

**1** Indexable Drilling

**1**

Holemaking

**2** Indexable Boring

**3** Reaming

**4** Indexable Turning

Turning

**5** Parting and Grooving

**6** Multifunction

Milling

**7** Indexable Milling

**8** Solid Milling

**9** Material examples and  
article no. index

## List of contents

|   |       |
|---|-------|
| Symbol explanation  | 2     |
| Application tips – eccentric devices  | 3     |
| Toolfinder  | 4+5   |
| Product program   | 6–41  |
| Technical Information   |       |
| Cutting Data  | 42–55 |
| Maximum Offset Range  | 56–58 |
| Coding example, coolant supply  | 59    |
| Indexable insert drilling –<br>problems / possible causes / solutions           | 60    |
| KUB Centron – drilling instructions +<br>problems / possible causes / solutions | 61+62 |
| Application and Grade Comparison  | 63+64 |

## KOMET \ Performance

Premium quality tools for high performance.

The premium quality tools from the **KOMET Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

## Symbol explanation

### Shank



Cylindrical shank with clamping flat  
Guarantees optimum clamping of the tool and  
can be clamped in every standard adapter



Drill with ABS connection  
The ABS connection from Komet is a modular  
coupling system for rotating tools and stationary  
tools, and offers a number of advantages, such as  
improved force transmission

### Coolant supply version



Drill with thru coolant supply  
The tried-and-tested thru coolant system  
guarantees a reduction in heat at the cutting edges  
of the tool as well as improved chip removal

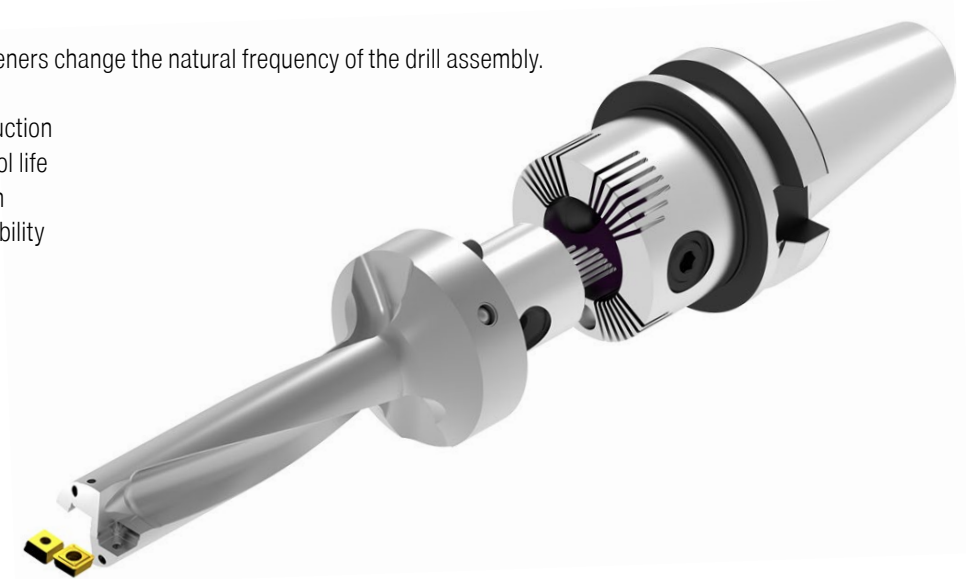


## Application tips – Torsional vibration dampeners and eccentric adjusting devices

The modular concept of the ABS connection, will allow you to easily and quickly optimize your drilling operation. Two example of this are the torsional dampening devices and the eccentric adjusting devices.

Torsional vibration dampeners change the natural frequency of the drill assembly. This results in:

- ▲ A significant noise reduction
- ▲ Considerably longer tool life
- ▲ Improved surface finish
- ▲ Improved process reliability



*Eccentric adapter with ABS connection*



Using an eccentric adapter, along with an ABS drill, you can easily vary and adjust the diameter of the hole by +/- 0.25mm (+/- .010").



Additional metric items are available in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric main catalog.



# Toolfinder

## KUB Pentron



- ▲ The all around tool for process-secure drilling under a wide variety of conditions
- ▲ Ideal for extreme machining situations

|  | Boring depth | Drilling through a cross hole | Stack plate drilling | Drilling on uneven surfaces | Boring | Spot drilling an edge | Spot drilling a convex surface | Spot drilling angled surfaces | Spot drilling a pointed contour | Chain drilling | Spot drilling through a center in the pre-op |
|--|--------------|-------------------------------|----------------------|-----------------------------|--------|-----------------------|--------------------------------|-------------------------------|---------------------------------|----------------|--|
|  |              |                               |                      |                             |        |                       |                                |                               |                                 |                |  |
|  | 4xD          | ●                             | ●                    | ○                           | -      | ●                     | ●                              | ●                             | ●                               | ○              | ●  |
|  | 5xD          | ●                             | ○                    | ○                           | -      | ●                     | ○                              | ●                             | ○                               | -              | ○  |
|  | 4xD          | ●                             | ●                    | ○                           | -      | ●                     | ●                              | ●                             | ●                               | ○              | ●  |
|  | 5xD          | ●                             | ○                    | ○                           | -      | ●                     | ○                              | ●                             | ○                               | -              | ○  |

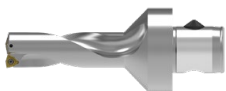
## KUB Quatron



- ▲ Provides perfect drilling quality even under enormous loads
- ▲ For stable machining situations

|  | 2xD | ● | ● | ● | ○ | ○ | ● | ● | ○ | ● | ● |
|--|-----|---|---|---|---|---|---|---|---|---|---|
|  | 3xD | ● | ● | ● | ○ | ○ | ● | ● | ○ | ● | ● |
|  | 2xD | ● | ● | ● | ○ | ○ | ● | ● | ○ | ● | ● |
|  | 3xD | ● | ● | ● | ○ | ○ | ● | ● | ○ | ● | ● |

## KUB Trigon



- ▲ Ideal for machining under unstable conditions
- ▲ Well-suited to machining on less powerful machines
- ▲ The first choice for creating dimensionally accurate holes

|  | 2xD   | ● | - | ● | ● | ○ | ● | ● | ○ | ● | ○ |
|--|-------|---|---|---|---|---|---|---|---|---|---|
|  | 3xD   | ● | - | ● | ● | ○ | ● | ● | ○ | ● | ○ |
|  | 4xD   | ○ | - | ○ | - | - | ○ | ○ | - | ○ | ○ |
|  | 2.5xD | ● | - | ● | ● | ○ | ● | ● | ○ | ● | ○ |
|  | 4xD   | ○ | - | ○ | - | - | ○ | ○ | - | ○ | ○ |

## MaxiDrill 900



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

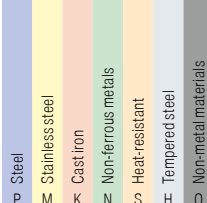












|  | 3xD | ● | ● | ● | ○ | ● | ● | ● | ● | ○ | ● |
|--|-----|---|---|---|---|---|---|---|---|---|---|
|  | 5xD | ● | ○ | ○ | ○ | ● | ● | ● | ● | ○ | ● |

## KUB Centron



- ▲ Cost-effective and process-secure drilling
- ▲ Hole depths up to 9xD in virtually all materials
- ▲ HSS or solid carbide centering tip for optimum positioning accuracy

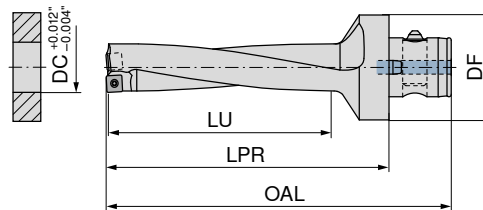
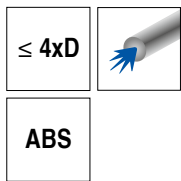
|  | 4xD | ○ | - | ● | - | - | ○ | - | - | ○ | ● |
|--|-----|---|---|---|---|---|---|---|---|---|---|
|  | 6xD | ○ | - | ● | - | - | ○ | - | - | ○ | ● |
|  | 9xD | ○ | - | ● | - | - | ○ | - | - | ○ | ● |

| Shank | Diameter<br>Ø | Page No.  | Insert type  | No. of cutting edges |    | Page No. |  |             |
|-------|---------------|---|--|----------------------|---|----------|--|-------------|
| ABS   | 0.562 – 1.752 | 6+7   |  |                      |   |          |  |             |
| ABS   | 0.562 – 1.752 | 8+9   |  SOGX   | 4                    |    | 14+15    |  |             |
| C     | 0.562 – 1.750 | 10+11   |  |                      |   |          |  |             |
| C     | 0.562 – 1.750 | 12+13   |  |                      |   |          |  |             |
| ABS   | 0.562 – 2.500 | 16+17   |  |                      |   |          |  |             |
| ABS   | 0.562 – 2.500 | 18+19   |  SOEX   | 4                    |    | 24+25    |  |             |
| C     | 0.562 – 1.750 | 20+21   |  |                      |   |          |  |             |
| C     | 0.562 – 1.750 | 22+23   |  |                      |   |          |  |             |
| ABS   | 0.562 – 3.250 | 26+27   |  |                      |   |          |  |             |
| ABS   | 0.562 – 3.250 | 28+29   |  WOEX | 3                    |  | 40+41    |  |             |
| ABS   | 0.562 – 1.750 | 30  |  |                      |   |          |  |             |
| C     | 0.562 – 3.250 | 31-33   |  |                      |   |          |  |             |
| C     | 0.562 – 1.750 | 34+35   |  |                      |   |          |  |             |
| C     | 0.480 – 2.483 |  |  |                      |   |          |  SONT | 2<br>4      |
| C     | 0.480 – 1.614 |  |  |                      |   |          |  |             |
| ABS   | 0.812 – 2.500 |   |  WOEX | 3                    |  | 40+41    |  |             |
| ABS   | 0.812 – 2.500 | 36-38   |  |                      |   |          | KUB Centron – centering tips   |             |
| ABS   | 0.812 – 2.500 |   |  |                      |   |          |       | Ø 5 – 10 mm |




# KUB Pentron – Indexable insert drill

**Scope of supply:**

Indexable Insert Drill incl. clamping screws



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 874 ... |  | 15 874 ... |       |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|--|------------|-------|
|                            |           |            |            |             |            |             |             |                     |            |  |            |       |
| KUB-P.4D.0562.R.04.ABS50-F | U44 51430 | 0.562      | 1.969      | 4.685       | 2.362      | 3.465       | SOGX 040204 | 0,38                |            |  |            | 14395 |
| KUB-P.4D.0593.R.04.ABS50-F | U44 51510 | 0.593      | 1.969      | 4.921       | 2.520      | 3.701       | SOGX 040204 | 0,38                |            |  |            | 15195 |
| KUB-P.4D.0625.R.04.ABS50-F | U44 51590 | 0.625      | 1.969      | 4.921       | 2.520      | 3.701       | SOGX 040204 | 0,38                |            |  |            | 15995 |
| KUB-P.4D.0656.R.05.ABS50-F | U44 51670 | 0.656      | 1.969      | 5.118       | 2.677      | 3.898       | SOGX 050204 | 0,62                |            |  |            | 16795 |
| KUB-P.4D.0687.R.05.ABS50   | U44 51750 | 0.689      | 1.969      | 5.276       | 2.835      | 4.055       | SOGX 050204 | 0,62                | 17595      |  |            | 17995 |
| KUB-P.4D.0703.R.05.ABS50-F | U44 51790 | 0.703      | 1.969      | 5.275       | 2.835      | 4.055       | SOGX 050204 | 0,62                |            |  |            | 17995 |
| KUB-P.4D.0750.R.06.ABS50-F | U44 51910 | 0.750      | 1.969      | 5.629       | 3.150      | 4.409       | SOGX 060206 | 1,01                |            |  |            | 19195 |
| KUB-P.4D.0765.R.06.ABS50-F | U44 51940 | 0.765      | 1.969      | 5.629       | 3.150      | 4.409       | SOGX 060206 | 1,01                |            |  |            | 19495 |
| KUB-P.4D.0781.R.06.ABS50-F | U44 51980 | 0.781      | 1.969      | 5.629       | 3.150      | 4.409       | SOGX 060206 | 1,01                |            |  |            | 19895 |
| KUB-P.4D.0812.R.07.ABS50-F | U44 52060 | 0.812      | 1.969      | 5.787       | 3.307      | 4.567       | SOGX 07T208 | 1,01                |            |  |            | 20695 |
| KUB-P.4D.0828.R.07.ABS50   | U44 52100 | 0.827      | 1.969      | 5.787       | 3.307      | 4.567       | SOGX 07T208 | 1,01                | 21095      |  |            | 22295 |
| KUB-P.4D.0875.R.07.ABS50-F | U44 52220 | 0.875      | 1.969      | 6.102       | 3.622      | 4.882       | SOGX 07T208 | 1,01                |            |  |            | 22295 |
| KUB-P.4D.0906.R.07.ABS50   | U44 52300 | 0.906      | 1.969      | 6.102       | 3.622      | 4.882       | SOGX 07T208 | 1,01                | 23095      |  |            | 22295 |
| KUB-P.4D.0937.R.08.ABS50-F | U44 52380 | 0.937      | 1.969      | 6.259       | 3.780      | 5.039       | SOGX 080308 | 1,28                |            |  |            | 23895 |
| KUB-P.4D.0985.R.08.ABS50   | U44 52500 | 0.984      | 1.969      | 6.457       | 3.937      | 5.236       | SOGX 080308 | 1,28                | 25095      |  |            | 25495 |
| KUB-P.4D.1000.R.08.ABS50-F | U44 52540 | 1.000      | 1.969      | 6.614       | 4.094      | 5.394       | SOGX 080308 | 1,28                |            |  |            | 25495 |
| KUB-P.4D.1031.R.09.ABS50-F | U44 52620 | 1.031      | 1.969      | 6.811       | 4.252      | 5.591       | SOGX 09T308 | 2,25                |            |  |            | 26295 |
| KUB-P.4D.1062.R.09.ABS50   | U44 52700 | 1.063      | 1.969      | 6.811       | 4.252      | 5.591       | SOGX 09T308 | 2,25                | 27095      |  |            | 28295 |
| KUB-P.4D.1109.R.09.ABS50-F | U44 52820 | 1.109      | 1.969      | 7.165       | 4.567      | 5.945       | SOGX 09T308 | 2,25                |            |  |            | 28695 |
| KUB-P.4D.1125.R.09.ABS50-F | U44 52860 | 1.125      | 1.969      | 7.165       | 4.567      | 5.945       | SOGX 09T308 | 2,25                |            |  |            | 28695 |
| KUB-P.4D.1156.R.09.ABS50-F | U44 52940 | 1.156      | 1.969      | 7.322       | 4.724      | 6.102       | SOGX 09T308 | 2,25                |            |  |            | 29495 |
| KUB-P.4D.1187.R.10.ABS63-F | U44 63020 | 1.187      | 2.480      | 7.913       | 4.882      | 6.417       | SOGX 100408 | 2,8                 |            |  |            | 30196 |
| KUB-P.4D.1218.R.10.ABS63-F | U44 63090 | 1.218      | 2.480      | 7.913       | 4.882      | 6.417       | SOGX 100408 | 2,8                 |            |  |            | 30996 |
| KUB-P.4D.1250.R.10.ABS63-F | U44 63180 | 1.250      | 2.480      | 8.071       | 5.039      | 6.575       | SOGX 100408 | 2,8                 |            |  |            | 31896 |
| KUB-P.4D.1281.R.10.ABS63   | U44 63250 | 1.280      | 2.480      | 8.268       | 5.197      | 6.772       | SOGX 100408 | 2,8                 | 32596      |  |            | 31896 |
| KUB-P.4D.1312.R.11.ABS63-F | U44 63330 | 1.312      | 2.480      | 8.425       | 5.354      | 6.929       | SOGX 110408 | 2,8                 |            |  |            | 33396 |
| KUB-P.4D.1328.R.11.ABS63-F | U44 63370 | 1.328      | 2.480      | 8.425       | 5.354      | 6.929       | SOGX 110408 | 2,8                 |            |  |            | 33796 |
| KUB-P.4D.1375.R.11.ABS63-F | U44 63490 | 1.375      | 2.480      | 8.622       | 5.512      | 7.126       | SOGX 110408 | 2,8                 |            |  |            | 34996 |
| KUB-P.4D.1437.R.11.ABS63   | U44 63650 | 1.437      | 2.480      | 8.976       | 5.827      | 7.480       | SOGX 110408 | 2,8                 | 36596      |  |            | 34996 |
| KUB-P.4D.1469.R.12.ABS63-F | U44 63730 | 1.469      | 2.480      | 9.134       | 5.984      | 7.638       | SOGX 120408 | 6,25                |            |  |            | 37396 |
| KUB-P.4D.1500.R.12.ABS63-F | U44 63810 | 1.500      | 2.480      | 9.331       | 6.142      | 7.835       | SOGX 120408 | 6,25                |            |  |            | 38196 |
| KUB-P.4D.1562.R.12.ABS63-F | U44 63970 | 1.562      | 2.480      | 9.488       | 6.299      | 7.992       | SOGX 120408 | 6,25                |            |  |            | 39796 |
| KUB-P.4D.1625.R.12.ABS63-F | U44 64130 | 1.625      | 2.480      | 9.842       | 6.614      | 8.346       | SOGX 120408 | 6,25                |            |  |            | 41396 |
| KUB-P.4D.1656.R.13.ABS63-F | U44 64210 | 1.656      | 2.480      | 10.039      | 6.772      | 8.543       | SOGX 130508 | 6,25                |            |  |            | 42196 |
| KUB-P.4D.1687.R.13.ABS63-F | U44 64290 | 1.687      | 2.480      | 10.039      | 6.772      | 8.543       | SOGX 130508 | 6,25                |            |  |            | 42896 |
| KUB-P.4D.1750.R.13.ABS63   | U44 64450 | 1.752      | 2.480      | 10.394      | 7.087      | 8.898       | SOGX 130508 | 6,25                | 44596      |  |            | 42896 |

|                    |          | <br>Key | <br>Screwdriver | <br>Clamping screw |
|--------------------|----------|--|--|---|
|                    |          | 80 950 ...   | 80 950 ...   | 10 950 ...  |
| <b>Spare parts</b> |          |  |  |   |
| <b>DC</b>          |          |  |  |   |
| 0.562 - 0.625      | T05 - IP | <b>057</b>   |  | M1,8x3,8 - 05IP <b>10100</b>  |
| 0.656 - 0.703      |          |  | T06 - IP <b>123</b>  | M2,0x4,3 - 06IP <b>10000</b>  |
| 0.750 - 0.906      |          |  | T06 - IP <b>123</b>  | M2,2x5,5 - 06IP <b>10700</b>  |
| 0.937 - 1.000      |          |  | T08 - IP <b>125</b>  | M2,5x6,3 - 08IP <b>10800</b>  |
| 1.031 - 1.156      |          |  | T08 - IP <b>125</b>  | M3,0x7,6 - 08IP <b>10200</b>  |
| 1.187 - 1.437      |          |  | T15 - IP <b>128</b>  | M3,5x7,5 - 15IP <b>10300</b>  |
| 1.469 - 1.752      |          |  | T20 - IP <b>129</b>  | M4,5x10 - 20IP <b>10400</b>   |



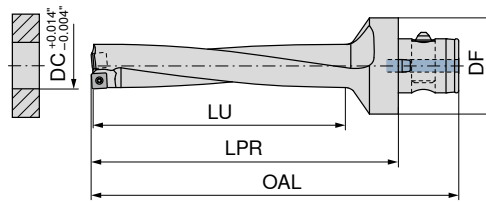
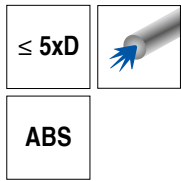
Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog






