18  | 12  | M5       | 10   | 2,5             | 4004E (ER08) |
| 16                   | 1 - 7  | 182 | 22  | 16  | M7,5x0,5 | 14   | 4,0             | 4008E (ER11) |
| 16                   | 1 - 10 | 117 | 37  | 22  | M11x1    | 17   | 4,0             | 426E (ER16)  |
| 16                   | 1 - 10 | 197 | 37  | 22  | M11x1    | 17   | 4,0             | 426E (ER16)  |
| 20                   | 1 - 10 | 166 | 25  | 22  | M11x1    | 17   | 5,0             | 426E (ER16)  |
| 25                   | 1 - 13 | 166 | 37  | 28  | M14x1    | 22   | 5,0             | 428E (ER20)  |
| 25                   | 1 - 16 | 190 | 40  | 35  | M18x1    | 27   |                 | 430E (ER25)  |

| Article no. |        |
|-------------|--------|
|             | EUR    |
| 83 453 081  | 78,21  |
| 83 453 122  | 107,20 |
| 83 453 163  | 114,90 |
| 83 453 164  | 81,08  |
| 83 453 165  | 114,90 |
| 83 453 204  | 111,40 |
| 83 453 254  | 128,20 |
| 83 453 256  | 161,00 |

ER collet chuck with mini clamping nut

▲ with cylindrical shank and clamping flat

WNT \ Standard



AD

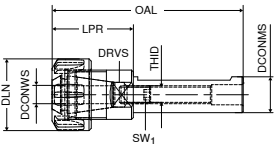
| DCONMS <sub>h6</sub> | DCONWS | OAL | LPR | DLN | THID  | DRVS | SW <sub>1</sub> | for collet  |
|----------------------|--------|-----|-----|-----|-------|------|-----------------|-------------|
| mm                   | mm     | mm  | mm  | mm  |       | mm   | mm              |             |
| 20                   | 1 - 10 | 166 | 25  | 22  | M11x1 | 17   | 5               | 426E (ER16) |
| 20                   | 1 - 13 | 137 | 37  | 28  | M11x1 | 22   | 5               | 428E (ER20) |
| 20                   | 1 - 16 | 146 | 46  | 35  | M11x1 | 27   | 5               | 430E (ER25) |
| 25                   | 1 - 13 | 166 | 28  | 28  | M14x1 | 22   | 5               | 428E (ER20) |
| 25                   | 1 - 16 | 190 | 40  | 35  | M18x1 | 27   |                 | 430E (ER25) |

| Article no. |        |
|-------------|--------|
|             | EUR    |
| 83 454 204  | 111,40 |
| 83 454 206  | 83,71  |
| 83 454 208  | 97,24  |
| 83 454 254  | 128,20 |
| 83 454 256  | 161,00 |

ER Collet Chuck

▲ with cylindrical shank and clamping flat

WNT \ Standard



AD

| DCONMS <sub>h6</sub> | DCONWS | OAL | LPR | DLN | THID    | DRVS | SW <sub>1</sub> | for collet  |
|----------------------|--------|-----|-----|-----|---------|------|-----------------|-------------|
| mm                   | mm     | mm  | mm  | mm  |         | mm   | mm              |             |
| 40                   | 2 - 20 | 100 |     | 50  | M22x1,5 | 36   |                 | 470E (ER32) |
| 40                   | 2 - 20 | 160 |     | 50  | M22x1,5 | 36   |                 | 470E (ER32) |
| 40                   | 3 - 30 | 139 | 59  | 63  | M28x1,5 | 40   | 6               | 472E (ER40) |

| Article no. |        |
|-------------|--------|
|             | EUR    |
| 83 455 401  | 99,41  |
| 83 455 402  | 122,10 |
| 83 455 405  | 113,70 |

**i** Note: Spanner to be ordered separately.

Technical support: 1800 93 22 55

3 time served engineers, available from 8:00 am to 6:30 pm, Monday to Friday

Speed  
Calculation

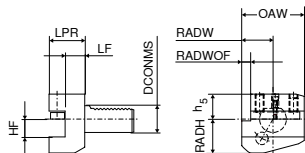
$$\text{RPM} = \frac{v_c \times 1000}{\pi \times D}$$