# KUB Pentron – Indexable insert drill

**Scope of supply:**

Indexable Insert Drill incl. clamping screws



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 875 ... | 15 875 ... |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|------------|
|                            |           |            |            |             |            |             |             |                     |            |            |
| KUB-P.5D.0562.R.04.ABS50-F | U45 51430 | 0.562      | 1.969      | 5.275       | 2.953      | 4.055       | SOGX 040204 | 0,38                |            | 14395      |
| KUB-P.5D.0593.R.04.ABS50-F | U45 51510 | 0.593      | 1.969      | 5.551       | 3.150      | 4.331       | SOGX 040204 | 0,38                |            | 15195      |
| KUB-P.5D.0625.R.04.ABS50-F | U45 51590 | 0.625      | 1.969      | 5.551       | 3.150      | 4.331       | SOGX 040204 | 0,38                |            | 15995      |
| KUB-P.5D.0656.R.05.ABS50-F | U45 51670 | 0.656      | 1.969      | 5.787       | 3.346      | 4.567       | SOGX 050204 | 0,62                |            | 16795      |
| KUB-P.5D.0687.R.05.ABS50   | U45 51750 | 0.689      | 1.969      | 5.984       | 3.543      | 4.764       | SOGX 050204 | 0,62                | 17595      |            |
| KUB-P.5D.0703.R.05.ABS50-F | U45 51790 | 0.703      | 1.969      | 5.984       | 3.543      | 4.764       | SOGX 050204 | 0,62                |            | 17995      |
| KUB-P.5D.0750.R.06.ABS50-F | U45 51910 | 0.750      | 1.969      | 6.417       | 3.937      | 5.197       | SOGX 060206 | 1,01                |            | 19195      |
| KUB-P.5D.0765.R.06.ABS50-F | U45 51940 | 0.765      | 1.969      | 6.417       | 3.937      | 5.197       | SOGX 060206 | 1,01                |            | 19495      |
| KUB-P.5D.0781.R.06.ABS50-F | U45 51980 | 0.781      | 1.969      | 6.417       | 3.937      | 5.197       | SOGX 060206 | 1,01                |            | 19895      |
| KUB-P.5D.0812.R.07.ABS50-F | U45 52060 | 0.812      | 1.969      | 6.614       | 4.134      | 5.394       | SOGX 07T208 | 1,01                |            | 20695      |
| KUB-P.5D.0828.R.07.ABS50   | U45 52100 | 0.827      | 1.969      | 6.614       | 4.134      | 5.394       | SOGX 07T208 | 1,01                | 21095      |            |
| KUB-P.5D.0875.R.07.ABS50-F | U45 52220 | 0.875      | 1.969      | 7.007       | 4.528      | 5.787       | SOGX 07T208 | 1,01                |            | 22295      |
| KUB-P.5D.0906.R.07.ABS50   | U45 52300 | 0.906      | 1.969      | 7.008       | 4.528      | 5.787       | SOGX 07T208 | 1,01                | 23095      |            |
| KUB-P.5D.0937.R.08.ABS50-F | U45 52380 | 0.937      | 1.969      | 7.204       | 4.724      | 5.984       | SOGX 080308 | 1,28                |            | 23895      |
| KUB-P.5D.0985.R.08.ABS50   | U45 52500 | 0.984      | 1.969      | 7.441       | 4.921      | 6.220       | SOGX 080308 | 1,28                | 25095      |            |
| KUB-P.5D.1000.R.08.ABS50-F | U45 52540 | 1.000      | 1.969      | 7.637       | 5.118      | 6.417       | SOGX 080308 | 1,28                |            | 25495      |
| KUB-P.5D.1031.R.09.ABS50-F | U45 52620 | 1.031      | 1.969      | 7.874       | 5.315      | 6.654       | SOGX 09T308 | 2,25                |            | 26295      |
| KUB-P.5D.1062.R.09.ABS50   | U45 52700 | 1.063      | 1.969      | 7.874       | 5.315      | 6.654       | SOGX 09T308 | 2,25                | 27095      |            |
| KUB-P.5D.1109.R.09.ABS50-F | U45 52820 | 1.109      | 1.969      | 8.307       | 5.709      | 7.087       | SOGX 09T308 | 2,25                |            | 28295      |
| KUB-P.5D.1125.R.09.ABS50-F | U45 52860 | 1.125      | 1.969      | 8.307       | 5.709      | 7.087       | SOGX 09T308 | 2,25                |            | 28695      |
| KUB-P.5D.1156.R.09.ABS50-F | U45 52940 | 1.156      | 1.969      | 8.503       | 5.906      | 7.283       | SOGX 09T308 | 2,25                |            | 29495      |
| KUB-P.5D.1187.R.10.ABS63-F | U45 63020 | 1.187      | 2.480      | 9.134       | 6.102      | 7.638       | SOGX 100408 | 2,8                 |            | 30196      |
| KUB-P.5D.1218.R.10.ABS63-F | U45 63090 | 1.218      | 2.480      | 9.134       | 6.102      | 7.638       | SOGX 100408 | 2,8                 |            | 30996      |
| KUB-P.5D.1250.R.10.ABS63-F | U45 63180 | 1.250      | 2.480      | 9.331       | 6.299      | 7.835       | SOGX 100408 | 2,8                 |            | 31896      |
| KUB-P.5D.1281.R.10.ABS63   | U45 63250 | 1.280      | 2.480      | 9.567       | 6.496      | 8.071       | SOGX 100408 | 2,8                 | 32596      |            |
| KUB-P.5D.1312.R.11.ABS63-F | U45 63330 | 1.312      | 2.480      | 9.764       | 6.693      | 8.268       | SOGX 110408 | 2,8                 |            | 33396      |
| KUB-P.5D.1328.R.11.ABS63-F | U45 63370 | 1.328      | 2.480      | 9.764       | 6.693      | 8.268       | SOGX 110408 | 2,8                 |            | 33796      |
| KUB-P.5D.1375.R.11.ABS63-F | U45 63490 | 1.375      | 2.480      | 10.000      | 6.890      | 8.504       | SOGX 110408 | 2,8                 |            | 34996      |
| KUB-P.5D.1437.R.11.ABS63   | U45 63650 | 1.437      | 2.480      | 10.433      | 7.283      | 8.937       | SOGX 110408 | 2,8                 | 36596      |            |
| KUB-P.5D.1469.R.12.ABS63-F | U45 63730 | 1.469      | 2.480      | 10.630      | 7.480      | 9.134       | SOGX 120408 | 6,25                |            | 37396      |
| KUB-P.5D.1500.R.12.ABS63-F | U45 63810 | 1.500      | 2.480      | 10.866      | 7.677      | 9.370       | SOGX 120408 | 6,25                |            | 38196      |
| KUB-P.5D.1562.R.12.ABS63-F | U45 63970 | 1.562      | 2.480      | 11.063      | 7.874      | 9.567       | SOGX 120408 | 6,25                |            | 39796      |
| KUB-P.5D.1625.R.12.ABS63-F | U45 64130 | 1.625      | 2.480      | 11.496      | 8.268      | 10.000      | SOGX 120408 | 6,25                |            | 41396      |
| KUB-P.5D.1656.R.13.ABS63-F | U45 64210 | 1.656      | 2.480      | 11.732      | 8.465      | 10.236      | SOGX 130508 | 6,25                |            | 42196      |
| KUB-P.5D.1687.R.13.ABS63-F | U45 64290 | 1.687      | 2.480      | 11.732      | 8.465      | 10.236      | SOGX 130508 | 6,25                |            | 42896      |
| KUB-P.5D.1750.R.13.ABS63   | U45 64450 | 1.752      | 2.480      | 12.165      | 8.858      | 10.669      | SOGX 130508 | 6,25                | 44596      |            |

|                    |          | <br>Key | <br>Screwdriver | <br>Clamping screw |
|--------------------|----------|---|---|--|
|                    |          | 80 950 ...  | 80 950 ...  | 10 950 ...   |
| <b>Spare parts</b> |          |   |   |  |
| <b>DC</b>          |          |   |   |  |
| 0.562 - 0.625      | T05 - IP | 057   |   | M1,8x3,8 - 05IP 10100  |
| 0.656 - 0.703      |          |   | T06 - IP 123  | M2,0x4,3 - 06IP 10000  |
| 0.750 - 0.906      |          |   | T06 - IP 123  | M2,2x5,5 - 06IP 10700  |
| 0.984 - 1.000      |          |   | T08 - IP 125  | M2,5x6,3 - 08IP 10800  |
| 1.031 - 1.156      |          |   | T08 - IP 125  | M3,0x7,6 - 08IP 10200  |
| 1.187 - 1.437      |          |   | T15 - IP 128  | M3,5x7,5 - 15IP 10300  |
| 1.469 - 1.752      |          |   | T20 - IP 129  | M4,5x10 - 20IP 10400   |

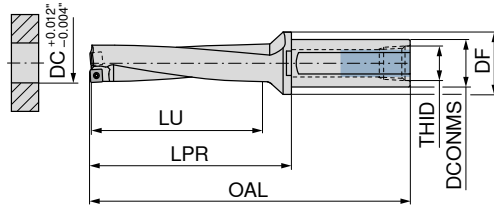
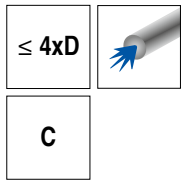


Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Pentron – Indexable insert drill

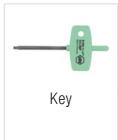
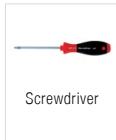
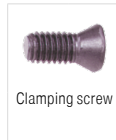
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 874 ...

| Designation                 | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-----------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-P.4D.0562.R.04.C0750-EF | U44 81430 | 0.562      | 0.750          | 1.180      | 5.163       | 2.362      | 2.913       | 1/8" NPT     | SOGX 040204 | 0,38                | 14309 |
| KUB-P.4D.0593.R.04.C0750-EF | U44 81510 | 0.593      | 0.750          | 1.180      | 5.400       | 2.520      | 3.150       | 1/8" NPT     | SOGX 040204 | 0,38                | 15109 |
| KUB-P.4D.0625.R.04.C0750-EF | U44 81590 | 0.625      | 0.750          | 1.180      | 5.400       | 2.520      | 3.150       | 1/8" NPT     | SOGX 040204 | 0,38                | 15909 |
| KUB-P.4D.0656.R.05.C0750-EF | U44 81670 | 0.656      | 0.750          | 1.180      | 5.596       | 2.677      | 3.346       | 1/8" NPT     | SOGX 050204 | 0,62                | 16709 |
| KUB-P.4D.0687.R.05.C1000-E  | U44 81750 | 0.687      | 1.000          | 1.180      | 6.754       | 2.835      | 3.504       | 1/8" NPT     | SOGX 050204 | 0,62                | 17500 |
| KUB-P.4D.0703.R.05.C1000-EF | U44 81790 | 0.703      | 1.000          | 1.180      | 6.754       | 2.835      | 3.504       | 1/8" NPT     | SOGX 050204 | 0,62                | 17900 |
| KUB-P.4D.0750.R.06.C1000-EF | U44 81910 | 0.750      | 1.000          | 1.180      | 7.108       | 3.150      | 3.858       | 1/8" NPT     | SOGX 060206 | 1,01                | 19100 |
| KUB-P.4D.0765.R.06.C1000-EF | U44 81940 | 0.765      | 1.000          | 1.180      | 7.108       | 3.150      | 3.858       | 1/8" NPT     | SOGX 060206 | 1,01                | 19400 |
| KUB-P.4D.0781.R.06.C1000-EF | U44 81980 | 0.781      | 1.000          | 1.180      | 7.108       | 3.150      | 3.858       | 1/8" NPT     | SOGX 060206 | 1,01                | 19800 |
| KUB-P.4D.0812.R.07.C1000-EF | U44 82060 | 0.812      | 1.000          | 1.180      | 7.305       | 3.307      | 4.055       | 1/8" NPT     | SOGX 07T208 | 1,01                | 20600 |
| KUB-P.4D.0828.R.07.C1000-E  | U44 82100 | 0.828      | 1.000          | 1.180      | 7.305       | 3.307      | 4.055       | 1/8" NPT     | SOGX 07T208 | 1,01                | 21000 |
| KUB-P.4D.0843.R.07.C1000-EF | U44 82140 | 0.843      | 1.000          | 1.180      | 7.974       | 3.465      | 4.724       | 1/8" NPT     | SOGX 07T208 | 1,01                | 21400 |
| KUB-P.4D.0875.R.07.C1000-EF | U44 82220 | 0.875      | 1.000          | 1.180      | 7.659       | 3.622      | 4.409       | 1/8" NPT     | SOGX 07T208 | 1,01                | 22200 |
| KUB-P.4D.0906.R.07.C1000-E  | U44 82300 | 0.906      | 1.000          | 1.180      | 7.659       | 3.622      | 4.409       | 1/8" NPT     | SOGX 07T208 | 1,01                | 23000 |
| KUB-P.4D.0937.R.08.C1250-EF | U44 82380 | 0.937      | 1.250          | 1.540      | 7.817       | 3.780      | 4.567       | 1/8" NPT     | SOGX 080308 | 1,28                | 23801 |
| KUB-P.4D.0985.R.08.C1250-E  | U44 82500 | 0.985      | 1.250          | 1.540      | 8.014       | 3.937      | 4.764       | 1/8" NPT     | SOGX 080308 | 1,28                | 25001 |
| KUB-P.4D.1000.R.08.C1250-EF | U44 82540 | 1.000      | 1.250          | 1.540      | 8.171       | 4.094      | 4.921       | 1/8" NPT     | SOGX 080308 | 1,28                | 25401 |
| KUB-P.4D.1031.R.09.C1250-EF | U44 82620 | 1.031      | 1.250          | 1.540      | 8.368       | 4.252      | 5.118       | 1/4" NPT     | SOGX 09T308 | 2,25                | 26201 |
| KUB-P.4D.1062.R.09.C1250-E  | U44 82700 | 1.062      | 1.250          | 1.540      | 8.368       | 4.252      | 5.118       | 1/4" NPT     | SOGX 09T308 | 2,25                | 27001 |
| KUB-P.4D.1109.R.09.C1250-EF | U44 82820 | 1.109      | 1.250          | 1.540      | 8.722       | 4.567      | 5.472       | 1/4" NPT     | SOGX 09T308 | 2,25                | 28201 |
| KUB-P.4D.1125.R.09.C1250-E  | U44 82860 | 1.125      | 1.250          | 1.540      | 8.722       | 4.567      | 5.472       | 1/4" NPT     | SOGX 09T308 | 2,25                | 28601 |
| KUB-P.4D.1156.R.09.C1250-EF | U44 82940 | 1.156      | 1.250          | 1.540      | 8.880       | 4.724      | 5.630       | 1/4" NPT     | SOGX 09T308 | 2,25                | 29401 |
| KUB-P.4D.1187.R.10.C1500-EF | U44 83020 | 1.187      | 1.500          | 1.970      | 9.577       | 4.882      | 5.827       | 1/4" NPT     | SOGX 100408 | 2,8                 | 30102 |
| KUB-P.4D.1218.R.10.C1500-EF | U44 83090 | 1.218      | 1.500          | 1.970      | 9.577       | 4.882      | 5.827       | 1/4" NPT     | SOGX 100408 | 2,8                 | 30902 |
| KUB-P.4D.1250.R.10.C1500-EF | U44 83180 | 1.250      | 1.500          | 1.970      | 9.734       | 5.039      | 5.984       | 1/4" NPT     | SOGX 100408 | 2,8                 | 31802 |
| KUB-P.4D.1281.R.10.C1500-E  | U44 83250 | 1.281      | 1.500          | 1.970      | 9.931       | 5.197      | 6.181       | 1/4" NPT     | SOGX 100408 | 2,8                 | 32502 |
| KUB-P.4D.1312.R.11.C1500-EF | U44 83330 | 1.312      | 1.500          | 1.970      | 10.089      | 5.354      | 6.339       | 1/4" NPT     | SOGX 110408 | 2,8                 | 33302 |
| KUB-P.4D.1328.R.11.C1500-EF | U44 83370 | 1.328      | 1.500          | 1.970      | 10.089      | 5.354      | 6.339       | 1/4" NPT     | SOGX 110408 | 2,8                 | 33702 |
| KUB-P.4D.1375.R.11.C1500-EF | U44 83490 | 1.375      | 1.500          | 1.970      | 10.285      | 5.512      | 6.535       | 1/4" NPT     | SOGX 110408 | 2,8                 | 34902 |
| KUB-P.4D.1437.R.11.C1500-E  | U44 83650 | 1.437      | 1.500          | 1.970      | 10.640      | 5.827      | 6.890       | 1/4" NPT     | SOGX 110408 | 2,8                 | 36502 |
| KUB-P.4D.1469.R.12.C1500-EF | U44 83730 | 1.469      | 1.500          | 1.970      | 10.797      | 5.984      | 7.047       | 1/4" NPT     | SOGX 120408 | 6,25                | 37302 |
| KUB-P.4D.1500.R.12.C1500-EF | U44 83810 | 1.500      | 1.500          | 1.970      | 10.994      | 6.142      | 7.244       | 1/4" NPT     | SOGX 120408 | 6,25                | 38102 |
| KUB-P.4D.1531.R.12.C1500-EF | U44 83890 | 1.531      | 1.500          | 1.970      | 10.994      | 6.142      | 7.244       | 1/4" NPT     | SOGX 120408 | 6,25                | 38902 |
| KUB-P.4D.1562.R.12.C1500-EF | U44 83970 | 1.562      | 1.500          | 1.970      | 11.152      | 6.299      | 7.402       | 1/4" NPT     | SOGX 120408 | 6,25                | 39702 |
| KUB-P.4D.1625.R.12.C1500-EF | U44 84130 | 1.625      | 1.500          | 1.970      | 11.506      | 6.614      | 7.756       | 1/4" NPT     | SOGX 120408 | 6,25                | 41302 |
| KUB-P.4D.1656.R.13.C1500-EF | U44 84210 | 1.656      | 1.500          | 1.970      | 11.703      | 6.772      | 7.953       | 1/4" NPT     | SOGX 130508 | 6,25                | 42102 |
| KUB-P.4D.1687.R.13.C1500-EF | U44 84290 | 1.687      | 1.500          | 1.970      | 11.703      | 6.772      | 7.953       | 1/4" NPT     | SOGX 130508 | 6,25                | 42802 |
| KUB-P.4D.1750.R.13.C1500-EF | U44 84450 | 1.750      | 1.500          | 1.970      | 12.057      | 7.087      | 8.307       | 1/4" NPT     | SOGX 130508 | 6,25                | 44502 |

|                    |          | <br>Key | <br>Screwdriver | <br>Clamping screw |
|--------------------|----------|---|---|--|
|                    |          | 80 950 ...  | 80 950 ...  | 10 950 ...   |
| <b>Spare parts</b> |          |   |   |  |
| <b>DC</b>          |          |   |   |  |
| 0.562 - 0.625      | T05 - IP | <b>057</b>  |   | M1,8x3,8 - 05IP <b>10100</b>   |
| 0.656 - 0.703      |          |   | T06 - IP <b>123</b>   | M2,0x4,3 - 06IP <b>10000</b>   |
| 0.750 - 0.906      |          |   | T06 - IP <b>123</b>   | M2,2x5,5 - 06IP <b>10700</b>   |
| 0.937 - 1.000      |          |   | T08 - IP <b>125</b>   | M2,5x6,3 - 08IP <b>10800</b>   |
| 1.031 - 1.156      |          |   | T08 - IP <b>125</b>   | M3,0x7,6 - 08IP <b>10200</b>   |
| 1.187 - 1.437      |          |   | T15 - IP <b>128</b>   | M3,5x7,5 - 15IP <b>10300</b>   |
| 1.469 - 1.750      |          |   | T20 - IP <b>129</b>   | M4,5x10 - 20IP <b>10400</b>  |

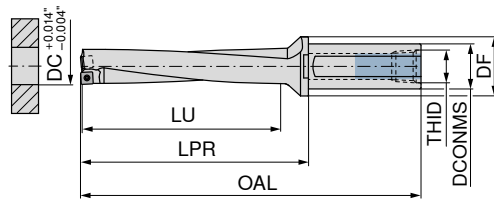
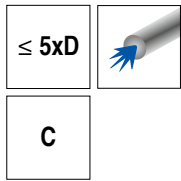


Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Pentron – Indexable insert drill

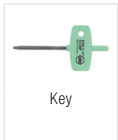
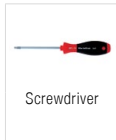
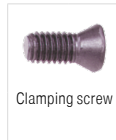
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 875 ...

| Designation                 | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-----------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-P.5D.0562.R.04.C0750-EF | U45 81430 | 0.562      | 0.750          | 1.180      | 5.754       | 2.953      | 3.504       | 1/8" NPT     | SOGX 040204 | 0,38                | 14309 |
| KUB-P.5D.0593.R.04.C0750-EF | U45 81510 | 0.593      | 0.750          | 1.180      | 6.030       | 3.150      | 3.780       | 1/8" NPT     | SOGX 040204 | 0,38                | 15109 |
| KUB-P.5D.0625.R.04.C0750-EF | U45 81590 | 0.625      | 0.750          | 1.180      | 6.030       | 3.150      | 3.780       | 1/8" NPT     | SOGX 040204 | 0,38                | 15909 |
| KUB-P.5D.0656.R.05.C0750-EF | U45 81670 | 0.656      | 0.750          | 1.180      | 6.266       | 3.346      | 4.016       | 1/8" NPT     | SOGX 050204 | 0,62                | 16709 |
| KUB-P.5D.0687.R.05.C1000-E  | U45 81750 | 0.687      | 1.000          | 1.180      | 7.463       | 3.543      | 4.213       | 1/8" NPT     | SOGX 050204 | 0,62                | 17500 |
| KUB-P.5D.0703.R.05.C1000-EF | U45 81790 | 0.703      | 1.000          | 1.180      | 7.463       | 3.543      | 4.213       | 1/8" NPT     | SOGX 050204 | 0,62                | 17900 |
| KUB-P.5D.0750.R.06.C1000-EF | U45 81910 | 0.750      | 1.000          | 1.180      | 7.896       | 3.937      | 4.646       | 1/8" NPT     | SOGX 060206 | 1,01                | 19100 |
| KUB-P.5D.0765.R.06.C1000-EF | U45 81940 | 0.765      | 1.000          | 1.180      | 7.896       | 3.937      | 4.646       | 1/8" NPT     | SOGX 060206 | 1,01                | 19400 |
| KUB-P.5D.0781.R.06.C1000-EF | U45 81980 | 0.781      | 1.000          | 1.180      | 7.896       | 3.937      | 4.646       | 1/8" NPT     | SOGX 060206 | 1,01                | 19800 |
| KUB-P.5D.0812.R.07.C1000-EF | U45 82060 | 0.812      | 1.000          | 1.180      | 8.132       | 4.134      | 4.882       | 1/8" NPT     | SOGX 07T208 | 1,01                | 20600 |
| KUB-P.5D.0828.R.07.C1000-E  | U45 82100 | 0.828      | 1.000          | 1.180      | 8.132       | 4.134      | 4.882       | 1/8" NPT     | SOGX 07T208 | 1,01                | 21000 |
| KUB-P.5D.0843.R.07.C1000-EF | U45 82140 | 0.843      | 1.000          | 1.180      | 8.329       | 4.331      | 5.079       | 1/8" NPT     | SOGX 07T208 | 1,01                | 21400 |
| KUB-P.5D.0875.R.07.C1000-EF | U45 82220 | 0.875      | 1.000          | 1.180      | 8.565       | 4.528      | 5.315       | 1/8" NPT     | SOGX 07T208 | 1,01                | 22200 |
| KUB-P.5D.0906.R.07.C1000-E  | U45 82300 | 0.906      | 1.000          | 1.180      | 8.565       | 4.528      | 5.315       | 1/8" NPT     | SOGX 07T208 | 1,01                | 23000 |
| KUB-P.5D.0937.R.08.C1250-EF | U45 82380 | 0.937      | 1.250          | 1.540      | 8.762       | 4.724      | 5.512       | 1/8" NPT     | SOGX 080308 | 1,28                | 23801 |
| KUB-P.5D.0985.R.08.C1250-E  | U45 82500 | 0.985      | 1.250          | 1.540      | 8.998       | 4.921      | 5.748       | 1/8" NPT     | SOGX 080308 | 1,28                | 25001 |
| KUB-P.5D.1000.R.08.C1250-EF | U45 82540 | 1.000      | 1.250          | 1.540      | 9.195       | 5.118      | 5.945       | 1/8" NPT     | SOGX 080308 | 1,28                | 25401 |
| KUB-P.5D.1031.R.09.C1250-EF | U45 82620 | 1.031      | 1.250          | 1.540      | 9.431       | 5.315      | 6.181       | 1/4" NPT     | SOGX 09T308 | 2,25                | 26201 |
| KUB-P.5D.1062.R.09.C1250-E  | U45 82700 | 1.062      | 1.250          | 1.540      | 9.431       | 5.315      | 6.181       | 1/4" NPT     | SOGX 09T308 | 2,25                | 27001 |
| KUB-P.5D.1109.R.09.C1250-EF | U45 82820 | 1.109      | 1.250          | 1.540      | 9.864       | 5.709      | 6.614       | 1/4" NPT     | SOGX 09T308 | 2,25                | 28201 |
| KUB-P.5D.1125.R.09.C1250-EF | U45 82860 | 1.125      | 1.250          | 1.540      | 9.864       | 5.709      | 6.614       | 1/4" NPT     | SOGX 09T308 | 2,25                | 28601 |
| KUB-P.5D.1156.R.09.C1250-EF | U45 82940 | 1.156      | 1.250          | 1.540      | 10.061      | 5.906      | 6.811       | 1/4" NPT     | SOGX 09T308 | 2,25                | 29401 |
| KUB-P.5D.1187.R.10.C1500-EF | U45 83020 | 1.187      | 1.500          | 1.970      | 10.797      | 6.102      | 7.047       | 1/4" NPT     | SOGX 100408 | 2,8                 | 30102 |
| KUB-P.5D.1218.R.10.C1500-EF | U45 83090 | 1.218      | 1.500          | 1.970      | 10.797      | 6.102      | 7.047       | 1/4" NPT     | SOGX 100408 | 2,8                 | 30902 |
| KUB-P.5D.1250.R.10.C1500-EF | U45 83180 | 1.250      | 1.500          | 1.970      | 10.994      | 6.299      | 7.244       | 1/4" NPT     | SOGX 100408 | 2,8                 | 31802 |
| KUB-P.5D.1281.R.10.C1500-E  | U45 83250 | 1.281      | 1.500          | 1.970      | 11.230      | 6.496      | 7.480       | 1/4" NPT     | SOGX 100408 | 2,8                 | 32502 |
| KUB-P.5D.1312.R.11.C1500-EF | U45 83330 | 1.312      | 1.500          | 1.970      | 11.427      | 6.693      | 7.677       | 1/4" NPT     | SOGX 110408 | 2,8                 | 33302 |
| KUB-P.5D.1328.R.11.C1500-EF | U45 83370 | 1.328      | 1.500          | 1.970      | 11.427      | 6.693      | 7.677       | 1/4" NPT     | SOGX 110408 | 2,8                 | 33702 |
| KUB-P.5D.1375.R.11.C1500-EF | U45 83490 | 1.375      | 1.500          | 1.970      | 11.663      | 6.890      | 7.913       | 1/4" NPT     | SOGX 110408 | 2,8                 | 34902 |
| KUB-P.5D.1437.R.11.C1500-E  | U45 83650 | 1.437      | 1.500          | 1.970      | 12.096      | 7.283      | 8.346       | 1/4" NPT     | SOGX 110408 | 6,25                | 36502 |
| KUB-P.5D.1469.R.12.C1500-EF | U45 83730 | 1.469      | 1.500          | 1.970      | 12.293      | 7.480      | 8.543       | 1/4" NPT     | SOGX 120408 | 6,25                | 37302 |
| KUB-P.5D.1500.R.12.C1500-EF | U45 83810 | 1.500      | 1.500          | 1.970      | 12.530      | 7.677      | 8.780       | 1/4" NPT     | SOGX 120408 | 6,25                | 38102 |
| KUB-P.5D.1531.R.12.C1500-EF | U45 83890 | 1.531      | 1.500          | 1.970      | 12.530      | 7.677      | 8.780       | 1/4" NPT     | SOGX 120408 | 6,25                | 38902 |
| KUB-P.5D.1562.R.12.C1500-EF | U45 83970 | 1.562      | 1.500          | 1.970      | 12.726      | 7.874      | 8.976       | 1/4" NPT     | SOGX 120408 | 6,25                | 39702 |
| KUB-P.5D.1625.R.12.C1500-EF | U45 84130 | 1.625      | 1.500          | 1.970      | 13.159      | 8.268      | 9.409       | 1/4" NPT     | SOGX 120408 | 6,25                | 41302 |
| KUB-P.5D.1656.R.13.C1500-EF | U45 84210 | 1.656      | 1.500          | 1.970      | 13.396      | 8.465      | 9.646       | 1/4" NPT     | SOGX 130508 | 6,25                | 42102 |
| KUB-P.5D.1687.R.13.C1500-EF | U45 84290 | 1.687      | 1.500          | 1.970      | 13.396      | 8.465      | 9.646       | 1/4" NPT     | SOGX 130508 | 6,25                | 42802 |
| KUB-P.5D.1750.R.13.C1500-EF | U45 84450 | 1.750      | 1.500          | 1.970      | 13.829      | 8.858      | 10.079      | 1/4" NPT     | SOGX 130508 | 6,25                | 44502 |

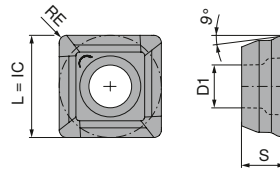
|                    |          | <br>Key | <br>Screwdriver | <br>Clamping screw |
|--------------------|----------|---|---|--|
|                    |          | 80 950 ...  | 80 950 ...  | 10 950 ...   |
| <b>Spare parts</b> |          |   |   |  |
| <b>DC</b>          |          |   |   |  |
| 0.562 - 0.625      | T05 - IP | 057   |   | M1,8x3,8 - 05IP 10100  |
| 0.656 - 0.703      |          |   | T06 - IP 123  | M2,0x4,3 - 06IP 10000  |
| 0.750 - 0.906      |          |   | T06 - IP 123  | M2,2x5,5 - 06IP 10700  |
| 0.937 - 1.000      |          |   | T08 - IP 125  | M2,5x6,3 - 08IP 10800  |
| 1.031 - 1.156      |          |   | T08 - IP 125  | M3,0x7,6 - 08IP 10200  |
| 1.187 - 1.437      |          |   | T15 - IP 128  | M3,5x7,5 - 15IP 10300  |
| 1.469 - 1.750      |          |   | T20 - IP 129  | M4,5x10 - 20IP 10400   |




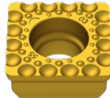



Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# SOGX

| Designation | L<br>inch | IC<br>inch | D1<br>inch | S<br>inch |
|-------------|-----------|------------|------------|-----------|
| SOGX 0402.. | 0.188     | 0.188      | 0.080      | 0.086     |
| SOGX 0502.. | 0.216     | 0.216      | 0.090      | 0.094     |
| SOGX 0602.. | 0.244     | 0.244      | 0.102      | 0.108     |
| SOGX 07T2.. | 0.279     | 0.279      | 0.102      | 0.116     |
| SOGX 0803.. | 0.314     | 0.314      | 0.112      | 0.133     |
| SOGX 09T3.. | 0.350     | 0.350      | 0.133      | 0.153     |
| SOGX 1004.. | 0.385     | 0.385      | 0.161      | 0.165     |
| SOGX 1104.. | 0.429     | 0.429      | 0.161      | 0.177     |
| SOGX 1204.. | 0.472     | 0.472      | 0.204      | 0.188     |
| SOGX 1305.. | 0.519     | 0.519      | 0.204      | 0.204     |



# SOGX

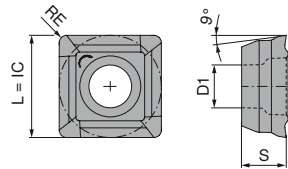
|   |   |   |   |   |
|---|---|---|---|---|
|   |   | <b>NEW</b>  | <b>NEW</b>  | <b>NEW</b>  |
| -01<br>BK8425   | -03<br>BK8430   | -13<br>BK8425   | -32<br>BK8425   | -34<br>BK8425   |
|  |  |  |  |  |
| SOGX  | SOGX  | SOGX  | SOGX  | SOGX  |
| 10 820 ...  | 10 820 ...  | 10 820 ...  | 10 820 ...  | 10 820 ...  |

| ISO    | KOMET no.        | RE<br>inch | 10 820 ... | 10 820 ... | 10 820 ... | 10 820 ... | 10 820 ... |
|--------|------------------|------------|------------|------------|------------|------------|------------|
| 040204 | W80 10010.048425 | 0.016      | 30401      |            |            |            |            |
| 040204 | W80 10030.048430 | 0.016      |            | 00403      |            |            |            |
| 040204 | W80 10130.048425 | 0.016      |            |            | 30413      |            |            |
| 040204 | W80 10320.048425 | 0.016      |            |            |            | 30432      |            |
| 040204 | W80 10340.048425 | 0.016      |            |            |            |            | 30434      |
| 050204 | W80 12010.048425 | 0.016      | 30501      |            |            |            |            |
| 050204 | W80 12030.048430 | 0.016      |            | 00503      |            |            |            |
| 050204 | W80 12130.048425 | 0.016      |            |            | 30513      |            |            |
| 050204 | W80 12320.048425 | 0.016      |            |            |            | 30532      |            |
| 050204 | W80 12340.048425 | 0.016      |            |            |            |            | 30534      |
| 060206 | W80 18010.068425 | 0.024      | 30601      |            |            |            |            |
| 060206 | W80 18030.068430 | 0.024      |            | 00603      |            |            |            |
| 060206 | W80 18130.068425 | 0.024      |            |            | 30613      |            |            |
| 060206 | W80 18320.068425 | 0.024      |            |            |            | 30632      |            |
| 060206 | W80 18340.068425 | 0.024      |            |            |            |            | 30634      |
| 07T208 | W80 20010.088425 | 0.031      | 30701      |            |            |            |            |
| 07T208 | W80 20030.088430 | 0.031      |            | 00703      |            |            |            |
| 07T208 | W80 20130.088425 | 0.031      |            |            | 30713      |            |            |
| 07T208 | W80 20320.088425 | 0.031      |            |            |            | 30732      |            |
| 07T208 | W80 20340.088425 | 0.031      |            |            |            |            | 30734      |
| 080308 | W80 24010.088425 | 0.031      | 30801      |            |            |            |            |
| 080308 | W80 24030.088430 | 0.031      |            | 00803      |            |            |            |
| 080308 | W80 24130.088425 | 0.031      |            |            | 30813      |            |            |
| 080308 | W80 24320.088425 | 0.031      |            |            |            | 30832      |            |
| 080308 | W80 24340.088425 | 0.031      |            |            |            |            | 30834      |
| 09T308 | W80 28010.088425 | 0.031      | 30901      |            |            |            |            |
| 09T308 | W80 28030.088430 | 0.031      |            | 00903      |            |            |            |
| 09T308 | W80 28130.088425 | 0.031      |            |            | 30913      |            |            |
| 09T308 | W80 28320.088425 | 0.031      |            |            |            | 30932      |            |
| 09T308 | W80 28340.088425 | 0.031      |            |            |            |            | 30934      |
| 100408 | W80 32010.088425 | 0.031      | 31001      |            |            |            |            |
| 100408 | W80 32030.088430 | 0.031      |            | 01003      |            |            |            |
| 100408 | W80 32130.088425 | 0.031      |            |            | 31013      |            |            |
| 100408 | W80 32320.088425 | 0.031      |            |            |            | 31032      |            |
| 100408 | W80 32340.088425 | 0.031      |            |            |            |            | 31034      |
| 110408 | W80 38010.088425 | 0.031      | 31101      |            |            |            |            |
| 110408 | W80 38030.088430 | 0.031      |            | 01103      |            |            |            |
| 110408 | W80 38130.088425 | 0.031      |            |            | 31113      |            |            |
| 110408 | W80 38320.088425 | 0.031      |            |            |            | 31132      |            |
| 110408 | W80 38340.088425 | 0.031      |            |            |            |            | 31134      |
| 120408 | W80 42010.088425 | 0.031      | 31201      |            |            |            |            |
| 120408 | W80 42030.088430 | 0.031      |            | 01203      |            |            |            |
| 120408 | W80 42130.088425 | 0.031      |            |            | 31213      |            |            |
| 120408 | W80 42320.088425 | 0.031      |            |            |            | 31232      |            |
| 120408 | W80 42340.088425 | 0.031      |            |            |            |            | 31234      |
| 130508 | W80 46010.088425 | 0.031      | 31301      |            |            |            |            |
| 130508 | W80 46030.088430 | 0.031      |            | 01303      |            |            |            |
| 130508 | W80 46130.088425 | 0.031      |            |            | 31313      |            |            |
| 130508 | W80 46320.088425 | 0.031      |            |            |            | 31332      |            |
| 130508 | W80 46340.088425 | 0.031      |            |            |            |            | 31334      |

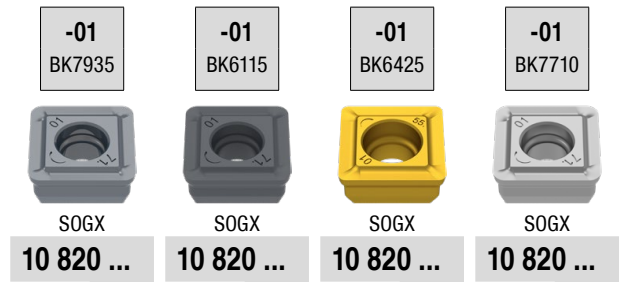
|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ |
| M | ● | ● | ● | ● |   |
| K | ● | ● | ● | ● | ● |
| N | ○ | ○ | ○ | ○ |   |
| S | ● | ● | ● | ● |   |
| H | ○ | ○ | ○ | ○ |   |
| O |   |   |   |   |   |

### SOGX

| Designation | L<br>inch | IC<br>inch | D1<br>inch | S<br>inch |
|-------------|-----------|------------|------------|-----------|
| SOGX 0402.. | 0.188     | 0.188      | 0.080      | 0.086     |
| SOGX 0502.. | 0.216     | 0.216      | 0.090      | 0.094     |
| SOGX 0602.. | 0.244     | 0.244      | 0.102      | 0.108     |
| SOGX 07T2.. | 0.279     | 0.279      | 0.102      | 0.116     |
| SOGX 0803.. | 0.314     | 0.314      | 0.112      | 0.133     |
| SOGX 09T3.. | 0.350     | 0.350      | 0.133      | 0.153     |
| SOGX 1004.. | 0.385     | 0.385      | 0.161      | 0.165     |
| SOGX 1104.. | 0.429     | 0.429      | 0.161      | 0.177     |
| SOGX 1204.. | 0.472     | 0.472      | 0.204      | 0.188     |
| SOGX 1305.. | 0.519     | 0.519      | 0.204      | 0.204     |



### SOGX



| ISO    | KOMET no.        | RE<br>inch | 10 820 ... | 10 820 ... | 10 820 ... | 10 820 ... |
|--------|------------------|------------|------------|------------|------------|------------|
| 040204 | W80 10010.046115 | 0.016      |            | 40401      | 60401      | 90401      |
| 040204 | W80 10010.046425 | 0.016      |            |            |            |            |
| 040204 | W80 10010.047710 | 0.016      |            |            |            |            |
| 040204 | W80 10010.047935 | 0.016      | 50401      |            |            |            |
| 050204 | W80 12010.046115 | 0.016      |            | 40501      |            |            |
| 050204 | W80 12010.046425 | 0.016      |            |            | 60501      |            |
| 050204 | W80 12010.047710 | 0.016      |            |            |            | 90501      |
| 050204 | W80 12010.047935 | 0.016      | 50501      |            |            |            |
| 060206 | W80 18010.066115 | 0.024      |            | 40601      |            |            |
| 060206 | W80 18010.066425 | 0.024      |            |            | 60601      |            |
| 060206 | W80 18010.067710 | 0.024      |            |            |            | 90601      |
| 060206 | W80 18010.067935 | 0.024      | 50601      |            |            |            |
| 07T208 | W80 20010.086115 | 0.031      |            | 40701      |            |            |
| 07T208 | W80 20010.086425 | 0.031      |            |            | 60701      |            |
| 07T208 | W80 20010.087710 | 0.031      |            |            |            | 90701      |
| 07T208 | W80 20010.087935 | 0.031      | 50701      |            |            |            |
| 080308 | W80 24010.086115 | 0.031      |            | 40801      |            |            |
| 080308 | W80 24010.086425 | 0.031      |            |            | 60801      |            |
| 080308 | W80 24010.087710 | 0.031      |            |            |            | 90801      |
| 080308 | W80 24010.087935 | 0.031      | 50801      |            |            |            |
| 09T308 | W80 28010.086115 | 0.031      |            | 40901      |            |            |
| 09T308 | W80 28010.086425 | 0.031      |            |            | 60901      |            |
| 09T308 | W80 28010.087710 | 0.031      |            |            |            | 90901      |
| 09T308 | W80 28010.087935 | 0.031      | 50901      |            |            |            |
| 100408 | W80 32010.086115 | 0.031      |            | 41001      |            |            |
| 100408 | W80 32010.086425 | 0.031      |            |            | 61001      |            |
| 100408 | W80 32010.087710 | 0.031      |            |            |            | 91001      |
| 100408 | W80 32010.087935 | 0.031      | 51001      |            |            |            |
| 110408 | W80 38010.086115 | 0.031      |            | 41101      |            |            |
| 110408 | W80 38010.086425 | 0.031      |            |            | 61101      |            |
| 110408 | W80 38010.087710 | 0.031      |            |            |            | 91101      |
| 110408 | W80 38010.087935 | 0.031      | 51101      |            |            |            |
| 120408 | W80 42010.086115 | 0.031      |            | 41201      |            |            |
| 120408 | W80 42010.086425 | 0.031      |            |            | 61201      |            |
| 120408 | W80 42010.087710 | 0.031      |            |            |            | 91201      |
| 120408 | W80 42010.087935 | 0.031      | 51201      |            |            |            |
| 130508 | W80 46010.086115 | 0.031      |            | 41301      |            |            |
| 130508 | W80 46010.086425 | 0.031      |            |            | 61301      |            |
| 130508 | W80 46010.087710 | 0.031      |            |            |            | 91301      |
| 130508 | W80 46010.087935 | 0.031      | 51301      |            |            |            |
| P      |                  |            | ●          | ●          | ●          |            |
| M      |                  |            | ●          | ●          | ●          |            |
| K      |                  |            | ●          | ●          | ●          |            |
| N      |                  |            | ○          |            |            | ●          |
| S      |                  |            | ●          |            |            | ○          |
| H      |                  |            |            | ○          |            |            |
| O      |                  |            | ○          |            |            | ○          |

→ v<sub>c</sub> Page 43-45

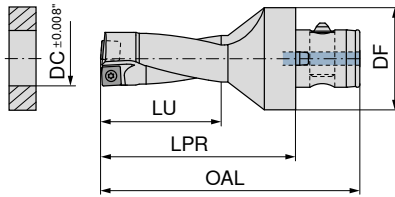
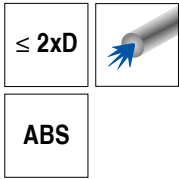
BK6115-01 is exclusively recommended for use on the peripheral cutting edge!



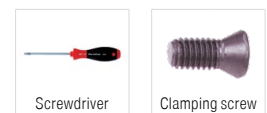
# KUB Quatron – Indexable insert drill

**Scope of supply:**

Indexable Insert Drill incl. clamping screws



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 879 ... | 15 879 ... |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|------------|
|                            |           |            |            |             |            |             |             |                     |            |            |
| KUB-Q.2D.0562.R.05.ABS50-F | U10 71432 | 0.562      | 1.969      | 3.779       | 1.181      | 2.559       | SOEX 050204 | 0,62                |            | 14395      |
| KUB-Q.2D.0593.R.05.ABS50-F | U10 71510 | 0.593      | 1.969      | 3.858       | 1.260      | 2.638       | SOEX 050204 | 0,62                |            | 15195      |
| KUB-Q.2D.0625.R.05.ABS50-F | U10 71590 | 0.625      | 1.969      | 3.858       | 1.260      | 2.638       | SOEX 050204 | 0,62                |            | 15995      |
| KUB-Q.2D.0656.R.05.ABS50-F | U10 71670 | 0.656      | 1.969      | 3.937       | 1.339      | 2.717       | SOEX 050204 | 0,62                |            | 16795      |
| KUB-Q.2D.0687.R.05.ABS50   | U10 71750 | 0.689      | 1.969      | 4.016       | 1.417      | 2.795       | SOEX 050204 | 0,62                | 17595      |            |
| KUB-Q.2D.0703.R.06.ABS50-F | U10 71790 | 0.703      | 1.969      | 4.015       | 1.417      | 2.795       | SOEX 060306 | 1,01                |            | 17995      |
| KUB-Q.2D.0718.R.06.ABS50-F | U10 71820 | 0.718      | 1.969      | 4.094       | 1.496      | 2.874       | SOEX 060306 | 1,01                |            | 18295      |
| KUB-Q.2D.0750.R.06.ABS50-F | U10 71910 | 0.750      | 1.969      | 4.173       | 1.575      | 2.953       | SOEX 060306 | 1,01                |            | 19195      |
| KUB-Q.2D.0765.R.06.ABS50-F | U10 71940 | 0.765      | 1.969      | 4.173       | 1.575      | 2.953       | SOEX 060306 | 1,01                |            | 19495      |
| KUB-Q.2D.0781.R.06.ABS50-F | U10 71980 | 0.781      | 1.969      | 4.173       | 1.575      | 2.953       | SOEX 060306 | 1,01                |            | 19895      |
| KUB-Q.2D.0812.R.06.ABS50-F | U10 72060 | 0.812      | 1.969      | 4.251       | 1.654      | 3.031       | SOEX 060306 | 1,01                |            | 20695      |
| KUB-Q.2D.0828.R.06.ABS50   | U10 72100 | 0.827      | 1.969      | 4.252       | 1.654      | 3.032       | SOEX 060306 | 1,01                | 21095      |            |
| KUB-Q.2D.0843.R.06.ABS50-F | U10 72140 | 0.843      | 1.969      | 4.330       | 1.732      | 3.110       | SOEX 060306 | 1,01                |            | 21495      |
| KUB-Q.2D.0875.R.07.ABS50-F | U10 72220 | 0.875      | 1.969      | 4.409       | 1.811      | 3.189       | SOEX 07T308 | 1,01                |            | 22295      |
| KUB-Q.2D.0906.R.07.ABS50   | U10 72300 | 0.906      | 1.969      | 4.409       | 1.811      | 3.189       | SOEX 07T308 | 1,01                | 23095      |            |
| KUB-Q.2D.0937.R.07.ABS50-F | U10 72380 | 0.937      | 1.969      | 4.488       | 1.890      | 3.268       | SOEX 07T308 | 1,01                |            | 23895      |
| KUB-Q.2D.0968.R.07.ABS50-F | U10 72460 | 0.968      | 1.969      | 4.566       | 1.969      | 3.346       | SOEX 07T308 | 1,01                |            | 24695      |
| KUB-Q.2D.0985.R.07.ABS50   | U10 72500 | 0.984      | 1.969      | 4.567       | 1.969      | 3.346       | SOEX 07T308 | 1,01                | 25095      |            |
| KUB-Q.2D.1000.R.07.ABS50-F | U10 72540 | 1.000      | 1.969      | 4.645       | 2.047      | 3.425       | SOEX 07T308 | 1,01                |            | 25495      |
| KUB-Q.2D.1031.R.07.ABS50-F | U10 72620 | 1.031      | 1.969      | 4.724       | 2.126      | 3.504       | SOEX 07T308 | 1,01                |            | 26295      |
| KUB-Q.2D.1062.R.07.ABS50   | U10 72700 | 1.063      | 1.969      | 4.724       | 2.126      | 3.504       | SOEX 07T308 | 1,01                | 27095      |            |
| KUB-Q.2D.1109.R.09.ABS50-F | U10 72820 | 1.109      | 1.969      | 4.881       | 2.283      | 3.661       | SOEX 090408 | 2,25                |            | 28295      |
| KUB-Q.2D.1125.R.09.ABS50-F | U10 72860 | 1.125      | 1.969      | 4.881       | 2.283      | 3.661       | SOEX 090408 | 2,25                |            | 28695      |
| KUB-Q.2D.1156.R.09.ABS50-F | U10 72940 | 1.156      | 1.969      | 4.960       | 2.323      | 3.740       | SOEX 090408 | 2,25                |            | 29495      |
| KUB-Q.2D.1187.R.09.ABS50-F | U10 73020 | 1.187      | 1.969      | 5.235       | 2.441      | 4.015       | SOEX 090408 | 2,25                |            | 30195      |
| KUB-Q.2D.1218.R.09.ABS50-F | U10 73090 | 1.218      | 1.969      | 5.236       | 2.441      | 4.016       | SOEX 090408 | 2,25                |            | 30995      |
| KUB-Q.2D.1250.R.09.ABS50-F | U10 73180 | 1.250      | 1.969      | 4.314       | 2.520      | 3.094       | SOEX 090408 | 2,25                |            | 31895      |
| KUB-Q.2D.1281.R.09.ABS50-F | U10 73250 | 1.281      | 1.969      | 5.393       | 2.598      | 4.173       | SOEX 090408 | 2,25                |            | 32595      |
| KUB-Q.2D.1312.R.12.ABS50-F | U10 73330 | 1.312      | 1.969      | 5.471       | 2.677      | 4.251       | SOEX 120508 | 6,25                |            | 33395      |
| KUB-Q.2D.1328.R.12.ABS50-F | U10 73370 | 1.328      | 1.969      | 5.471       | 2.677      | 4.251       | SOEX 120508 | 6,25                |            | 33795      |
| KUB-Q.2D.1375.R.12.ABS50-F | U10 73490 | 1.375      | 1.969      | 5.550       | 2.756      | 4.330       | SOEX 120508 | 6,25                |            | 34995      |
| KUB-Q.2D.1406.R.12.ABS50-F | U10 73570 | 1.406      | 1.969      | 5.629       | 2.835      | 4.409       | SOEX 120508 | 6,25                |            | 35795      |
| KUB-Q.2D.1437.R.12.ABS50-F | U10 73650 | 1.437      | 1.969      | 6.101       | 2.913      | 4.881       | SOEX 120508 | 6,25                |            | 36595      |
| KUB-Q.2D.1469.R.12.ABS50-F | U10 73730 | 1.469      | 1.969      | 6.180       | 2.992      | 4.960       | SOEX 120508 | 6,25                |            | 37395      |
| KUB-Q.2D.1500.R.12.ABS50-F | U10 73810 | 1.500      | 1.969      | 6.259       | 3.071      | 5.039       | SOEX 120508 | 6,25                |            | 38195      |
| KUB-Q.2D.1531.R.12.ABS50-F | U10 73890 | 1.531      | 1.969      | 6.259       | 3.071      | 5.039       | SOEX 120508 | 6,25                |            | 38995      |
| KUB-Q.2D.1562.R.12.ABS50-F | U10 73970 | 1.562      | 1.969      | 6.338       | 3.150      | 5.118       | SOEX 120508 | 6,25                |            | 39795      |
| KUB-Q.2D.1625.R.12.ABS50-F | U10 74130 | 1.625      | 1.969      | 6.495       | 3.307      | 5.275       | SOEX 120508 | 6,25                |            | 41395      |
| KUB-Q.2D.1656.R.12.ABS50-F | U10 74210 | 1.656      | 1.969      | 6.574       | 3.386      | 5.354       | SOEX 120508 | 6,25                |            | 42195      |
| KUB-Q.2D.1687.R.12.ABS50-F | U10 74290 | 1.687      | 1.969      | 6.574       | 3.386      | 5.354       | SOEX 120508 | 6,25                |            | 42895      |
| KUB-Q.2D.1750.R.12.ABS50-F | U10 74450 | 1.750      | 1.969      | 6.653       | 3.465      | 5.433       | SOEX 120508 | 6,25                |            | 44595      |