$v_c$  = (See Individual  $v_c$  Charts)  
 $\pi$  = 3.142  
D = Diameter

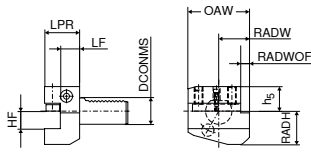


Radial tool holders, short

WNT \ Performance



| B2                   |                      |     |      |        |                |      |                      |     |
|----------------------|----------------------|-----|------|--------|----------------|------|----------------------|-----|
| DCONMS <sub>h6</sub> | HF <sub>0/+0,1</sub> | OAW | RADW | RADWOF | h <sub>5</sub> | RADH | LF <sub>0/+0,5</sub> | LPR |
| mm                   | mm                   | mm  | mm   | mm     | mm             | mm   | mm                   | mm  |
| 16                   | 12                   | 42  | 23,0 | 5,0    | 20,0           | 22   | 13,0                 | 24  |
| 20                   | 16                   | 55  | 30,0 | 7,0    | 25,0           | 30   | 16,0                 | 30  |
| 20                   | 16                   | 55  | 30,0 | 7,0    | 25,0           | 30   | 26,0                 | 40  |
| 30                   | 20                   | 70  | 35,0 | 10,0   | 28,0           | 38   | 18,5                 | 40  |
| 30                   | 20                   | 70  | 35,0 | 10,0   | 28,0           | 38   | 42,0                 | 60  |
| 40                   | 25                   | 85  | 42,5 | 12,5   | 32,5           | 48   | 18,5                 | 44  |
| 50                   | 32                   | 100 | 50,0 | 16,0   | 35,0           | 60   | 30,0                 | 55  |



B1

B2



B1



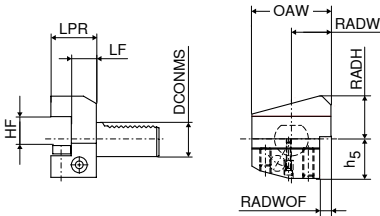
Left-hand

Right-hand

| Article no. |        |  | Article no. |        |  |
|-------------|--------|--|-------------|--------|--|
| EUR         |        |  | EUR         |        |  |
| 82 189 200  | 110,10 |  | 82 185 160  | 103,00 |  |
| 82 189 201  | 115,40 |  | 82 185 200  | 117,40 |  |
| 82 189 300  | 118,50 |  | 82 185 201  | 113,30 |  |
| 82 189 301  | 148,90 |  | 82 185 300  | 106,90 |  |
| 82 189 400  | 120,60 |  | 82 185 301  | 140,60 |  |
| 82 189 500  | 185,60 |  | 82 185 400  | 110,10 |  |
|             |        |  | 82 185 500  | 183,50 |  |

Radial tool holders, overhead, short

WNT \ Performance



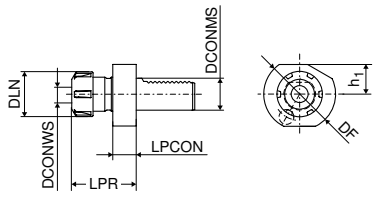
B3



| Right-hand  |        |  |  |  |  |  |  |  |
|-------------|--------|--|--|--|--|--|--|--|
| Article no. |        |  |  |  |  |  |  |  |
| EUR         |        |  |  |  |  |  |  |  |
| 82 193 160  | 109,10 |  |  |  |  |  |  |  |
| 82 193 200  | 117,40 |  |  |  |  |  |  |  |
| 82 193 201  | 135,30 |  |  |  |  |  |  |  |
| 82 193 250  | 134,20 |  |  |  |  |  |  |  |
| 82 193 300  | 111,10 |  |  |  |  |  |  |  |
| 82 193 301  | 148,90 |  |  |  |  |  |  |  |
| 82 193 400  | 112,20 |  |  |  |  |  |  |  |
| 82 193 500  | 185,60 |  |  |  |  |  |  |  |