80 950 ... 10 950 ...

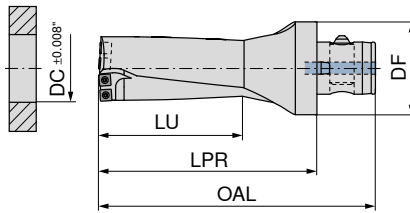
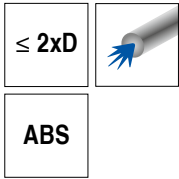
**Spare parts**

| DC            | 123 | 10000 |
|---------------|-----|-------|
| 0.562 - 0.689 | 123 | 10700 |
| 0.703 - 0.843 | 125 | 10800 |
| 0.875 - 1.063 | 128 | 10300 |
| 1.109 - 1.281 | 129 | 10400 |
| 1.312 - 1.750 |     |       |

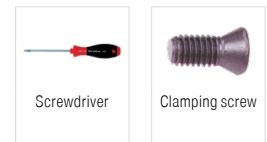
# KUB Quatron – Indexable insert drill

**Scope of supply:**

Indexable Insert Drill incl. clamping screws



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 879 ... |  | 15 879 ... |       |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|--|------------|-------|
|                            |           |            |            |             |            |             |             |                     |            |  |            |       |
| KUB-Q.2D.1781.R.07.ABS63-F | U10 84520 | 1.781      | 2.480      | 7.283       | 3.622      | 5.787       | SOEX 07T308 | 1,01                |            |  |            | 45296 |
| KUB-Q.2D.1812.R.07.ABS63   | U10 84600 | 1.811      | 2.480      | 7.283       | 3.622      | 5.787       | SOEX 07T308 | 1,01                | 46096      |  |            | 47696 |
| KUB-Q.2D.1875.R.07.ABS63-F | U10 84760 | 1.875      | 2.480      | 7.441       | 3.780      | 5.945       | SOEX 07T308 | 1,01                |            |  |            | 49296 |
| KUB-Q.2D.1937.R.07.ABS63-F | U10 84920 | 1.937      | 2.480      | 7.598       | 3.937      | 6.102       | SOEX 07T308 | 1,01                |            |  |            | 50296 |
| KUB-Q.2D.1975.R.07.ABS63-F | U10 85020 | 1.975      | 2.480      | 7.677       | 4.016      | 6.181       | SOEX 07T308 | 1,01                |            |  |            | 50896 |
| KUB-Q.2D.2000.R.07.ABS63-F | U10 85080 | 2.000      | 2.480      | 7.677       | 4.016      | 6.181       | SOEX 07T308 | 1,01                |            |  |            | 52496 |
| KUB-Q.2D.2062.R.09.ABS63-F | U10 85240 | 2.062      | 2.480      | 7.835       | 4.173      | 6.339       | SOEX 090408 | 2,25                |            |  |            | 57298 |
| KUB-Q.2D.2125.R.09.ABS63   | U10 85400 | 2.126      | 2.480      | 7.913       | 4.252      | 6.417       | SOEX 090408 | 2,25                | 54096      |  |            | 57998 |
| KUB-Q.2D.2165.R.09.ABS80   | U10 95500 | 2.165      | 3.150      | 8.189       | 4.331      | 6.496       | SOEX 090408 | 2,25                | 55098      |  |            | 60398 |
| KUB-Q.2D.2203.R.09.ABS80   | U10 95600 | 2.205      | 3.150      | 8.268       | 4.409      | 6.575       | SOEX 090408 | 2,25                | 56098      |  |            | 61998 |
| KUB-Q.2D.2250.R.09.ABS80-F | U10 95720 | 2.250      | 3.150      | 8.425       | 4.567      | 6.732       | SOEX 090408 | 2,25                |            |  |            | 63598 |
| KUB-Q.2D.2281.R.09.ABS80-F | U10 95790 | 2.281      | 3.150      | 8.425       | 4.567      | 6.732       | SOEX 090408 | 2,25                |            |  |            |       |
| KUB-Q.2D.2375.R.09.ABS80-F | U10 96030 | 2.375      | 3.150      | 8.662       | 4.803      | 6.969       | SOEX 090408 | 2,25                |            |  |            |       |
| KUB-Q.2D.2437.R.09.ABS80-F | U10 96190 | 2.437      | 3.150      | 8.740       | 4.882      | 7.047       | SOEX 090408 | 2,25                |            |  |            |       |
| KUB-Q.2D.2500.R.09.ABS80-F | U10 96350 | 2.500      | 3.150      | 8.898       | 5.039      | 7.205       | SOEX 090408 | 2,25                |            |  |            |       |



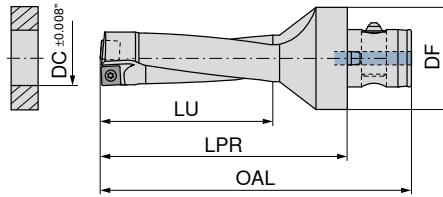
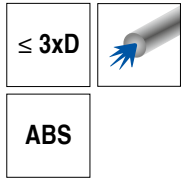
**Spare parts**  
DC

| DC            | 80 950 ... | 10 950 ... |
|---------------|------------|------------|
| 1.781 - 2.000 | 125        | 10800      |
| 2.062 - 2.500 | 128        | 10300      |

# KUB Quatron – Indexable insert drill

**Scope of supply:**

Indexable Insert Drill incl. clamping screws



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 880 ... | 15 880 ... |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|------------|
|                            |           |            |            |             |            |             |             |                     |            |            |
| KUB-Q.3D.0562.R.05.ABS50-F | U11 51432 | 0.562      | 1.969      | 4.370       | 1.772      | 3.150       | SOEX 050204 | 0,62                |            | 14395      |
| KUB-Q.3D.0593.R.05.ABS50-F | U11 51510 | 0.593      | 1.969      | 4.488       | 1.890      | 3.268       | SOEX 050204 | 0,62                |            | 15195      |
| KUB-Q.3D.0625.R.05.ABS50-F | U11 51590 | 0.625      | 1.969      | 4.488       | 1.890      | 3.268       | SOEX 050204 | 0,62                |            | 15995      |
| KUB-Q.3D.0656.R.05.ABS50-F | U11 51670 | 0.656      | 1.969      | 4.606       | 2.008      | 3.386       | SOEX 050204 | 0,62                |            | 16795      |
| KUB-Q.3D.0687.R.05.ABS50   | U11 51750 | 0.689      | 1.969      | 4.724       | 2.126      | 3.504       | SOEX 050204 | 0,62                | 17595      |            |
| KUB-Q.3D.0703.R.06.ABS50-F | U11 51790 | 0.703      | 1.969      | 4.724       | 2.126      | 3.504       | SOEX 060306 | 1,01                |            | 17995      |
| KUB-Q.3D.0718.R.06.ABS50-F | U11 51820 | 0.718      | 1.969      | 4.842       | 2.244      | 3.622       | SOEX 060306 | 1,01                |            | 18295      |
| KUB-Q.3D.0750.R.06.ABS50-F | U11 51910 | 0.750      | 1.969      | 4.960       | 2.362      | 3.740       | SOEX 060306 | 1,01                |            | 19195      |
| KUB-Q.3D.0765.R.06.ABS50-F | U11 51940 | 0.765      | 1.969      | 4.960       | 2.362      | 3.740       | SOEX 060306 | 1,01                |            | 19495      |
| KUB-Q.3D.0781.R.06.ABS50-F | U11 51980 | 0.781      | 1.969      | 4.960       | 2.362      | 3.740       | SOEX 060306 | 1,01                |            | 19895      |
| KUB-Q.3D.0812.R.06.ABS50-F | U11 52060 | 0.812      | 1.969      | 5.078       | 2.480      | 3.858       | SOEX 060306 | 1,01                |            | 20695      |
| KUB-Q.3D.0828.R.06.ABS50   | U11 52100 | 0.827      | 1.969      | 5.079       | 2.480      | 3.858       | SOEX 060306 | 1,01                | 21095      |            |
| KUB-Q.3D.0843.R.06.ABS50-F | U11 52140 | 0.843      | 1.969      | 5.196       | 2.598      | 3.976       | SOEX 060306 | 1,01                |            | 21495      |
| KUB-Q.3D.0875.R.07.ABS50-F | U11 52220 | 0.875      | 1.969      | 5.314       | 2.717      | 4.094       | SOEX 07T308 | 1,01                |            | 22295      |
| KUB-Q.3D.0906.R.07.ABS50   | U11 52300 | 0.906      | 1.969      | 5.315       | 2.717      | 4.094       | SOEX 07T308 | 1,01                | 23095      |            |
| KUB-Q.3D.0937.R.07.ABS50-F | U11 52380 | 0.937      | 1.969      | 5.433       | 2.835      | 4.213       | SOEX 07T308 | 1,01                |            | 23895      |
| KUB-Q.3D.0968.R.07.ABS50-F | U11 52460 | 0.968      | 1.969      | 5.551       | 2.953      | 4.331       | SOEX 07T308 | 1,01                |            | 24695      |
| KUB-Q.3D.0985.R.07.ABS50   | U11 52500 | 0.984      | 1.969      | 5.551       | 2.953      | 4.331       | SOEX 07T308 | 1,01                | 25095      |            |
| KUB-Q.3D.1000.R.07.ABS50-F | U11 52540 | 1.000      | 1.969      | 5.669       | 3.071      | 4.449       | SOEX 07T308 | 1,01                |            | 25495      |
| KUB-Q.3D.1031.R.07.ABS50-F | U11 52620 | 1.031      | 1.969      | 5.787       | 3.189      | 4.567       | SOEX 07T308 | 1,01                |            | 26295      |
| KUB-Q.3D.1062.R.07.ABS50   | U11 52700 | 1.063      | 1.969      | 5.787       | 3.189      | 4.567       | SOEX 07T308 | 1,01                | 27095      |            |
| KUB-Q.3D.1109.R.09.ABS50-F | U11 52820 | 1.109      | 1.969      | 6.023       | 3.425      | 4.803       | SOEX 090408 | 2,25                |            | 28295      |
| KUB-Q.3D.1125.R.09.ABS50-F | U11 52860 | 1.125      | 1.969      | 6.023       | 3.425      | 4.803       | SOEX 090408 | 2,25                |            | 28695      |
| KUB-Q.3D.1156.R.09.ABS50-F | U11 52940 | 1.156      | 1.969      | 6.141       | 3.543      | 4.921       | SOEX 090408 | 2,25                |            | 29495      |
| KUB-Q.3D.1187.R.09.ABS50-F | U11 53020 | 1.187      | 1.969      | 6.456       | 3.661      | 5.236       | SOEX 090408 | 2,25                |            | 30195      |
| KUB-Q.3D.1218.R.09.ABS50-F | U11 53090 | 1.218      | 1.969      | 6.456       | 3.661      | 5.236       | SOEX 090408 | 2,25                |            | 30995      |
| KUB-Q.3D.1250.R.09.ABS50-F | U11 53180 | 1.250      | 1.969      | 6.574       | 3.780      | 5.354       | SOEX 090408 | 2,25                |            | 31895      |
| KUB-Q.3D.1281.R.09.ABS50-F | U11 53250 | 1.281      | 1.969      | 6.692       | 3.898      | 5.472       | SOEX 090408 | 2,25                |            | 32595      |
| KUB-Q.3D.1312.R.12.ABS50-F | U11 53330 | 1.312      | 1.969      | 6.811       | 4.016      | 5.591       | SOEX 120508 | 6,25                |            | 33395      |
| KUB-Q.3D.1328.R.12.ABS50-F | U11 53370 | 1.328      | 1.969      | 6.811       | 4.016      | 5.591       | SOEX 120508 | 6,25                |            | 33795      |
| KUB-Q.3D.1375.R.12.ABS50-F | U11 53490 | 1.375      | 1.969      | 6.929       | 4.134      | 5.709       | SOEX 120508 | 6,25                |            | 34995      |
| KUB-Q.3D.1406.R.12.ABS50-F | U11 53570 | 1.406      | 1.969      | 7.047       | 4.252      | 5.827       | SOEX 120508 | 6,25                |            | 35795      |
| KUB-Q.3D.1437.R.12.ABS50-F | U11 53650 | 1.437      | 1.969      | 7.559       | 4.370      | 6.339       | SOEX 120508 | 6,25                |            | 36595      |
| KUB-Q.3D.1469.R.12.ABS50-F | U11 53730 | 1.469      | 1.969      | 7.677       | 4.488      | 6.457       | SOEX 120508 | 6,25                |            | 37395      |
| KUB-Q.3D.1500.R.12.ABS50-F | U11 53810 | 1.500      | 1.969      | 7.795       | 4.606      | 6.575       | SOEX 120508 | 6,25                |            | 38195      |
| KUB-Q.3D.1531.R.12.ABS50-F | U11 53890 | 1.531      | 1.969      | 7.795       | 4.606      | 6.575       | SOEX 120508 | 6,25                |            | 38995      |
| KUB-Q.3D.1562.R.12.ABS50-F | U11 53970 | 1.562      | 1.969      | 7.913       | 4.724      | 6.693       | SOEX 120508 | 6,25                |            | 39795      |
| KUB-Q.3D.1625.R.12.ABS50-F | U11 54130 | 1.625      | 1.969      | 8.149       | 4.961      | 6.929       | SOEX 120508 | 6,25                |            | 41395      |
| KUB-Q.3D.1656.R.12.ABS50-F | U11 54210 | 1.656      | 1.969      | 8.267       | 5.079      | 7.047       | SOEX 120508 | 6,25                |            | 42195      |
| KUB-Q.3D.1687.R.12.ABS50-F | U11 54290 | 1.687      | 1.969      | 8.267       | 5.079      | 7.047       | SOEX 120508 | 6,25                |            | 42895      |
| KUB-Q.3D.1750.R.12.ABS50-F | U11 54450 | 1.750      | 1.969      | 8.385       | 5.197      | 7.165       | SOEX 120508 | 6,25                |            | 44595      |



Screwdriver



Clamping screw

80 950 ...

10 950 ...

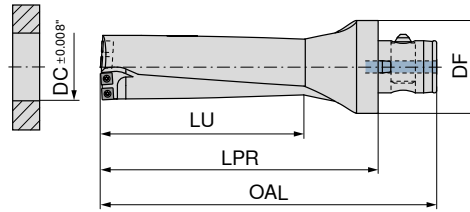
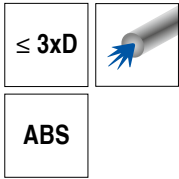
**Spare parts**

| DC            | 80 950 ... | 10 950 ... |
|---------------|------------|------------|
| 0.562 - 0.689 | 123        | 10000      |
| 0.703 - 0.843 | 123        | 10700      |
| 0.875 - 1.063 | 125        | 10800      |
| 1.109 - 1.281 | 128        | 10300      |
| 1.312 - 1.750 | 129        | 10400      |

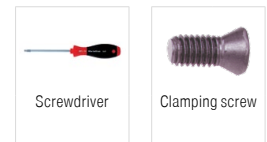
# KUB Quatron – Indexable insert drill

**Scope of supply:**

Indexable Insert Drill incl. clamping screws



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 880 ... | 15 880 ... |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|------------|
|                            |           |            |            |             |            |             |             |                     |            |            |
| KUB-Q.3D.1781.R.07.ABS63-F | U12 34520 | 1.781      | 2.480      | 9.094       | 5.433      | 7.598       | SOEX 07T308 | 1,01                |            | 45296      |
| KUB-Q.3D.1812.R.07.ABS63   | U12 34600 | 1.811      | 2.480      | 9.094       | 5.433      | 7.598       | SOEX 07T308 | 1,01                | 46096      |            |
| KUB-Q.3D.1875.R.07.ABS63-F | U12 34760 | 1.875      | 2.480      | 9.331       | 5.669      | 7.835       | SOEX 07T308 | 1,01                |            | 47696      |
| KUB-Q.3D.1937.R.07.ABS63-F | U12 34920 | 1.937      | 2.480      | 9.567       | 5.906      | 8.071       | SOEX 07T308 | 1,01                |            | 49296      |
| KUB-Q.3D.1975.R.07.ABS63-F | U12 35020 | 1.975      | 2.480      | 9.685       | 6.024      | 8.189       | SOEX 07T308 | 1,01                |            | 50296      |
| KUB-Q.3D.2000.R.07.ABS63-F | U12 35080 | 2.000      | 2.480      | 9.685       | 6.024      | 8.189       | SOEX 07T308 | 1,01                |            | 50896      |
| KUB-Q.3D.2062.R.09.ABS63-F | U12 35240 | 2.062      | 2.480      | 9.921       | 6.260      | 8.425       | SOEX 090408 | 2,25                |            | 52496      |
| KUB-Q.3D.2125.R.09.ABS63   | U12 35400 | 2.126      | 2.480      | 10.039      | 6.378      | 8.543       | SOEX 090408 | 2,25                | 54096      |            |
| KUB-Q.3D.2165.R.09.ABS80   | U12 45500 | 2.165      | 3.150      | 10.354      | 6.496      | 8.661       | SOEX 090408 | 2,25                | 55098      |            |
| KUB-Q.3D.2203.R.09.ABS80   | U12 45600 | 2.205      | 3.150      | 10.472      | 6.614      | 8.780       | SOEX 090408 | 2,25                | 56098      |            |
| KUB-Q.3D.2250.R.09.ABS80-F | U12 45720 | 2.250      | 3.150      | 10.709      | 6.850      | 9.016       | SOEX 090408 | 2,25                |            | 57298      |
| KUB-Q.3D.2281.R.09.ABS80-F | U12 45790 | 2.281      | 3.150      | 10.709      | 6.850      | 9.016       | SOEX 090408 | 2,25                |            | 57998      |
| KUB-Q.3D.2375.R.09.ABS80-F | U12 46030 | 2.375      | 3.150      | 11.063      | 7.205      | 9.370       | SOEX 090408 | 2,25                |            | 60398      |
| KUB-Q.3D.2437.R.09.ABS80-F | U12 46190 | 2.437      | 3.150      | 11.181      | 7.323      | 9.488       | SOEX 090408 | 2,25                |            | 61998      |
| KUB-Q.3D.2500.R.09.ABS80-F | U12 46350 | 2.500      | 3.150      | 11.417      | 7.559      | 9.724       | SOEX 090408 | 2,25                |            | 63598      |



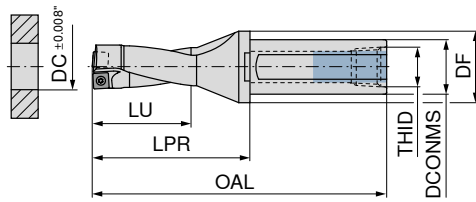
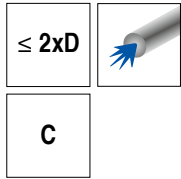
**Spare parts**  
DC

| DC            | 80 950 ... | 10 950 ... |
|---------------|------------|------------|
| 1.781 - 2.000 | 125        | 10800      |
| 2.062 - 2.500 | 128        | 10300      |

# KUB Quatron – Indexable insert drill

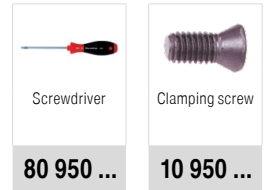
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 879 ...

| Designation                 | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-----------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-Q.2D.0562.R.05.C0750-EF | U11 21435 | 0.562      | 0.750          | 1.180      | 4.376       | 1.181      | 2.126       | 1/8" NPT     | SOEX 050204 | 0,62                | 14309 |
| KUB-Q.2D.0593.R.05.C0750-EF | U11 21513 | 0.593      | 0.750          | 1.180      | 4.455       | 1.260      | 2.205       | 1/8" NPT     | SOEX 050204 | 0,62                | 15109 |
| KUB-Q.2D.0625.R.05.C0750-EF | U11 21593 | 0.625      | 0.750          | 1.180      | 4.455       | 1.260      | 2.205       | 1/8" NPT     | SOEX 050204 | 0,62                | 15909 |
| KUB-Q.2D.0656.R.05.C0750-EF | U11 21673 | 0.656      | 0.750          | 1.180      | 4.534       | 1.339      | 2.284       | 1/8" NPT     | SOEX 050204 | 0,62                | 16709 |
| KUB-Q.2D.0687.R.05.C0750-E  | U11 21753 | 0.687      | 0.750          | 1.180      | 4.612       | 1.417      | 2.362       | 1/8" NPT     | SOEX 050204 | 0,62                | 17509 |
| KUB-Q.2D.0703.R.06.C1000-EF | U11 31793 | 0.703      | 1.000          | 1.180      | 5.612       | 1.417      | 2.362       | 1/8" NPT     | SOEX 060306 | 1,01                | 17900 |
| KUB-Q.2D.0718.R.06.C1000-EF | U11 31823 | 0.718      | 1.000          | 1.180      | 5.691       | 1.496      | 2.441       | 1/8" NPT     | SOEX 060306 | 1,01                | 18200 |
| KUB-Q.2D.0750.R.06.C1000-EF | U11 31913 | 0.750      | 1.000          | 1.180      | 5.770       | 1.575      | 2.520       | 1/8" NPT     | SOEX 060306 | 1,01                | 19100 |
| KUB-Q.2D.0765.R.06.C1000-EF | U11 31943 | 0.765      | 1.000          | 1.180      | 5.770       | 1.575      | 2.520       | 1/8" NPT     | SOEX 060306 | 1,01                | 19400 |
| KUB-Q.2D.0781.R.06.C1000-EF | U11 31983 | 0.781      | 1.000          | 1.180      | 5.770       | 1.575      | 2.520       | 1/8" NPT     | SOEX 060306 | 1,01                | 19800 |
| KUB-Q.2D.0812.R.06.C1000-EF | U11 32063 | 0.812      | 1.000          | 1.180      | 5.849       | 1.654      | 2.599       | 1/8" NPT     | SOEX 060306 | 1,01                | 20600 |
| KUB-Q.2D.0828.R.06.C1000-E  | U11 32103 | 0.828      | 1.000          | 1.180      | 5.927       | 1.732      | 2.677       | 1/8" NPT     | SOEX 060306 | 1,01                | 21000 |
| KUB-Q.2D.0843.R.06.C1000-EF | U11 32143 | 0.843      | 1.000          | 1.180      | 5.927       | 1.732      | 2.677       | 1/8" NPT     | SOEX 060306 | 1,01                | 21400 |
| KUB-Q.2D.0875.R.07.C1000-EF | U11 32223 | 0.875      | 1.000          | 1.180      | 6.006       | 1.811      | 2.756       | 1/8" NPT     | SOEX 07T308 | 1,01                | 22200 |
| KUB-Q.2D.0906.R.07.C1000-E  | U11 32303 | 0.906      | 1.000          | 1.180      | 6.085       | 1.890      | 2.835       | 1/8" NPT     | SOEX 07T308 | 1,01                | 23000 |
| KUB-Q.2D.0937.R.07.C1000-EF | U11 32382 | 0.937      | 1.000          | 1.180      | 6.085       | 1.890      | 2.835       | 1/8" NPT     | SOEX 07T308 | 1,01                | 23800 |
| KUB-Q.2D.0937.R.07.C1250-EF | U11 42383 | 0.937      | 1.250          | 1.540      | 6.085       | 1.890      | 2.835       | 1/4" NPT     | SOEX 07T308 | 1,01                | 23801 |
| KUB-Q.2D.0968.R.07.C1250-EF | U11 42463 | 0.968      | 1.250          | 1.540      | 6.164       | 1.969      | 2.914       | 1/4" NPT     | SOEX 07T308 | 1,01                | 24601 |
| KUB-Q.2D.0968.R.07.C1000-EF | U11 32462 | 0.968      | 1.000          | 1.180      | 6.164       | 1.969      | 2.914       | 1/8" NPT     | SOEX 07T308 | 1,01                | 24600 |
| KUB-Q.2D.0985.R.07.C1250-E  | U11 42503 | 0.985      | 1.250          | 1.540      | 6.164       | 1.969      | 2.914       | 1/4" NPT     | SOEX 07T308 | 1,01                | 25001 |
| KUB-Q.2D.0985.R.07.C1000-E  | U11 32502 | 0.985      | 1.000          | 1.180      | 6.164       | 1.969      | 2.914       | 1/8" NPT     | SOEX 07T308 | 1,01                | 25000 |
| KUB-Q.2D.1000.R.07.C1250-EF | U11 42543 | 1.000      | 1.250          | 1.540      | 6.242       | 2.047      | 2.992       | 1/4" NPT     | SOEX 07T308 | 1,01                | 25401 |
| KUB-Q.2D.1000.R.07.C1000-EF | U11 32542 | 1.000      | 1.000          | 1.180      | 6.242       | 2.047      | 2.992       | 1/8" NPT     | SOEX 07T308 | 1,01                | 25400 |
| KUB-Q.2D.1031.R.07.C1250-EF | U11 42622 | 1.031      | 1.250          | 1.540      | 6.321       | 2.126      | 3.071       | 1/4" NPT     | SOEX 07T308 | 1,01                | 26201 |
| KUB-Q.2D.1062.R.07.C1250-E  | U11 42702 | 1.062      | 1.250          | 1.540      | 6.321       | 2.126      | 3.071       | 1/4" NPT     | SOEX 07T308 | 1,01                | 27001 |
| KUB-Q.2D.1109.R.09.C1250-EF | U11 42822 | 1.109      | 1.250          | 1.540      | 6.478       | 2.283      | 3.228       | 1/4" NPT     | SOEX 090408 | 2,25                | 28201 |
| KUB-Q.2D.1125.R.09.C1250-EF | U11 42862 | 1.125      | 1.250          | 1.540      | 6.478       | 2.283      | 3.228       | 1/4" NPT     | SOEX 090408 | 2,25                | 28601 |
| KUB-Q.2D.1156.R.09.C1250-EF | U11 42942 | 1.156      | 1.250          | 1.540      | 6.557       | 2.323      | 3.307       | 1/4" NPT     | SOEX 090408 | 2,25                | 29401 |
| KUB-Q.2D.1187.R.09.C1250-EF | U11 43022 | 1.187      | 1.250          | 1.540      | 6.832       | 2.441      | 3.582       | 1/4" NPT     | SOEX 090408 | 2,25                | 30101 |
| KUB-Q.2D.1218.R.09.C1250-EF | U11 43092 | 1.218      | 1.250          | 1.540      | 6.832       | 2.441      | 3.582       | 1/4" NPT     | SOEX 090408 | 2,25                | 30901 |
| KUB-Q.2D.1250.R.09.C1250-EF | U11 43182 | 1.250      | 1.250          | 1.540      | 6.911       | 2.520      | 3.661       | 1/4" NPT     | SOEX 090408 | 2,25                | 31801 |
| KUB-Q.2D.1281.R.09.C1250-E  | U11 43252 | 1.281      | 1.250          | 1.540      | 6.990       | 2.598      | 3.740       | 1/4" NPT     | SOEX 090408 | 2,25                | 32501 |
| KUB-Q.2D.1312.R.12.C1250-EF | U11 43332 | 1.312      | 1.250          | 1.540      | 7.068       | 2.677      | 3.818       | 1/4" NPT     | SOEX 120508 | 6,25                | 33301 |
| KUB-Q.2D.1328.R.12.C1250-EF | U11 43372 | 1.328      | 1.250          | 1.540      | 7.068       | 2.677      | 3.818       | 1/4" NPT     | SOEX 120508 | 6,25                | 33701 |
| KUB-Q.2D.1375.R.12.C1250-EF | U11 43492 | 1.375      | 1.250          | 1.540      | 7.147       | 2.756      | 3.897       | 1/4" NPT     | SOEX 120508 | 6,25                | 34901 |
| KUB-Q.2D.1406.R.12.C1250-EF | U11 43572 | 1.406      | 1.250          | 1.540      | 7.226       | 2.835      | 3.976       | 1/4" NPT     | SOEX 120508 | 6,25                | 35701 |
| KUB-Q.2D.1437.R.12.C1250-E  | U11 43652 | 1.437      | 1.250          | 1.540      | 7.698       | 2.913      | 4.448       | 1/4" NPT     | SOEX 120508 | 6,25                | 36501 |
| KUB-Q.2D.1469.R.12.C1250-EF | U11 43732 | 1.469      | 1.250          | 1.540      | 7.777       | 2.992      | 4.527       | 1/4" NPT     | SOEX 120508 | 6,25                | 37301 |
| KUB-Q.2D.1500.R.12.C1250-EF | U11 43812 | 1.500      | 1.250          | 1.540      | 7.856       | 3.071      | 4.606       | 1/4" NPT     | SOEX 120508 | 6,25                | 38101 |
| KUB-Q.2D.1531.R.12.C1250-EF | U11 43892 | 1.531      | 1.250          | 1.540      | 7.856       | 3.071      | 4.606       | 1/4" NPT     | SOEX 120508 | 6,25                | 38901 |
| KUB-Q.2D.1562.R.12.C1250-EF | U11 43972 | 1.562      | 1.250          | 1.540      | 7.935       | 3.150      | 4.685       | 1/4" NPT     | SOEX 120508 | 6,25                | 39701 |
| KUB-Q.2D.1625.R.12.C1250-EF | U11 44132 | 1.625      | 1.250          | 1.540      | 8.092       | 3.307      | 4.842       | 1/4" NPT     | SOEX 120508 | 6,25                | 41301 |
| KUB-Q.2D.1656.R.12.C1250-EF | U11 44212 | 1.656      | 1.250          | 1.540      | 8.171       | 3.386      | 4.921       | 1/4" NPT     | SOEX 120508 | 6,25                | 42101 |
| KUB-Q.2D.1687.R.12.C1250-EF | U11 44292 | 1.687      | 1.250          | 1.540      | 8.171       | 3.386      | 4.921       | 1/4" NPT     | SOEX 120508 | 6,25                | 42801 |
| KUB-Q.2D.1750.R.12.C1250-EF | U11 44452 | 1.750      | 1.250          | 1.540      | 8.250       | 3.465      | 5.000       | 1/4" NPT     | SOEX 120508 | 6,25                | 44501 |



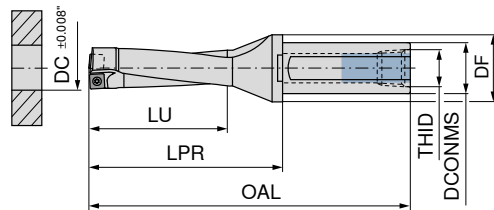
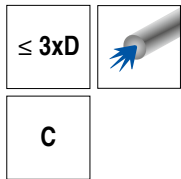
**Spare parts  
DC**

|               |     |       |
|---------------|-----|-------|
| 0.562 - 0.687 | 123 | 10000 |
| 0.703         | 129 | 10400 |
| 0.718 - 0.843 | 123 | 10700 |
| 0.875 - 1.062 | 125 | 10800 |
| 1.109 - 1.281 | 128 | 10300 |
| 1.312 - 1.750 | 129 | 10400 |

# KUB Quatron – Indexable insert drill

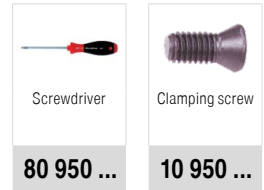
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 880 ...

| Designation                 | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-----------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-Q.3D.0562.R.05.C0750-EF | U12 01434 | 0.562      | 0.750          | 1.180      | 4.967       | 1.772      | 2.717       | 1/8" NPT     | SOEX 050204 | 0,62                | 14309 |
| KUB-Q.3D.0593.R.05.C0750-EF | U12 01512 | 0.593      | 0.750          | 1.180      | 5.085       | 1.890      | 2.835       | 1/8" NPT     | SOEX 050204 | 0,62                | 15109 |
| KUB-Q.3D.0625.R.05.C0750-EF | U12 01592 | 0.625      | 0.750          | 1.180      | 5.085       | 1.890      | 2.835       | 1/8" NPT     | SOEX 050204 | 0,62                | 15909 |
| KUB-Q.3D.0656.R.05.C0750-EF | U12 01672 | 0.656      | 0.750          | 1.180      | 5.203       | 2.008      | 2.953       | 1/8" NPT     | SOEX 050204 | 0,62                | 16709 |
| KUB-Q.3D.0687.R.05.C0750-E  | U12 01752 | 0.687      | 0.750          | 1.180      | 5.321       | 2.126      | 3.071       | 1/8" NPT     | SOEX 050204 | 0,62                | 17509 |
| KUB-Q.3D.0703.R.06.C1000-EF | U12 11792 | 0.703      | 1.000          | 1.180      | 6.321       | 2.126      | 3.071       | 1/8" NPT     | SOEX 060306 | 1,01                | 17900 |
| KUB-Q.3D.0718.R.06.C1000-EF | U12 11822 | 0.718      | 1.000          | 1.180      | 6.439       | 2.244      | 3.189       | 1/8" NPT     | SOEX 060306 | 1,01                | 18200 |
| KUB-Q.3D.0750.R.06.C1000-EF | U12 11912 | 0.750      | 1.000          | 1.180      | 6.557       | 2.362      | 3.307       | 1/8" NPT     | SOEX 060306 | 1,01                | 19100 |
| KUB-Q.3D.0765.R.06.C1000-EF | U12 11942 | 0.765      | 1.000          | 1.180      | 6.557       | 2.362      | 3.307       | 1/8" NPT     | SOEX 060306 | 1,01                | 19400 |
| KUB-Q.3D.0781.R.06.C1000-EF | U12 11982 | 0.781      | 1.000          | 1.180      | 6.557       | 2.362      | 3.307       | 1/8" NPT     | SOEX 060306 | 1,01                | 19800 |
| KUB-Q.3D.0812.R.06.C1000-EF | U12 12062 | 0.812      | 1.000          | 1.180      | 6.675       | 2.480      | 3.425       | 1/8" NPT     | SOEX 060306 | 1,01                | 20600 |
| KUB-Q.3D.0828.R.06.C1000-E  | U12 12102 | 0.828      | 1.000          | 1.180      | 6.793       | 2.598      | 3.543       | 1/8" NPT     | SOEX 060306 | 1,01                | 21000 |
| KUB-Q.3D.0843.R.06.C1000-EF | U12 12142 | 0.843      | 1.000          | 1.180      | 6.793       | 2.598      | 3.543       | 1/8" NPT     | SOEX 060306 | 1,01                | 21400 |
| KUB-Q.3D.0875.R.07.C1000-EF | U12 12222 | 0.875      | 1.000          | 1.180      | 6.912       | 2.717      | 3.662       | 1/8" NPT     | SOEX 07T308 | 1,01                | 22200 |
| KUB-Q.3D.0906.R.07.C1000-E  | U12 12302 | 0.906      | 1.000          | 1.180      | 7.030       | 2.835      | 3.780       | 1/8" NPT     | SOEX 07T308 | 1,01                | 23000 |
| KUB-Q.3D.0937.R.07.C1000-EF | U12 12382 | 0.937      | 1.000          | 1.180      | 7.030       | 2.835      | 3.780       | 1/8" NPT     | SOEX 07T308 | 1,01                | 23800 |
| KUB-Q.3D.0937.R.07.C1250-EF | U12 22382 | 0.937      | 1.250          | 1.540      | 7.030       | 2.835      | 3.780       | 1/4" NPT     | SOEX 07T308 | 1,01                | 23801 |
| KUB-Q.3D.0968.R.07.C1000-EF | U12 12462 | 0.968      | 1.000          | 1.180      | 7.148       | 2.953      | 3.898       | 1/8" NPT     | SOEX 07T308 | 1,01                | 24600 |
| KUB-Q.3D.0968.R.07.C1250-EF | U12 22462 | 0.968      | 1.250          | 1.540      | 7.148       | 2.953      | 3.898       | 1/4" NPT     | SOEX 07T308 | 1,01                | 24601 |
| KUB-Q.3D.0985.R.07.C1250-E  | U12 22502 | 0.985      | 1.250          | 1.540      | 7.266       | 3.071      | 4.016       | 1/4" NPT     | SOEX 07T308 | 1,01                | 25001 |
| KUB-Q.3D.0985.R.07.C1000-E  | U12 12502 | 0.985      | 1.000          | 1.180      | 7.148       | 2.953      | 3.898       | 1/8" NPT     | SOEX 07T308 | 1,01                | 25000 |
| KUB-Q.3D.1000.R.07.C1250-EF | U12 22542 | 1.000      | 1.250          | 1.540      | 7.266       | 3.071      | 4.016       | 1/4" NPT     | SOEX 07T308 | 1,01                | 25401 |
| KUB-Q.3D.1000.R.07.C1000-EF | U12 12542 | 1.000      | 1.000          | 1.180      | 7.266       | 3.071      | 4.016       | 1/8" NPT     | SOEX 07T308 | 1,01                | 25400 |
| KUB-Q.3D.1031.R.07.C1250-EF | U12 22622 | 1.031      | 1.250          | 1.540      | 7.384       | 3.189      | 4.134       | 1/4" NPT     | SOEX 07T308 | 1,01                | 26201 |
| KUB-Q.3D.1062.R.07.C1250-E  | U12 22702 | 1.062      | 1.250          | 1.540      | 7.384       | 3.189      | 4.134       | 1/4" NPT     | SOEX 07T308 | 1,01                | 27001 |
| KUB-Q.3D.1109.R.09.C1250-EF | U12 22822 | 1.109      | 1.250          | 1.540      | 7.620       | 3.425      | 4.370       | 1/4" NPT     | SOEX 090408 | 6,25                | 28201 |
| KUB-Q.3D.1125.R.09.C1250-EF | U12 22862 | 1.125      | 1.250          | 1.540      | 7.620       | 3.425      | 4.370       | 1/4" NPT     | SOEX 090408 | 6,25                | 28601 |
| KUB-Q.3D.1156.R.09.C1250-EF | U12 22942 | 1.156      | 1.250          | 1.540      | 7.738       | 3.543      | 4.488       | 1/4" NPT     | SOEX 090408 | 6,25                | 29401 |
| KUB-Q.3D.1187.R.09.C1250-EF | U12 23022 | 1.187      | 1.250          | 1.540      | 8.053       | 3.661      | 4.803       | 1/4" NPT     | SOEX 090408 | 6,25                | 30101 |
| KUB-Q.3D.1218.R.09.C1250-EF | U12 23092 | 1.218      | 1.250          | 1.540      | 8.053       | 3.661      | 4.803       | 1/4" NPT     | SOEX 090408 | 6,25                | 30901 |
| KUB-Q.3D.1250.R.09.C1250-EF | U12 23182 | 1.250      | 1.250          | 1.540      | 8.171       | 3.780      | 4.921       | 1/4" NPT     | SOEX 090408 | 6,25                | 31801 |
| KUB-Q.3D.1281.R.09.C1250-E  | U12 23252 | 1.281      | 1.250          | 1.540      | 8.289       | 3.898      | 5.039       | 1/4" NPT     | SOEX 090408 | 6,25                | 32501 |
| KUB-Q.3D.1312.R.12.C1250-EF | U12 23332 | 1.312      | 1.250          | 1.540      | 8.407       | 4.016      | 5.157       | 1/4" NPT     | SOEX 120508 | 6,25                | 33301 |
| KUB-Q.3D.1328.R.12.C1250-EF | U12 23372 | 1.328      | 1.250          | 1.540      | 8.407       | 4.016      | 5.157       | 1/4" NPT     | SOEX 120508 | 6,25                | 33701 |
| KUB-Q.3D.1375.R.12.C1250-EF | U12 23492 | 1.375      | 1.250          | 1.540      | 8.526       | 4.134      | 5.276       | 1/4" NPT     | SOEX 120508 | 6,25                | 34901 |
| KUB-Q.3D.1406.R.12.C1250-EF | U12 23572 | 1.406      | 1.250          | 1.540      | 8.644       | 4.252      | 5.394       | 1/4" NPT     | SOEX 120508 | 6,25                | 35701 |
| KUB-Q.3D.1437.R.12.C1250-E  | U12 23652 | 1.437      | 1.250          | 1.540      | 9.156       | 4.370      | 5.906       | 1/4" NPT     | SOEX 120508 | 6,25                | 36501 |
| KUB-Q.3D.1469.R.12.C1250-EF | U12 23732 | 1.469      | 1.250          | 1.540      | 9.274       | 4.488      | 6.024       | 1/4" NPT     | SOEX 120508 | 6,25                | 37301 |
| KUB-Q.3D.1500.R.12.C1250-EF | U12 23812 | 1.500      | 1.250          | 1.540      | 9.392       | 4.606      | 6.142       | 1/4" NPT     | SOEX 120508 | 6,25                | 38101 |
| KUB-Q.3D.1531.R.12.C1250-EF | U12 23892 | 1.531      | 1.250          | 1.540      | 9.392       | 4.606      | 6.142       | 1/4" NPT     | SOEX 120508 | 6,25                | 38901 |
| KUB-Q.3D.1562.R.12.C1250-EF | U12 23972 | 1.562      | 1.250          | 1.540      | 9.510       | 4.724      | 6.260       | 1/4" NPT     | SOEX 120508 | 6,25                | 39701 |
| KUB-Q.3D.1625.R.12.C1250-EF | U12 24132 | 1.625      | 1.250          | 1.540      | 9.746       | 4.961      | 6.496       | 1/4" NPT     | SOEX 120508 | 6,25                | 41301 |
| KUB-Q.3D.1656.R.12.C1250-EF | U12 24212 | 1.656      | 1.250          | 1.540      | 9.864       | 5.079      | 6.614       | 1/4" NPT     | SOEX 120508 | 6,25                | 42101 |
| KUB-Q.3D.1687.R.12.C1250-EF | U12 24292 | 1.687      | 1.250          | 1.540      | 9.864       | 5.079      | 6.614       | 1/4" NPT     | SOEX 120508 | 6,25                | 42801 |
| KUB-Q.3D.1750.R.12.C1250-EF | U12 24452 | 1.750      | 1.250          | 1.540      | 9.982       | 5.197      | 6.732       | 1/4" NPT     | SOEX 120508 | 6,25                | 44501 |