ER Collet chucks

WNT \ Performance



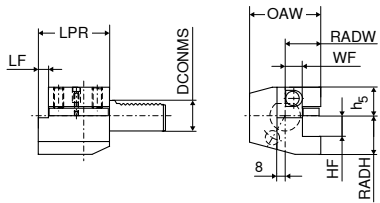
E4



| for collet |        |    |    |      |      |    |             | Article no. |        |
|------------|--------|----|----|------|------|----|-------------|-------------|--------|
| EUR        |        |    |    |      |      |    |             | EUR         |        |
| 16         | 1 - 10 | 40 | 28 | 18,0 | 45,5 | 14 | 426E (ER16) | 82 286 160  | 151,00 |
| 16         | 1 - 13 | 40 | 34 | 18,0 | 44,0 | 14 | 428E (ER20) | 82 286 161  | 148,90 |
| 20         | 1 - 16 | 50 | 42 | 23,0 | 57,0 | 18 | 430E (ER25) | 82 286 202  | 152,10 |
| 20         | 2 - 20 | 50 | 50 | 23,0 | 62,0 | 18 | 470E (ER32) | 82 286 203  | 156,20 |
| 30         | 1 - 16 | 68 | 42 | 28,0 | 57,0 | 22 | 430E (ER25) | 82 286 300  | 135,30 |
| 30         | 2 - 20 | 68 | 50 | 28,0 | 75,0 | 22 | 470E (ER32) | 82 286 301  | 138,40 |
| 40         | 1 - 16 | 83 | 42 | 32,5 | 63,0 | 22 | 430E (ER25) | 82 286 400  | 153,10 |
| 40         | 2 - 20 | 83 | 50 | 32,5 | 75,0 | 22 | 470E (ER32) | 82 286 401  | 153,10 |
| 40         | 3 - 26 | 83 | 63 | 32,5 | 75,0 | 22 | 472E (ER40) | 82 286 402  | 158,40 |
| 50         | 2 - 20 | 94 | 50 | 35,0 | 75,0 | 30 | 470E (ER32) | 82 286 500  | 232,80 |
| 50         | 3 - 26 | 94 | 63 | 35,0 | 63,0 | 30 | 472E (ER40) | 82 286 501  | 232,80 |

Axial tool holders

WNT \ Performance



C1

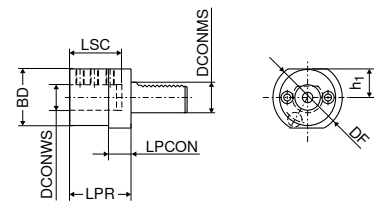


| Right-hand  |        |  |  |  |  |  |  |  |
|-------------|--------|--|--|--|--|--|--|--|
| Article no. |        |  |  |  |  |  |  |  |
| EUR         |        |  |  |  |  |  |  |  |
| 82 211 200  | 136,30 |  |  |  |  |  |  |  |
| 82 211 300  | 124,80 |  |  |  |  |  |  |  |
| 82 211 400  | 142,60 |  |  |  |  |  |  |  |
| 82 211 500  | 211,80 |  |  |  |  |  |  |  |

Boring bar holder

- ▲ for turning tools with cylindrical shank
- ▲ Coolant supply either through the tool or via the ball-shaped spray nozzle