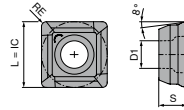
Spare parts

| DC            | 80 950 ... | 10 950 ... |
|---------------|------------|------------|
| 0.562 - 0.687 | 123        | 10000      |
| 0.703 - 0.843 | 123        | 10700      |
| 0.875 - 1.062 | 125        | 10800      |
| 1.109 - 1.281 | 128        | 10300      |
| 1.312 - 1.750 | 129        | 10400      |

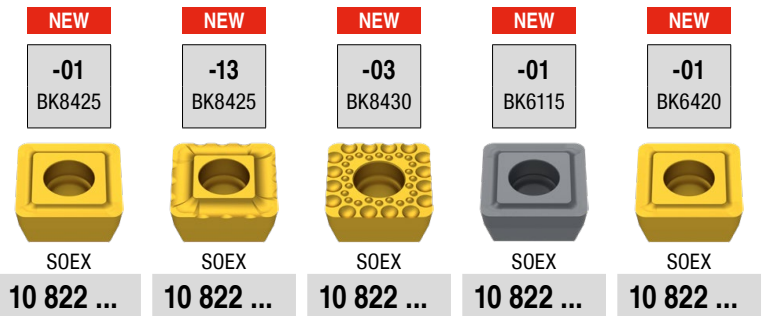


# SOEX

| Designation | L<br>inch | IC<br>inch | D1<br>inch | S<br>inch |
|-------------|-----------|------------|------------|-----------|
| SOEX 0502.. | 0.218     | 0.218      | 0.090      | 0.093     |
| SOEX 0603.. | 0.250     | 0.250      | 0.104      | 0.125     |
| SOEX 07T3.. | 0.312     | 0.312      | 0.112      | 0.140     |
| SOEX 0904.. | 0.374     | 0.374      | 0.161      | 0.172     |
| SOEX 1205.. | 0.500     | 0.500      | 0.204      | 0.203     |



# SOEX

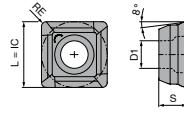


| ISO    | KOMET no.        | RE<br>inch | 10 822 ... | 10 822 ... | 10 822 ... | 10 822 ... | 10 822 ... |
|--------|------------------|------------|------------|------------|------------|------------|------------|
| 050204 | W83 13000.016115 | 0.016      |            |            |            |            | 40501      |
| 050204 | W83 13010.046420 | 0.016      |            |            |            |            | 45501      |
| 050204 | W83 13010.048425 | 0.016      | 30501      |            |            |            |            |
| 050204 | W83 13030.048430 | 0.016      |            |            | 00503      |            |            |
| 050204 | W83 13130.048425 | 0.016      |            | 30513      |            |            |            |
| 060306 | W83 18000.096115 | 0.024      |            |            |            |            | 40601      |
| 060306 | W83 18010.066420 | 0.024      |            |            |            |            | 45601      |
| 060306 | W83 18010.068425 | 0.024      | 30601      |            |            |            |            |
| 060306 | W83 18030.068430 | 0.024      |            |            | 00603      |            |            |
| 060306 | W83 18130.068425 | 0.024      |            | 30613      |            |            |            |
| 07T308 | W83 23000.016115 | 0.031      |            |            |            |            | 40701      |
| 07T308 | W83 23010.086420 | 0.031      |            |            |            |            | 45701      |
| 07T308 | W83 23010.088425 | 0.031      | 30701      |            |            |            |            |
| 07T308 | W83 23030.088430 | 0.031      |            |            | 00703      |            |            |
| 07T308 | W83 23130.088425 | 0.031      |            | 30713      |            |            |            |
| 090408 | W83 32000.156115 | 0.031      |            |            |            |            | 40901      |
| 090408 | W83 32010.086420 | 0.031      |            |            |            |            | 45901      |
| 090408 | W83 32010.088425 | 0.031      | 30901      |            |            |            |            |
| 090408 | W83 32030.088430 | 0.031      |            |            | 00903      |            |            |
| 090408 | W83 32130.088425 | 0.031      |            | 30913      |            |            |            |
| 120508 | W83 44000.186115 | 0.031      |            |            |            |            | 41201      |
| 120508 | W83 44010.086420 | 0.031      |            |            |            |            | 46201      |
| 120508 | W83 44010.088425 | 0.031      | 31201      |            |            |            |            |
| 120508 | W83 44030.088430 | 0.031      |            |            | 01203      |            |            |
| 120508 | W83 44130.088425 | 0.031      |            | 31213      |            |            |            |
| P      |                  |            | ●          | ●          | ●          | ●          | ●          |
| M      |                  |            | ●          | ●          | ●          | ●          | ●          |
| K      |                  |            | ●          | ●          | ●          | ●          | ○          |
| N      |                  |            | ○          | ○          | ○          | ○          | ○          |
| S      |                  |            | ●          | ●          | ●          | ●          | ●          |
| H      |                  |            | ○          | ○          | ○          | ○          | ○          |
| O      |                  |            |            |            |            |            |            |

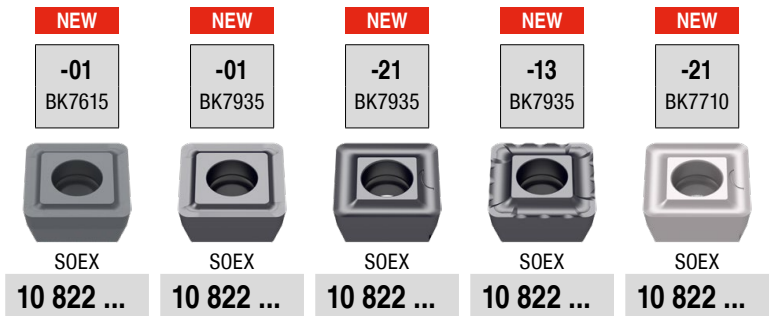
→ v<sub>c</sub> Page 46-47

# SOEX

| Designation | L<br>inch | IC<br>inch | D1<br>inch | S<br>inch |
|-------------|-----------|------------|------------|-----------|
| SOEX 0502.. | 0.218     | 0.218      | 0.090      | 0.093     |
| SOEX 0603.. | 0.250     | 0.250      | 0.104      | 0.125     |
| SOEX 07T3.. | 0.312     | 0.312      | 0.112      | 0.140     |
| SOEX 0904.. | 0.374     | 0.374      | 0.161      | 0.172     |
| SOEX 1205.. | 0.500     | 0.500      | 0.204      | 0.203     |



# SOEX



| ISO    | KOMET no.        | RE<br>inch | 10 822 ... | 10 822 ... | 10 822 ... | 10 822 ... | 10 822 ... |
|--------|------------------|------------|------------|------------|------------|------------|------------|
| 050204 | W83 13010.047615 | 0.016      | 05501      |            |            |            |            |
| 050204 | W83 13010.047935 | 0.016      |            | 50501      |            |            |            |
| 050204 | W83 13130.047935 | 0.016      |            |            |            | 50513      |            |
| 050204 | W83 13210.047710 | 0.016      |            |            |            |            | 90521      |
| 050204 | W83 13210.047935 | 0.016      |            |            | 50521      |            |            |
| 060306 | W83 18010.067615 | 0.024      | 05601      |            |            |            |            |
| 060306 | W83 18010.067935 | 0.024      |            | 50601      |            |            |            |
| 060306 | W83 18130.067935 | 0.024      |            |            |            | 50613      |            |
| 060306 | W83 18210.067710 | 0.024      |            |            |            |            | 90621      |
| 060306 | W83 18210.067935 | 0.024      |            |            | 51621      |            |            |
| 07T308 | W83 23010.087615 | 0.031      | 05701      |            |            |            |            |
| 07T308 | W83 23010.087935 | 0.031      |            | 50701      |            |            |            |
| 07T308 | W83 23130.087935 | 0.031      |            |            |            | 50713      |            |
| 07T308 | W83 23210.087710 | 0.031      |            |            |            |            | 90721      |
| 07T308 | W83 23210.087935 | 0.031      |            |            | 50721      |            |            |
| 090408 | W83 32010.087615 | 0.031      | 05901      |            |            |            |            |
| 090408 | W83 32010.087935 | 0.031      |            | 50901      |            |            |            |
| 090408 | W83 32130.087935 | 0.031      |            |            |            | 50913      |            |
| 090408 | W83 32210.087710 | 0.031      |            |            |            |            | 90921      |
| 090408 | W83 32210.087935 | 0.031      |            |            | 50921      |            |            |
| 120508 | W83 44010.087615 | 0.031      | 06201      |            |            |            |            |
| 120508 | W83 44010.087935 | 0.031      |            | 51201      |            |            |            |
| 120508 | W83 44130.087935 | 0.031      |            |            |            | 51213      |            |
| 120508 | W83 44210.087710 | 0.031      |            |            |            |            | 91221      |
| 120508 | W83 44210.087935 | 0.031      |            |            | 51221      |            |            |

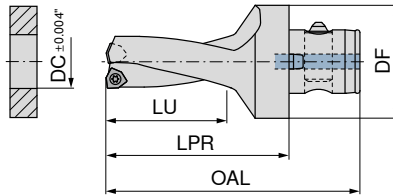
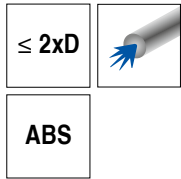
|   |   |   |   |     |
|---|---|---|---|-----|
| P |   | ● | ● | ●   |
| M |   | ● | ● | ●   |
| K | ● | ● | ● | ●   |
| N |   | ○ | ○ | ○ ● |
| S |   | ● | ● | ● ○ |
| H |   |   |   |     |
| O |   | ○ | ○ | ○ ○ |

→ v<sub>c</sub> Page 46-47

# KUB Trigon – Indexable insert drill

**Scope of supply:**

Indexable Insert Drill incl. clamping screws

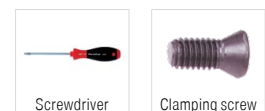


**NEW**



**15 892 ...**

| Designation                  | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm |       |
|------------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|-------|
| KUB-T-U.2D.0562.R.03.ABS50-F | V40 11430 | 0.562      | 1.969      | 3.780       | 1.181      | 2.559       | WOEX 030204 | 0,62                | 14395 |
| KUB-T-U.2D.0593.R.03.ABS50-F | V40 11510 | 0.593      | 1.969      | 3.858       | 1.260      | 2.638       | WOEX 030204 | 0,62                | 15195 |
| KUB-T-U.2D.0625.R.03.ABS50-F | V40 11590 | 0.625      | 1.969      | 3.858       | 1.260      | 2.638       | WOEX 030204 | 0,62                | 15995 |
| KUB-T-U.2D.0687.R.03.ABS50-F | V40 11750 | 0.687      | 1.969      | 4.016       | 1.417      | 2.795       | WOEX 030204 | 0,62                | 17595 |
| KUB-T-U.2D.0703.R.03.ABS50-F | V40 11790 | 0.703      | 1.969      | 4.016       | 1.417      | 2.559       | WOEX 030204 | 0,62                | 17995 |
| KUB-T-U.2D.0750.R.03.ABS50-F | V40 11910 | 0.750      | 1.969      | 4.173       | 1.575      | 2.638       | WOEX 030204 | 0,62                | 19195 |
| KUB-T-U.2D.0781.R.03.ABS50-F | V40 11980 | 0.781      | 1.969      | 4.173       | 1.575      | 2.638       | WOEX 030204 | 0,62                | 19895 |
| KUB-T-U.2D.0812.R.04.ABS50-F | V40 12060 | 0.812      | 1.969      | 4.252       | 1.654      | 2.795       | WOEX 040304 | 1,01                | 20695 |
| KUB-T-U.2D.0828.R.04.ABS50-F | V40 12100 | 0.828      | 1.969      | 4.252       | 1.654      | 2.795       | WOEX 040304 | 1,01                | 21095 |
| KUB-T-U.2D.0875.R.04.ABS50-F | V40 12220 | 0.875      | 1.969      | 4.409       | 1.811      | 2.953       | WOEX 040304 | 1,01                | 22295 |
| KUB-T-U.2D.0937.R.04.ABS50-F | V40 12380 | 0.937      | 1.969      | 4.488       | 1.890      | 2.953       | WOEX 040304 | 1,01                | 23895 |
| KUB-T-U.2D.1000.R.05.ABS50-F | V40 12540 | 1.000      | 1.969      | 4.646       | 2.047      | 3.031       | WOEX 05T304 | 1,28                | 25495 |
| KUB-T-U.2D.1031.R.05.ABS50-F | V40 12620 | 1.031      | 1.969      | 4.724       | 2.126      | 3.031       | WOEX 05T304 | 1,28                | 26295 |
| KUB-T-U.2D.1062.R.05.ABS50-F | V40 12700 | 1.062      | 1.969      | 4.724       | 2.126      | 3.189       | WOEX 05T304 | 1,28                | 27095 |
| KUB-T-U.2D.1109.R.05.ABS50-F | V40 12820 | 1.109      | 1.969      | 4.882       | 2.283      | 3.268       | WOEX 05T304 | 1,28                | 28295 |
| KUB-T-U.2D.1125.R.05.ABS50-F | V40 12860 | 1.125      | 1.969      | 4.882       | 2.283      | 3.425       | WOEX 05T304 | 1,28                | 28695 |
| KUB-T-U.2D.1156.R.05.ABS50-F | V40 12940 | 1.156      | 1.969      | 4.961       | 2.362      | 3.504       | WOEX 05T304 | 1,28                | 29495 |
| KUB-T-U.2D.1187.R.05.ABS50-F | V40 13010 | 1.187      | 1.969      | 5.236       | 2.441      | 3.504       | WOEX 05T304 | 1,28                | 30195 |
| KUB-T-U.2D.1218.R.05.ABS50-F | V40 13090 | 1.218      | 1.969      | 5.236       | 2.441      | 3.661       | WOEX 05T304 | 1,28                | 30995 |
| KUB-T-U.2D.1250.R.05.ABS50-F | V40 13180 | 1.250      | 1.969      | 5.315       | 2.520      | 3.661       | WOEX 05T304 | 1,28                | 31895 |
| KUB-T-U.2D.1281.R.05.ABS50-F | V40 13250 | 1.281      | 1.969      | 5.394       | 2.598      | 3.740       | WOEX 05T304 | 1,28                | 32595 |
| KUB-T-U.2D.1312.R.05.ABS50-F | V40 13330 | 1.312      | 1.969      | 5.472       | 2.677      | 4.016       | WOEX 05T304 | 1,28                | 33395 |
| KUB-T-U.2D.1328.R.05.ABS50-F | V40 13370 | 1.328      | 1.969      | 5.472       | 2.677      | 4.016       | WOEX 05T304 | 1,28                | 33795 |
| KUB-T-U.2D.1375.R.05.ABS50-F | V40 13490 | 1.375      | 1.969      | 5.551       | 2.756      | 4.094       | WOEX 05T304 | 1,28                | 34995 |
| KUB-T-U.2D.1406.R.05.ABS50-F | V40 13570 | 1.406      | 1.969      | 5.630       | 2.835      | 4.173       | WOEX 05T304 | 1,28                | 35795 |
| KUB-T-U.2D.1437.R.05.ABS50-F | V40 13650 | 1.437      | 1.969      | 6.102       | 2.913      | 4.252       | WOEX 05T304 | 1,28                | 36595 |
| KUB-T-U.2D.1469.R.06.ABS50-F | V40 13730 | 1.469      | 1.969      | 6.181       | 2.992      | 4.252       | WOEX 06T304 | 2,8                 | 37395 |
| KUB-T-U.2D.1500.R.06.ABS50-F | V40 13810 | 1.500      | 1.969      | 6.260       | 3.071      | 4.331       | WOEX 06T304 | 2,8                 | 38195 |
| KUB-T-U.2D.1531.R.06.ABS50-F | V40 13890 | 1.531      | 1.969      | 6.260       | 3.071      | 4.409       | WOEX 06T304 | 2,8                 | 38995 |
| KUB-T-U.2D.1562.R.06.ABS50-F | V40 13970 | 1.562      | 1.969      | 6.339       | 3.150      | 4.882       | WOEX 06T304 | 2,8                 | 39795 |
| KUB-T-U.2D.1625.R.06.ABS50-F | V40 14130 | 1.625      | 1.969      | 6.496       | 3.307      | 4.961       | WOEX 06T304 | 2,8                 | 41395 |
| KUB-T-U.2D.1656.R.06.ABS50-F | V40 14210 | 1.656      | 1.969      | 6.575       | 3.386      | 5.039       | WOEX 06T304 | 2,8                 | 42195 |
| KUB-T-U.2D.1687.R.06.ABS50-F | V40 14280 | 1.687      | 1.969      | 6.575       | 3.386      | 5.039       | WOEX 06T304 | 2,8                 | 42895 |
| KUB-T-U.2D.1750.R.06.ABS50-F | V40 14450 | 1.750      | 1.969      | 6.689       | 3.500      | 5.118       | WOEX 06T304 | 2,8                 | 44595 |



**80 950 ...**

**10 950 ...**

**Spare parts**

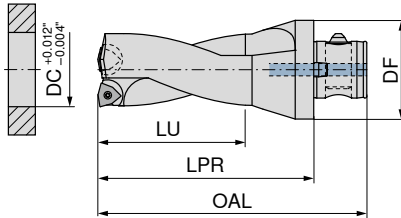
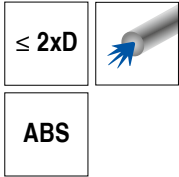
| DC            | 80 950 ... | 10 950 ... |
|---------------|------------|------------|
| 0.562 - 0.781 | 123        | 10000      |
| 0.812 - 0.937 | 123        | 10700      |
| 1.000 - 1.437 | 125        | 10500      |
| 1.469 - 1.750 | 127        | 10600      |

Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

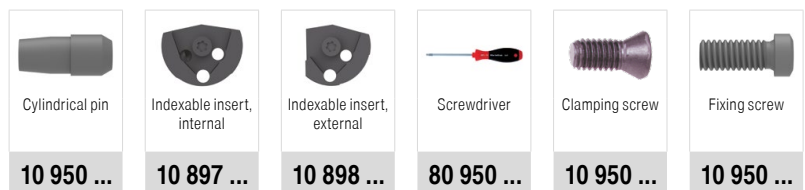
# KUB Trigon – Indexable insert drill

**Scope of supply:**

with indexable insert (10 897 ...) incl. fixing screw, cylindrical pin and clamping screw  
with indexable insert (10 898 ...) incl. fixing screw, cylindrical pin and clamping screw



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 892 ... | 15 892 ... |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|------------|
|                            |           |            |            |             |            |             |             |                     |            |            |
| KUB-T.2D.1781.R.08.ABS63-F | V13 34520 | 1.781      | 2.480      | 7.224       | 3.562      | 5.728       | WOEX 080404 | 4,3                 |            | 45296      |
| KUB-T.2D.1812.R.08.ABS63   | V13 34600 | 1.811      | 2.480      | 7.283       | 3.622      | 5.787       | WOEX 080404 | 4,3                 | 46096      |            |
| KUB-T.2D.1875.R.08.ABS63-F | V13 34760 | 1.875      | 2.480      | 7.412       | 3.750      | 5.916       | WOEX 080404 | 4,3                 |            | 47696      |
| KUB-T.2D.1937.R.08.ABS63-F | V13 34920 | 1.937      | 2.480      | 7.536       | 3.874      | 6.040       | WOEX 080404 | 4,3                 |            | 49296      |
| KUB-T.2D.1975.R.08.ABS63-F | V13 35020 | 1.975      | 2.480      | 7.612       | 3.950      | 6.116       | WOEX 080404 | 4,3                 |            | 50296      |
| KUB-T.2D.2000.R.08.ABS63-F | V13 35080 | 2.000      | 2.480      | 7.662       | 4.000      | 6.166       | WOEX 080404 | 4,3                 |            | 50896      |
| KUB-T.2D.2062.R.08.ABS63-F | V13 35240 | 2.062      | 2.480      | 7.786       | 4.124      | 6.290       | WOEX 080404 | 4,3                 |            | 52496      |
| KUB-T.2D.2125.R.08.ABS63   | V13 35400 | 2.126      | 2.480      | 7.913       | 4.252      | 6.417       | WOEX 080404 | 4,3                 | 54096      |            |
| KUB-T.2D.2165.R.10.ABS80   | V14 35500 | 2.165      | 3.150      | 8.189       | 4.331      | 6.496       | WOEX 100504 | 4,3                 | 55098      |            |
| KUB-T.2D.2203.R.10.ABS80   | V14 35600 | 2.205      | 3.150      | 8.268       | 4.409      | 6.575       | WOEX 100504 | 4,3                 | 56098      |            |
| KUB-T.2D.2250.R.10.ABS80-F | V14 35720 | 2.250      | 3.150      | 8.359       | 4.500      | 6.666       | WOEX 100504 | 4,3                 |            | 57298      |
| KUB-T.2D.2281.R.10.ABS80-F | V14 35790 | 2.281      | 3.150      | 8.421       | 4.562      | 6.728       | WOEX 100504 | 4,3                 |            | 57998      |
| KUB-T.2D.2375.R.10.ABS80-F | V14 36030 | 2.375      | 3.150      | 8.609       | 4.750      | 6.916       | WOEX 100504 | 4,3                 |            | 60398      |
| KUB-T.2D.2437.R.10.ABS80-F | V14 36190 | 2.437      | 3.150      | 8.733       | 4.874      | 7.040       | WOEX 100504 | 4,3                 |            | 61998      |
| KUB-T.2D.2500.R.10.ABS80-F | V14 36350 | 2.500      | 3.150      | 8.859       | 5.000      | 7.166       | WOEX 100504 | 4,3                 |            | 63598      |
| KUB-T.2D.2593.R.10.ABS80-F | V14 36590 | 2.593      | 3.150      | 9.045       | 5.186      | 7.352       | WOEX 100504 | 4,3                 |            | 65998      |
| KUB-T.2D.2625.R.10.ABS80-F | V14 36670 | 2.625      | 3.150      | 9.109       | 5.250      | 7.416       | WOEX 100504 | 4,3                 |            | 66798      |
| KUB-T.2D.2656.R.10.ABS80-F | V14 36750 | 2.656      | 3.150      | 9.171       | 5.312      | 7.478       | WOEX 100504 | 4,3                 |            | 67598      |
| KUB-T.2D.2750.R.12.ABS80-F | V14 36990 | 2.750      | 3.150      | 9.753       | 5.500      | 8.060       | WOEX 120608 | 6,25                |            | 69998      |
| KUB-T.2D.2875.R.12.ABS80   | V14 37300 | 2.874      | 3.150      | 10.000      | 5.748      | 8.307       | WOEX 120608 | 6,25                | 73098      |            |
| KUB-T.2D.3000.R.12.ABS80-F | V14 37620 | 3.000      | 3.150      | 10.253      | 6.000      | 8.560       | WOEX 120608 | 6,25                |            | 76298      |
| KUB-T.2D.3250.R.12.ABS80-F | V14 38260 | 3.250      | 3.150      | 10.753      | 6.500      | 9.060       | WOEX 120608 | 6,25                |            | 82698      |



**Spare parts**

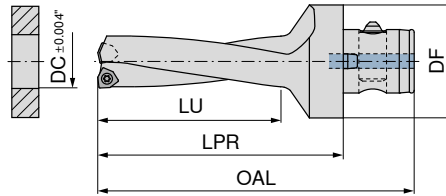
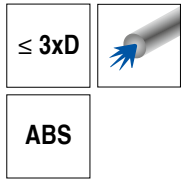
| DC            | 10 950 ... | 10 897 ... | 10 898 ... | 80 950 ... | 10 950 ... | 10 950 ... |
|---------------|------------|------------|------------|------------|------------|------------|
| 1.781 - 2.126 |            | 17200      | 14800      | 120        | 12700      | 17000      |
| 2.165 - 2.656 |            | 17200      | 25300      | 120        | 12700      | 17000      |
| 2.750 - 3.250 |            | 17300      | 36000      | 121        | 17400      | 17100      |

Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Trigon – Indexable insert drill

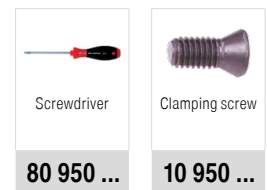
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 893 ...

| Designation                  | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm |       |
|------------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|-------|
| KUB-T-U.3D.0562.R.03.ABS50-F | V40 21430 | 0.562      | 1.969      | 4.370       | 1.772      | 5.276       | WOEX 030204 | 0,62                | 14395 |
| KUB-T-U.3D.0593.R.03.ABS50-F | V40 21510 | 0.593      | 1.969      | 4.488       | 1.890      | 5.354       | WOEX 030204 | 0,62                | 15195 |
| KUB-T-U.3D.0625.R.03.ABS50-F | V40 21590 | 0.625      | 1.969      | 4.488       | 1.890      | 5.354       | WOEX 030204 | 0,62                | 15995 |
| KUB-T-U.3D.0656.R.03.ABS50-F | V40 21670 | 0.656      | 1.969      | 4.606       | 2.008      | 5.469       | WOEX 030204 | 0,62                | 16795 |
| KUB-T-U.3D.0687.R.03.ABS50-F | V40 21750 | 0.687      | 1.969      | 4.724       | 2.126      | 3.150       | WOEX 030204 | 0,62                | 17595 |
| KUB-T-U.3D.0703.R.03.ABS50-F | V40 21790 | 0.703      | 1.969      | 4.724       | 2.126      | 3.268       | WOEX 030204 | 0,62                | 17995 |
| KUB-T-U.3D.0750.R.03.ABS50-F | V40 21910 | 0.750      | 1.969      | 4.961       | 2.362      | 3.268       | WOEX 030204 | 0,62                | 19195 |
| KUB-T-U.3D.0765.R.03.ABS50-F | V40 21940 | 0.765      | 1.969      | 4.961       | 2.362      | 3.386       | WOEX 030204 | 0,62                | 19495 |
| KUB-T-U.3D.0781.R.03.ABS50-F | V40 21980 | 0.781      | 1.969      | 4.961       | 2.362      | 3.504       | WOEX 030204 | 0,62                | 19895 |
| KUB-T-U.3D.0812.R.04.ABS50-F | V40 22060 | 0.812      | 1.969      | 5.079       | 2.480      | 3.504       | WOEX 040304 | 1,01                | 20695 |
| KUB-T-U.3D.0828.R.04.ABS50-F | V40 22100 | 0.828      | 1.969      | 5.079       | 2.480      | 3.740       | WOEX 040304 | 1,01                | 21095 |
| KUB-T-U.3D.0875.R.04.ABS50-F | V40 22220 | 0.875      | 1.969      | 5.315       | 2.717      | 3.740       | WOEX 040304 | 1,01                | 22295 |
| KUB-T-U.3D.0937.R.04.ABS50-F | V40 22380 | 0.937      | 1.969      | 5.433       | 2.835      | 3.740       | WOEX 040304 | 1,01                | 23895 |
| KUB-T-U.3D.0985.R.04.ABS50-F | V40 22500 | 0.985      | 1.969      | 5.551       | 2.953      | 3.858       | WOEX 040304 | 1,01                | 25095 |
| KUB-T-U.3D.1000.R.05.ABS50-F | V40 22540 | 1.000      | 1.969      | 5.669       | 3.071      | 3.858       | WOEX 05T304 | 1,28                | 25495 |
| KUB-T-U.3D.1031.R.05.ABS50-F | V40 22620 | 1.031      | 1.969      | 5.787       | 3.189      | 4.094       | WOEX 05T304 | 1,28                | 26295 |
| KUB-T-U.3D.1062.R.05.ABS50-F | V40 22700 | 1.062      | 1.969      | 5.787       | 3.189      | 4.213       | WOEX 05T304 | 1,28                | 27095 |
| KUB-T-U.3D.1109.R.05.ABS50-F | V40 22820 | 1.109      | 1.969      | 6.024       | 3.425      | 4.331       | WOEX 05T304 | 1,28                | 28295 |
| KUB-T-U.3D.1125.R.05.ABS50-F | V40 22860 | 1.125      | 1.969      | 6.024       | 3.425      | 4.449       | WOEX 05T304 | 1,28                | 28695 |
| KUB-T-U.3D.1156.R.05.ABS50-F | V40 22940 | 1.156      | 1.969      | 6.142       | 3.543      | 4.567       | WOEX 05T304 | 1,28                | 29495 |
| KUB-T-U.3D.1187.R.05.ABS50-F | V40 23010 | 1.187      | 1.969      | 6.457       | 3.661      | 4.567       | WOEX 05T304 | 1,28                | 30195 |
| KUB-T-U.3D.1218.R.05.ABS50-F | V40 23090 | 1.218      | 1.969      | 6.457       | 3.661      | 4.803       | WOEX 05T304 | 1,28                | 30995 |
| KUB-T-U.3D.1250.R.05.ABS50-F | V40 23180 | 1.250      | 1.969      | 6.575       | 3.780      | 4.803       | WOEX 05T304 | 1,28                | 31895 |
| KUB-T-U.3D.1281.R.05.ABS50-F | V40 23250 | 1.281      | 1.969      | 6.693       | 3.898      | 4.921       | WOEX 05T304 | 1,28                | 32595 |
| KUB-T-U.3D.1312.R.05.ABS50-F | V40 23330 | 1.312      | 1.969      | 6.811       | 4.016      | 5.236       | WOEX 05T304 | 1,28                | 33395 |
| KUB-T-U.3D.1328.R.05.ABS50-F | V40 23370 | 1.328      | 1.969      | 6.811       | 4.016      | 5.236       | WOEX 05T304 | 1,28                | 33795 |
| KUB-T-U.3D.1375.R.05.ABS50-F | V40 23490 | 1.375      | 1.969      | 6.929       | 4.134      | 5.354       | WOEX 05T304 | 1,28                | 34995 |
| KUB-T-U.3D.1406.R.05.ABS50-F | V40 23570 | 1.406      | 1.969      | 7.047       | 4.252      | 5.472       | WOEX 05T304 | 1,28                | 35795 |
| KUB-T-U.3D.1437.R.05.ABS50-F | V40 23650 | 1.437      | 1.969      | 7.559       | 4.370      | 5.591       | WOEX 05T304 | 1,28                | 36595 |
| KUB-T-U.3D.1469.R.06.ABS50-F | V40 23730 | 1.469      | 1.969      | 7.677       | 4.488      | 5.591       | WOEX 06T304 | 2,8                 | 37395 |
| KUB-T-U.3D.1500.R.06.ABS50-F | V40 23810 | 1.500      | 1.969      | 7.795       | 4.606      | 5.709       | WOEX 06T304 | 2,8                 | 38195 |
| KUB-T-U.3D.1531.R.06.ABS50-F | V40 23890 | 1.531      | 1.969      | 7.795       | 4.606      | 5.827       | WOEX 06T304 | 2,8                 | 38995 |
| KUB-T-U.3D.1562.R.06.ABS50-F | V40 23970 | 1.562      | 1.969      | 7.913       | 4.724      | 6.339       | WOEX 06T304 | 2,8                 | 39795 |
| KUB-T-U.3D.1625.R.06.ABS50-F | V40 24130 | 1.625      | 1.969      | 8.150       | 4.961      | 6.457       | WOEX 06T304 | 2,8                 | 41395 |
| KUB-T-U.3D.1656.R.06.ABS50-F | V40 24210 | 1.656      | 1.969      | 8.268       | 5.079      | 6.575       | WOEX 06T304 | 2,8                 | 42195 |
| KUB-T-U.3D.1687.R.06.ABS50-F | V40 24280 | 1.687      | 1.969      | 8.268       | 5.079      | 6.575       | WOEX 06T304 | 2,8                 | 42895 |
| KUB-T-U.3D.1750.R.06.ABS50-F | V40 24450 | 1.750      | 1.969      | 8.439       | 5.250      | 6.693       | WOEX 06T304 | 2,8                 | 44595 |



**Spare parts**

| DC            | 80 950 ... | 10 950 ... |
|---------------|------------|------------|
| 0.562 - 0.781 | 123        | 10000      |
| 0.812 - 0.985 | 123        | 10700      |
| 1.000 - 1.437 | 125        | 10500      |
| 1.469 - 1.750 | 127        | 10600      |

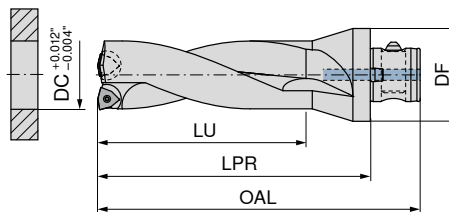
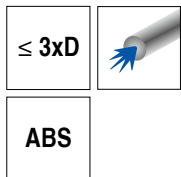
Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Trigon – Indexable insert drill

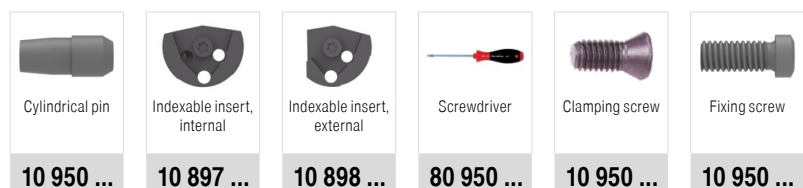
▲ Tightening torque refers to clamping screw

### Scope of supply:

with indexable insert (10 897 ...) incl. fixing screw, cylindrical pin and clamping screw  
with indexable insert (10 898 ...) incl. fixing screw, cylindrical pin and clamping screw



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 893 ... | 15 893 ... |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|------------|
|                            |           |            |            |             |            |             |             |                     |            |            |
| KUB-T.3D.1781.R.08.ABS63-F | V13 74520 | 1.781      | 2.480      | 9.005       | 5.343      | 7.509       | WOEX 080404 | 4,3                 | 46096      | 45296      |
| KUB-T.3D.1812.R.08.ABS63   | V13 74600 | 1.811      | 2.480      | 9.094       | 5.433      | 7.598       | WOEX 080404 | 4,3                 |            |            |
| KUB-T.3D.1875.R.08.ABS63-F | V13 74760 | 1.875      | 2.480      | 9.287       | 5.625      | 7.791       | WOEX 080404 | 4,3                 |            |            |
| KUB-T.3D.1937.R.08.ABS63-F | V13 74920 | 1.937      | 2.480      | 9.473       | 5.811      | 7.977       | WOEX 080404 | 4,3                 |            |            |
| KUB-T.3D.1975.R.08.ABS63-F | V13 75020 | 1.975      | 2.480      | 9.587       | 5.925      | 8.091       | WOEX 080404 | 4,3                 |            |            |
| KUB-T.3D.2000.R.08.ABS63-F | V13 75080 | 2.000      | 2.480      | 9.662       | 6.000      | 8.166       | WOEX 080404 | 4,3                 |            |            |
| KUB-T.3D.2062.R.08.ABS63-F | V13 75240 | 2.062      | 2.480      | 10.028      | 6.186      | 8.532       | WOEX 080404 | 4,3                 | 54096      | 50896      |
| KUB-T.3D.2125.R.08.ABS63   | V13 75400 | 2.126      | 2.480      | 10.039      | 6.378      | 8.543       | WOEX 080404 | 4,3                 |            |            |
| KUB-T.3D.2165.R.10.ABS80   | V14 75500 | 2.165      | 3.150      | 10.354      | 6.496      | 8.661       | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2203.R.10.ABS80   | V14 75600 | 2.205      | 3.150      | 10.472      | 6.614      | 8.780       | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2250.R.10.ABS80-F | V14 75720 | 2.250      | 3.150      | 10.609      | 6.750      | 8.916       | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2281.R.10.ABS80-F | V14 75790 | 2.281      | 3.150      | 10.702      | 6.843      | 9.009       | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2375.R.10.ABS80-F | V14 76030 | 2.375      | 3.150      | 10.984      | 7.125      | 9.291       | WOEX 100504 | 4,3                 | 55098      | 57298      |
| KUB-T.3D.2437.R.10.ABS80-F | V14 76190 | 2.437      | 3.150      | 11.170      | 7.311      | 9.477       | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2500.R.10.ABS80-F | V14 76350 | 2.500      | 3.150      | 11.359      | 7.500      | 9.666       | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2593.R.10.ABS80-F | V14 76590 | 2.593      | 3.150      | 11.638      | 7.779      | 9.945       | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2625.R.10.ABS80-F | V14 76670 | 2.625      | 3.150      | 11.734      | 7.875      | 10.041      | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2656.R.10.ABS80-F | V14 76750 | 2.656      | 3.150      | 11.827      | 7.968      | 10.134      | WOEX 100504 | 4,3                 |            |            |
| KUB-T.3D.2750.R.12.ABS80-F | V14 76990 | 2.750      | 3.150      | 12.503      | 8.250      | 10.810      | WOEX 120608 | 6,25                | 73098      | 69998      |
| KUB-T.3D.2875.R.12.ABS80   | V14 77300 | 2.874      | 3.150      | 12.874      | 8.622      | 11.181      | WOEX 120608 | 6,25                |            |            |
| KUB-T.3D.3000.R.12.ABS80-F | V14 77620 | 3.000      | 3.150      | 13.253      | 9.000      | 11.560      | WOEX 120608 | 6,25                |            |            |
| KUB-T.3D.3250.R.12.ABS80-F | V14 78260 | 3.250      | 3.150      | 14.003      | 9.750      | 12.310      | WOEX 120608 | 6,25                |            |            |



### Spare parts

| DC            | 10 950 ... | 10 897 ... | 10 898 ... | 80 950 ... | 10 950 ... | 10 950 ... |
|---------------|------------|------------|------------|------------|------------|------------|
| 1.781 - 2.126 | 17200      | 14800      | 14800      | 120        | 12700      | 17000      |
| 2.165 - 2.656 | 17200      | 25300      | 25300      | 120        | 12700      | 17000      |
| 2.750 - 3.250 | 17300      | 36000      | 36000      | 121        | 17400      | 17100      |

Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

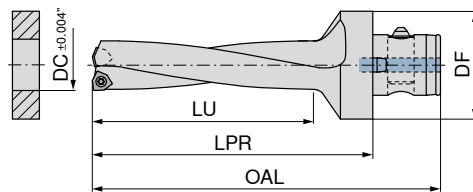
# KUB Trigon – Indexable insert drill

**Scope of supply:**

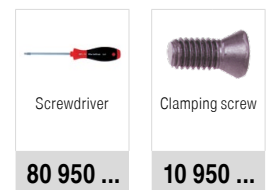
Indexable Insert Drill incl. clamping screws



**ABS**



| Designation                | KOMET no. | DC<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | Insert      | torque moment<br>Nm | 10 894 ... |  | 15 894 ... |       |
|----------------------------|-----------|------------|------------|-------------|------------|-------------|-------------|---------------------|------------|--|------------|-------|
|                            |           |            |            |             |            |             |             |                     |            |  |            |       |
| KUB-T.4D.0562.R.03.ABS50-F | V30 91431 | 0.562      | 1.969      | 4.955       | 2.358      | 3.735       | WOEX 030204 | 0,62                |            |  |            | 14395 |
| KUB-T.4D.0593.R.03.ABS50-F | V30 91511 | 0.593      | 1.969      | 5.112       | 2.514      | 3.892       | WOEX 030204 | 0,62                |            |  |            | 15195 |
| KUB-T.4D.0625.R.03.ABS50-F | V30 91591 | 0.625      | 1.969      | 5.114       | 2.516      | 3.894       | WOEX 030204 | 0,62                |            |  |            | 15995 |
| KUB-T.4D.0656.R.03.ABS50-F | V30 91671 | 0.656      | 1.969      | 5.269       | 2.671      | 4.049       | WOEX 030204 | 0,62                |            |  |            | 16795 |
| KUB-T.4D.0687.R.03.ABS50-F | V30 91751 | 0.687      | 1.969      | 5.425       | 2.827      | 4.205       | WOEX 030204 | 0,62                |            |  |            | 17595 |
| KUB-T.4D.0703.R.03.ABS50-F | V30 91791 | 0.703      | 1.969      | 5.425       | 2.828      | 4.205       | WOEX 030204 | 0,62                |            |  |            | 17995 |
| KUB-T.4D.0750.R.03.ABS50-F | V30 91911 | 0.750      | 1.969      | 5.740       | 3.142      | 4.520       | WOEX 030204 | 0,62                |            |  |            | 19195 |
| KUB-T.4D.0765.R.03.ABS50-F | V30 91941 | 0.765      | 1.969      | 5.752       | 3.154      | 4.532       | WOEX 030204 | 0,62                |            |  |            | 19495 |
| KUB-T.4D.0781.R.03.ABS50-F | V30 91981 | 0.781      | 1.969      | 5.753       | 3.155      | 4.533       | WOEX 030204 | 0,62                |            |  |            | 19895 |
| KUB-T.4D.0812.R.04.ABS50-F | V30 92061 | 0.812      | 1.969      | 5.909       | 3.311      | 4.689       | WOEX 040304 | 1,01                |            |  |            | 20695 |
| KUB-T.4D.0828.R.04.ABS50   | V30 92101 | 0.827      | 1.969      | 5.906       | 3.307      | 4.685       | WOEX 040304 | 1,01                | 21095      |  |            |       |
| KUB-T.4D.0875.R.04.ABS50-F | V30 92221 | 0.875      | 1.969      | 6.224       | 3.626      | 5.004       | WOEX 040304 | 1,01                |            |  |            | 22295 |
| KUB-T.4D.0937.R.04.ABS50-F | V30 92381 | 0.937      | 1.969      | 6.377       | 3.779      | 5.157       | WOEX 040304 | 1,01                |            |  |            | 23895 |
| KUB-T.4D.0985.R.05.ABS50   | V30 92501 | 0.984      | 1.969      | 6.535       | 3.937      | 5.315       | WOEX 05T304 | 1,28                | 25095      |  |            |       |
| KUB-T.4D.1000.R.05.ABS50-F | V30 92541 | 1.000      | 1.969      | 6.692       | 4.094      | 5.472       | WOEX 05T304 | 1,28                |            |  |            | 25495 |
| KUB-T.4D.1031.R.05.ABS50-F | V30 92621 | 1.031      | 1.969      | 6.848       | 4.250      | 5.628       | WOEX 05T304 | 1,28                |            |  |            | 26295 |
| KUB-T.4D.1062.R.05.ABS50   | V30 92701 | 1.063      | 1.969      | 6.850       | 4.252      | 5.630       | WOEX 05T304 | 1,28                | 27095      |  |            |       |
| KUB-T.4D.1109.R.05.ABS50-F | V30 92821 | 1.109      | 1.969      | 7.160       | 4.562      | 5.940       | WOEX 05T304 | 1,28                |            |  |            | 28295 |
| KUB-T.4D.1125.R.05.ABS50-F | V30 92861 | 1.125      | 1.969      | 7.161       | 4.563      | 5.941       | WOEX 05T304 | 1,28                |            |  |            | 28695 |
| KUB-T.4D.1156.R.05.ABS50-F | V30 92941 | 1.156      | 1.969      | 7.316       | 4.718      | 6.096       | WOEX 05T304 | 1,28                |            |  |            | 29495 |
| KUB-T.4D.1187.R.05.ABS50-F | V30 93021 | 1.187      | 1.969      | 7.685       | 4.874      | 6.465       | WOEX 05T304 | 1,28                |            |  |            | 30195 |
| KUB-T.4D.1218.R.05.ABS50-F | V30 93091 | 1.218      | 1.969      | 7.699       | 4.888      | 6.479       | WOEX 05T304 | 1,28                |            |  |            | 30995 |
| KUB-T.4D.1250.R.05.ABS50-F | V30 93181 | 1.250      | 1.969      | 7.842       | 5.031      | 6.622       | WOEX 05T304 | 1,28                |            |  |            | 31895 |
| KUB-T.4D.1281.R.05.ABS50-F | V30 93251 | 1.281      | 1.969      | 8.014       | 5.203      | 6.794       | WOEX 05T304 | 1,28                |            |  |            | 32595 |
| KUB-T.4D.1312.R.05.ABS50-F | V30 93331 | 1.312      | 1.969      | 8.161       | 5.350      | 6.941       | WOEX 05T304 | 1,28                |            |  |            | 33395 |
| KUB-T.4D.1328.R.05.ABS50-F | V30 93371 | 1.328      | 1.969      | 8.170       | 5.359      | 6.950       | WOEX 05T304 | 1,28                |            |  |            | 33795 |
| KUB-T.4D.1375.R.05.ABS50-F | V30 93491 | 1.375      | 1.969      | 8.327       | 5.516      | 7.107       | WOEX 05T304 | 1,28                |            |  |            | 34995 |
| KUB-T.4D.1406.R.05.ABS50-F | V30 93571 | 1.406      | 1.969      | 8.482       | 5.671      | 7.262       | WOEX 05T304 | 1,28                |            |  |            | 35795 |
| KUB-T.4D.1437.R.05.ABS50-F | V30 93651 | 1.437      | 1.969      | 8.638       | 5.827      | 7.418       | WOEX 05T304 | 1,28                |            |  |            | 36595 |
| KUB-T.4D.1469.R.06.ABS50-F | V30 93731 | 1.469      | 1.969      | 9.175       | 5.986      | 7.955       | WOEX 06T304 | 2,8                 |            |  |            | 37395 |
| KUB-T.4D.1500.R.06.ABS50-F | V30 93811 | 1.500      | 1.969      | 9.331       | 6.142      | 8.111       | WOEX 06T304 | 2,8                 |            |  |            | 38195 |
| KUB-T.4D.1531.R.06.ABS50-F | V30 93891 | 1.531      | 1.969      | 9.329       | 6.140      | 8.109       | WOEX 06T304 | 2,8                 |            |  |            | 38995 |
| KUB-T.4D.1562.R.06.ABS50-F | V30 93971 | 1.562      | 1.969      | 9.484       | 6.295      | 8.264       | WOEX 06T304 | 2,8                 |            |  |            | 39795 |
| KUB-T.4D.1625.R.06.ABS50-F | V30 94131 | 1.625      | 1.969      | 9.799       | 6.610      | 8.579       | WOEX 06T304 | 2,8                 |            |  |            | 41395 |
| KUB-T.4D.1656.R.06.ABS50-F | V30 94211 | 1.656      | 1.969      | 9.955       | 6.766      | 8.735       | WOEX 06T304 | 2,8                 |            |  |            | 42195 |
| KUB-T.4D.1687.R.06.ABS50-F | V30 94291 | 1.687      | 1.969      | 9.953       | 6.764      | 8.733       | WOEX 06T304 | 2,8                 |            |  |            | 42895 |
| KUB-T.4D.1750.R.06.ABS50-F | V30 94451 | 1.750      | 1.969      | 10.268      | 7.079      | 9.048       | WOEX 06T304 | 2,8                 |            |  |            | 44595 |