WNT \ Performance



E2



| Article no. |    |    |    |      |     |    |    | Article no.              |        |
|-------------|----|----|----|------|-----|----|----|--------------------------|--------|
| EUR         |    |    |    |      |     |    |    | EUR                      |        |
| 16          | 6  | 40 | 32 | 18,0 | 44  | 13 | 34 | 82 268 160 <sup>1)</sup> | 125,90 |
| 16          | 8  | 40 | 32 | 18,0 | 44  | 13 | 34 | 82 268 161 <sup>1)</sup> | 106,90 |
| 16          | 10 | 40 | 32 | 18,0 | 44  | 13 | 34 | 82 268 162 <sup>1)</sup> | 106,90 |
| 16          | 12 | 40 | 40 | 18,0 | 44  | 13 | 34 | 82 268 163 <sup>1)</sup> | 106,90 |
| 16          | 16 | 40 | 40 | 18,0 | 44  | 13 | 34 | 82 268 164 <sup>1)</sup> | 106,90 |
| 20          | 8  | 50 | 40 | 23,0 | 50  | 18 | 41 | 82 268 200               | 112,20 |
| 20          | 10 | 50 | 40 | 23,0 | 50  | 18 | 41 | 82 268 201               | 112,20 |
| 20          | 12 | 50 | 40 | 23,0 | 50  | 18 | 41 | 82 268 202               | 112,20 |
| 20          | 16 | 50 | 40 | 23,0 | 50  | 18 | 41 | 82 268 203               | 112,20 |
| 20          | 20 | 50 | 50 | 23,0 | 50  | 18 | 41 | 82 268 204               | 112,20 |
| 20          | 25 | 50 | 50 | 23,0 | 60  | 18 | 51 | 82 268 205               | 112,20 |
| 25          | 8  | 58 | 40 | 25,0 | 50  | 18 | 41 | 82 268 250               | 128,90 |
| 25          | 10 | 58 | 40 | 25,0 | 50  | 18 | 41 | 82 268 251               | 128,90 |
| 25          | 12 | 58 | 40 | 25,0 | 50  | 18 | 41 | 82 268 252               | 128,90 |
| 25          | 16 | 58 | 40 | 25,0 | 50  | 18 | 41 | 82 268 253               | 128,90 |
| 25          | 20 | 58 | 58 | 25,0 | 50  | 18 | 41 | 82 268 254               | 128,90 |
| 25          | 25 | 58 | 58 | 25,0 | 60  | 18 | 51 | 82 268 255               | 128,90 |
| 30          | 8  | 68 | 55 | 28,0 | 60  | 22 | 51 | 82 268 300               | 110,10 |
| 30          | 10 | 68 | 55 | 28,0 | 60  | 22 | 51 | 82 268 301               | 110,10 |
| 30          | 12 | 68 | 55 | 28,0 | 60  | 22 | 51 | 82 268 302               | 110,10 |
| 30          | 16 | 68 | 55 | 28,0 | 60  | 22 | 51 | 82 268 303               | 110,10 |
| 30          | 20 | 68 | 55 | 28,0 | 60  | 22 | 51 | 82 268 304               | 110,10 |
| 30          | 25 | 68 | 55 | 28,0 | 60  | 22 | 51 | 82 268 305               | 110,10 |
| 30          | 32 | 68 | 68 | 28,0 | 75  | 22 | 61 | 82 268 306               | 110,10 |
| 40          | 8  | 83 | 55 | 32,5 | 75  | 22 | 61 | 82 268 400               | 112,20 |
| 40          | 10 | 83 | 55 | 32,5 | 75  | 22 | 61 | 82 268 401               | 112,20 |
| 40          | 12 | 83 | 55 | 32,5 | 75  | 22 | 61 | 82 268 402               | 112,20 |
| 40          | 16 | 83 | 55 | 32,5 | 75  | 22 | 61 | 82 268 403               | 112,20 |
| 40          | 20 | 83 | 55 | 32,5 | 75  | 22 | 61 | 82 268 404               | 112,20 |
| 40          | 25 | 83 | 55 | 32,5 | 75  | 22 | 61 | 82 268 405               | 112,20 |
| 40          | 32 | 83 | 83 | 32,5 | 75  | 22 | 61 | 82 268 406               | 112,20 |
| 40          | 40 | 83 | 83 | 32,5 | 90  | 22 | 76 | 82 268 407               | 112,20 |
| 50          | 12 | 98 | 68 | 35,0 | 90  | 30 | 76 | 82 268 500               | 160,40 |
| 50          | 16 | 98 | 68 | 35,0 | 90  | 30 | 76 | 82 268 501               | 160,40 |
| 50          | 20 | 98 | 68 | 35,0 | 90  | 30 | 76 | 82 268 502               | 160,40 |
| 50          | 25 | 98 | 68 | 35,0 | 90  | 30 | 76 | 82 268 503               | 153,10 |
| 50          | 32 | 98 | 68 | 35,0 | 90  | 30 | 76 | 82 268 504               | 153,10 |
| 50          | 40 | 98 | 98 | 35,0 | 90  | 30 | 76 | 82 268 505               | 153,10 |
| 50          | 50 | 98 | 98 | 35,0 | 100 | 30 | 86 | 82 268 506               | 153,10 |

1) Coolant supply through pipe joint

# Tool Supply 24/7



## Tool-O-Mat 840

up to 840 tools

**Access to Cutting Tools 24/7**  
with full control

**Itemised Reporting**

**Major cashflow benefits**  
you only pay for the tools you use

**Zero obsolete stock**  
you don't get left with old cutting tool technology

**Major purchasing cost reduction**  
only one consolidated invoice per month

**Simple stock maintenance by CERATIZIT**

Your local CERATIZIT service/sales engineer refills the machine with tools. We manage everything for you so you can concentrate on machining.

**Supervisor key function**  
the ability to control high value items

**Tried and tested system**  
over 350 machines in operation in the UK & Ireland



## Tool-O-Mat 60

up to 60 tools



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**SPECIALIST FOR INDEXABLE INSERT TOOLS  
FOR TURNING, MILLING AND GROOMING**

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EFFICIENT BORE PRODUCTION**

High-precision drilling, reaming, countersinking and boring is a matter of expertise: efficient tooling solutions for drilling and mechatronic tools are therefore part of the KOMET brand name.



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TOOL HOLDERS AND CLAMPING SOLUTIONS**

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