**Spare parts**  
**DC**

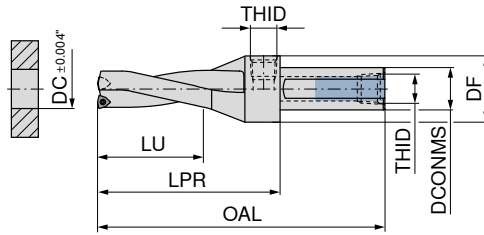
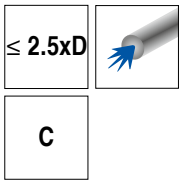
|               |     |       |
|---------------|-----|-------|
| 0.562 - 0.781 | 123 | 10000 |
| 0.812 - 0.937 | 123 | 10700 |
| 0.984 - 1.437 | 125 | 10500 |
| 1.469 - 1.750 | 127 | 10600 |

Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Trigon – Indexable insert drill

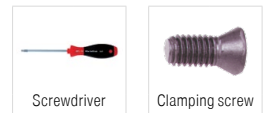
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 896 ...

| Designation                   | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-------------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-T.2,5D.0562.R.03.C0750-EF | V57 41432 | 0.562      | 0.750          | 1.130      | 5.125       | 1.405      | 2.875       | 1/8" NPT     | WOEX 030204 | 0,62                | 14309 |
| KUB-T.2,5D.0593.R.03.C0750-EF | V57 41510 | 0.593      | 0.750          | 1.130      | 5.125       | 1.483      | 2.875       | 1/8" NPT     | WOEX 030204 | 0,62                | 15109 |
| KUB-T.2,5D.0625.R.03.C0750-EF | V57 41590 | 0.625      | 0.750          | 1.130      | 5.125       | 1.563      | 2.875       | 1/8" NPT     | WOEX 030204 | 0,62                | 15909 |
| KUB-T.2,5D.0687.R.03.C0750-E  | V57 41750 | 0.687      | 0.750          | 1.130      | 5.375       | 1.718      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 17509 |
| KUB-T.2,5D.0703.R.03.C0750-EF | V57 41790 | 0.703      | 0.750          | 1.130      | 5.375       | 1.758      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 17909 |
| KUB-T.2,5D.0750.R.03.C0750-EF | V57 41910 | 0.750      | 0.750          | 1.130      | 5.375       | 1.875      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 19109 |



80 950 ...

10 950 ...

**Spare parts**  
DC

0.562 - 0.750

123

10000

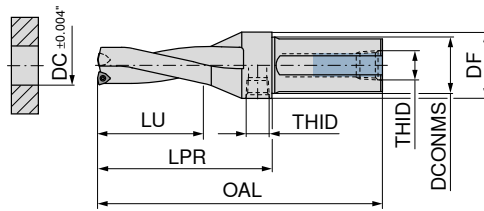
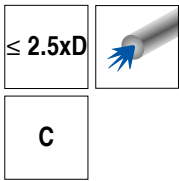
Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog



# KUB Trigon – Indexable insert drill

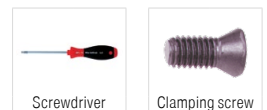
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 896 ...

| Designation                   | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-------------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-T.2,5D.0562.R.03.C1250-EF | V57 51434 | 0.562      | 1.250          | 1.575      | 6.125       | 1.405      | 2.875       | 1/8" NPT     | WOEX 030204 | 0,62                | 14301 |
| KUB-T.2,5D.0593.R.03.C1250-EF | V57 51512 | 0.593      | 1.250          | 1.575      | 6.125       | 1.483      | 2.875       | 1/8" NPT     | WOEX 030204 | 0,62                | 15101 |
| KUB-T.2,5D.0625.R.03.C1250-EF | V57 51592 | 0.625      | 1.250          | 1.575      | 6.125       | 1.563      | 2.875       | 1/8" NPT     | WOEX 030204 | 0,62                | 15901 |
| KUB-T.2,5D.0656.R.03.C1250-EF | V57 51672 | 0.656      | 1.250          | 1.575      | 6.375       | 1.718      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 16701 |
| KUB-T.2,5D.0687.R.03.C1250-E  | V57 51752 | 0.687      | 1.250          | 1.575      | 6.375       | 1.718      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 17501 |
| KUB-T.2,5D.0703.R.03.C1250-EF | V57 51792 | 0.703      | 1.250          | 1.575      | 6.375       | 1.758      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 17901 |
| KUB-T.2,5D.0750.R.03.C1250-EF | V57 51912 | 0.750      | 1.250          | 1.575      | 6.375       | 1.625      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 19101 |
| KUB-T.2,5D.0765.R.03.C1250-EF | V57 51942 | 0.765      | 1.250          | 1.575      | 6.375       | 1.625      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 19401 |
| KUB-T.2,5D.0781.R.03.C1250-EF | V57 51982 | 0.781      | 1.250          | 1.575      | 6.375       | 1.625      | 3.125       | 1/8" NPT     | WOEX 030204 | 0,62                | 19801 |
| KUB-T.2,5D.0812.R.04.C1250-EF | V57 52062 | 0.812      | 1.250          | 1.575      | 6.375       | 1.625      | 3.125       | 1/8" NPT     | WOEX 040304 | 1,01                | 20601 |
| KUB-T.2,5D.0828.R.04.C1250-E  | V57 52102 | 0.828      | 1.250          | 1.575      | 6.875       | 2.000      | 3.625       | 1/8" NPT     | WOEX 040304 | 1,01                | 21001 |
| KUB-T.2,5D.0843.R.04.C1250-EF | V57 52142 | 0.843      | 1.250          | 1.575      | 6.875       | 2.000      | 3.625       | 1/8" NPT     | WOEX 040304 | 1,01                | 21401 |
| KUB-T.2,5D.0875.R.04.C1250-EF | V57 52222 | 0.875      | 1.250          | 1.575      | 6.875       | 2.000      | 3.625       | 1/8" NPT     | WOEX 040304 | 1,01                | 22201 |
| KUB-T.2,5D.0906.R.04.C1250-E  | V57 52302 | 0.906      | 1.250          | 1.575      | 6.875       | 2.000      | 3.625       | 1/8" NPT     | WOEX 040304 | 1,01                | 23001 |
| KUB-T.2,5D.0937.R.04.C1250-EF | V57 52382 | 0.937      | 1.250          | 1.575      | 6.875       | 2.000      | 3.625       | 1/8" NPT     | WOEX 040304 | 1,01                | 23801 |
| KUB-T.2,5D.0985.R.05.C1250-E  | V57 52502 | 0.985      | 1.250          | 1.575      | 6.875       | 2.000      | 3.625       | 1/8" NPT     | WOEX 05T304 | 1,28                | 25001 |
| KUB-T.2,5D.1000.R.05.C1250-EF | V57 52542 | 1.000      | 1.250          | 1.575      | 6.875       | 2.000      | 3.625       | 1/8" NPT     | WOEX 05T304 | 1,28                | 25401 |
| KUB-T.2,5D.1031.R.05.C1250-EF | V57 52622 | 1.031      | 1.250          | 1.575      | 7.562       | 2.750      | 4.312       | 1/8" NPT     | WOEX 05T304 | 1,28                | 26201 |
| KUB-T.2,5D.1062.R.05.C1250-E  | V57 52702 | 1.062      | 1.250          | 1.575      | 7.562       | 2.750      | 4.312       | 1/8" NPT     | WOEX 05T304 | 1,28                | 27001 |
| KUB-T.2,5D.1109.R.05.C1250-EF | V57 52822 | 1.109      | 1.250          | 1.575      | 7.562       | 2.750      | 4.312       | 1/8" NPT     | WOEX 05T304 | 1,28                | 28201 |
| KUB-T.2,5D.1125.R.05.C1250-EF | V57 52862 | 1.125      | 1.250          | 1.575      | 7.562       | 2.750      | 4.312       | 1/8" NPT     | WOEX 05T304 | 1,28                | 28601 |
| KUB-T.2,5D.1156.R.05.C1250-EF | V57 52942 | 1.156      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 29401 |
| KUB-T.2,5D.1187.R.05.C1250-EF | V57 53022 | 1.187      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 30101 |
| KUB-T.2,5D.1218.R.05.C1250-EF | V57 53092 | 1.218      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 30901 |
| KUB-T.2,5D.1250.R.05.C1250-EF | V57 53182 | 1.250      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 31801 |
| KUB-T.2,5D.1281.R.05.C1250-E  | V57 53252 | 1.281      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 32501 |
| KUB-T.2,5D.1312.R.05.C1250-EF | V57 53332 | 1.312      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 33301 |
| KUB-T.2,5D.1328.R.05.C1250-EF | V57 53372 | 1.328      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 33701 |
| KUB-T.2,5D.1375.R.05.C1250-EF | V57 53492 | 1.375      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 34901 |
| KUB-T.2,5D.1406.R.05.C1250-EF | V57 53572 | 1.406      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 35701 |
| KUB-T.2,5D.1437.R.05.C1250-E  | V57 53652 | 1.437      | 1.250          | 1.575      | 8.250       | 3.250      | 5.000       | 1/8" NPT     | WOEX 05T304 | 1,28                | 36501 |
| KUB-T.2,5D.1469.R.06.C1250-EF | V57 53732 | 1.469      | 1.250          | 1.575      | 8.368       | 3.500      | 5.118       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 37301 |
| KUB-T.2,5D.1500.R.06.C1250-EF | V57 53812 | 1.500      | 1.250          | 1.575      | 8.368       | 3.500      | 5.118       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 38101 |
| KUB-T.2,5D.1531.R.06.C1250-EF | V57 53892 | 1.531      | 1.250          | 1.575      | 8.368       | 3.500      | 5.118       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 38911 |
| KUB-T.2,5D.1562.R.06.C1250-EF | V57 53972 | 1.562      | 1.250          | 1.575      | 8.368       | 3.500      | 5.118       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 39701 |
| KUB-T.2,5D.1625.R.06.C1250-EF | V57 54132 | 1.625      | 1.250          | 1.575      | 8.368       | 3.500      | 5.118       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 41301 |
| KUB-T.2,5D.1656.R.06.C1500-EF | V57 54212 | 1.656      | 1.500          | 1.970      | 10.709      | 4.000      | 5.709       | 1/4" NPT     | WOEX 06T304 | 2,8                 | 42102 |
| KUB-T.2,5D.1687.R.06.C1500-EF | V57 54262 | 1.687      | 1.500          | 1.970      | 10.709      | 4.000      | 5.709       | 1/4" NPT     | WOEX 06T304 | 2,8                 | 42802 |
| KUB-T.2,5D.1750.R.06.C1500-EF | V57 54452 | 1.750      | 1.500          | 1.970      | 10.709      | 4.000      | 5.709       | 1/4" NPT     | WOEX 06T304 | 2,8                 | 44502 |



80 950 ...

10 950 ...

**Spare parts**

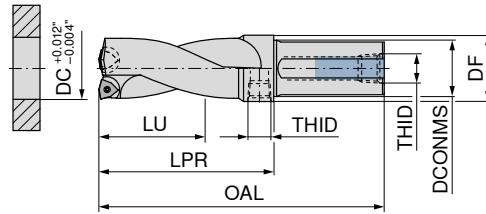
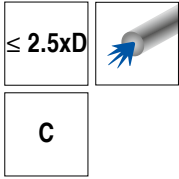
| DC            |     |       |
|---------------|-----|-------|
| 0.562 - 0.781 | 123 | 10000 |
| 0.812 - 0.937 | 123 | 10700 |
| 0.985 - 1.437 | 125 | 10500 |
| 1.469 - 1.750 | 127 | 10600 |

Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Trigon – Indexable insert drill

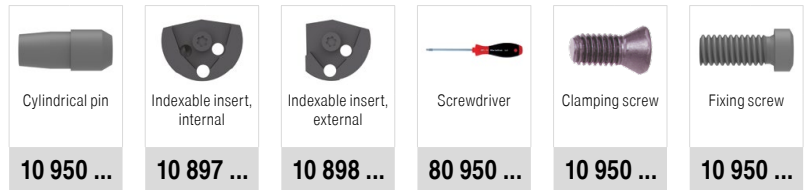
**Scope of supply:**

with indexable insert (10 897 ...) incl. fixing screw, cylindrical pin and clamping screw  
with indexable insert (10 898 ...) incl. fixing screw, cylindrical pin and clamping screw



15 896 ...

| Designation                   | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-------------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-T.2,5D.1812.R.08.C1500-E  | V57 34602 | 1.812      | 1.500          | 1.969      | 10.709      | 4.000      | 5.709       | 1/4" NPT     | WOEX 080404 | 4,3                 | 46002 |
| KUB-T.2,5D.1875.R.08.C1500-EF | V57 34762 | 1.875      | 1.500          | 1.969      | 10.709      | 4.000      | 5.709       | 1/4" NPT     | WOEX 080404 | 4,3                 | 47602 |
| KUB-T.2,5D.1937.R.08.C1500-EF | V57 34922 | 1.937      | 1.500          | 1.969      | 11.890      | 5.000      | 6.890       | 1/4" NPT     | WOEX 080404 | 4,3                 | 49202 |
| KUB-T.2,5D.2000.R.08.C1500-EF | V57 35082 | 2.000      | 1.500          | 1.969      | 11.890      | 5.000      | 6.890       | 1/4" NPT     | WOEX 080404 | 4,3                 | 50802 |
| KUB-T.2,5D.2125.R.08.C1500-E  | V57 35402 | 2.125      | 1.500          | 2.067      | 11.890      | 5.000      | 6.890       | 1/4" NPT     | WOEX 080404 | 4,3                 | 54002 |
| KUB-T.2,5D.2250.R.10.C2000-EF | V57 35722 | 2.250      | 2.000          | 2.362      | 11.890      | 5.000      | 6.890       | 1/4" NPT     | WOEX 100504 | 4,3                 | 57204 |
| KUB-T.2,5D.2375.R.10.C2000-EF | V57 36032 | 2.375      | 2.000          | 2.362      | 11.890      | 5.000      | 6.890       | 1/4" NPT     | WOEX 100504 | 4,3                 | 60304 |
| KUB-T.2,5D.2500.R.10.C2000-EF | V57 36352 | 2.500      | 2.000          | 2.492      | 11.890      | 5.000      | 6.890       | 1/4" NPT     | WOEX 100504 | 4,3                 | 63504 |
| KUB-T.2,5D.2750.R.12.C2000-EF | V57 36992 | 2.750      | 2.000          | 2.657      | 13.268      | 6.000      | 8.267       | 1/4" NPT     | WOEX 120608 | 6,25                | 69904 |
| KUB-T.2,5D.3000.R.12.C2000-EF | V57 37622 | 3.000      | 2.000          | 2.933      | 13.268      | 6.000      | 8.267       | 1/4" NPT     | WOEX 120608 | 6,25                | 76204 |
| KUB-T.2,5D.3250.R.12.C2000-EF | V57 38262 | 3.250      | 2.000          | 3.130      | 13.268      | 6.000      | 8.267       | 1/4" NPT     | WOEX 120608 | 6,25                | 82604 |



**Spare parts**  
**DC**

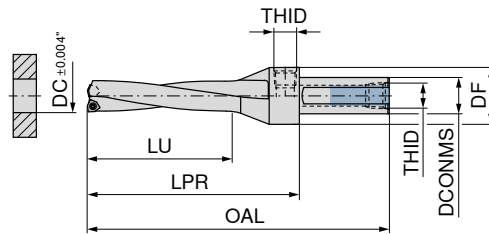
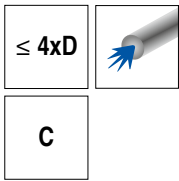
|               |       |       |       |     |       |       |
|---------------|-------|-------|-------|-----|-------|-------|
| 1.812 - 2.125 | 17200 | 14800 | 14800 | 120 | 12700 | 17000 |
| 2.250 - 2.500 | 17200 | 25300 | 25300 | 120 | 12700 | 17000 |
| 2.750 - 3.250 | 17300 | 36000 | 36000 | 121 | 17400 | 17100 |

Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Trigon – Indexable insert drill

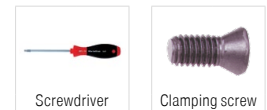
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 894 ...

| Designation                 | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-----------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-T.4D.0562.R.03.C0750-EF | V57 61432 | 0.562      | 0.750          | 1.130      | 5.875       | 2.248      | 3.625       | 1/8" NPT     | WOEX 030204 | 0,62                | 14309 |
| KUB-T.4D.0593.R.03.C0750-EF | V57 61510 | 0.593      | 0.750          | 1.130      | 6.000       | 2.372      | 3.750       | 1/8" NPT     | WOEX 030204 | 0,62                | 15109 |
| KUB-T.4D.0625.R.03.C0750-EF | V57 61590 | 0.625      | 0.750          | 1.130      | 6.128       | 2.500      | 3.878       | 1/8" NPT     | WOEX 030204 | 0,62                | 15909 |
| KUB-T.4D.0687.R.03.C0750-E  | V57 61750 | 0.687      | 0.750          | 1.130      | 6.376       | 2.748      | 4.126       | 1/8" NPT     | WOEX 030204 | 0,62                | 17509 |
| KUB-T.4D.0703.R.03.C0750-EF | V57 61790 | 0.703      | 0.750          | 1.130      | 6.439       | 2.812      | 4.189       | 1/8" NPT     | WOEX 030204 | 0,62                | 17909 |
| KUB-T.4D.0750.R.03.C0750-EF | V57 61910 | 0.750      | 0.750          | 1.130      | 6.628       | 3.000      | 4.378       | 1/8" NPT     | WOEX 030204 | 0,62                | 19109 |



80 950 ...

10 950 ...

**Spare parts**  
DC  
0.562 - 0.750

123

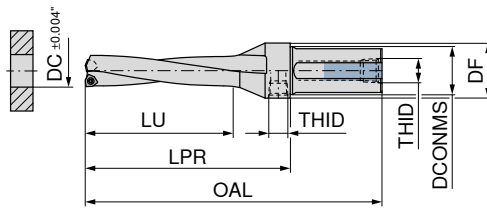
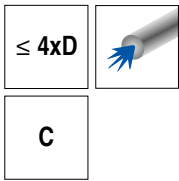
10000

Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Trigon – Indexable insert drill

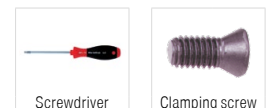
**Scope of supply:**

Indexable Insert Drill incl. clamping screws



15 894 ...

| Designation                 | KOMET no. | DC<br>inch | DCONMS<br>inch | DF<br>inch | OAL<br>inch | LU<br>inch | LPR<br>inch | THID<br>inch | Insert      | torque moment<br>Nm |       |
|-----------------------------|-----------|------------|----------------|------------|-------------|------------|-------------|--------------|-------------|---------------------|-------|
| KUB-T.4D.0562.R.03.C1250-EF | V57 71434 | 0.562      | 1.250          | 1.575      | 6.875       | 2.248      | 3.625       | 1/8" NPT     | WOEX 030204 | 0,62                | 14301 |
| KUB-T.4D.0593.R.03.C1250-EF | V57 71512 | 0.593      | 1.250          | 1.575      | 7.000       | 2.372      | 3.750       | 1/8" NPT     | WOEX 030204 | 0,62                | 15101 |
| KUB-T.4D.0625.R.03.C1250-EF | V57 71592 | 0.625      | 1.250          | 1.575      | 7.128       | 2.500      | 3.878       | 1/8" NPT     | WOEX 030204 | 0,62                | 15901 |
| KUB-T.4D.0656.R.03.C1250-EF | V57 71672 | 0.656      | 1.250          | 1.575      | 7.252       | 2.624      | 4.002       | 1/8" NPT     | WOEX 030204 | 0,62                | 16701 |
| KUB-T.4D.0687.R.03.C1250-E  | V57 71752 | 0.687      | 1.250          | 1.575      | 7.376       | 2.748      | 4.126       | 1/8" NPT     | WOEX 030204 | 0,62                | 17501 |
| KUB-T.4D.0703.R.03.C1250-EF | V57 71792 | 0.703      | 1.250          | 1.575      | 7.439       | 2.812      | 4.189       | 1/8" NPT     | WOEX 030204 | 0,62                | 17901 |
| KUB-T.4D.0750.R.03.C1250-EF | V57 71912 | 0.750      | 1.250          | 1.575      | 7.628       | 3.000      | 4.378       | 1/8" NPT     | WOEX 030204 | 0,62                | 19101 |
| KUB-T.4D.0765.R.03.C1250-EF | V57 71942 | 0.765      | 1.250          | 1.575      | 7.688       | 3.060      | 4.438       | 1/8" NPT     | WOEX 030204 | 0,62                | 19401 |
| KUB-T.4D.0781.R.03.C1250-EF | V57 71982 | 0.781      | 1.250          | 1.575      | 7.752       | 3.124      | 4.502       | 1/8" NPT     | WOEX 030204 | 0,62                | 19801 |
| KUB-T.4D.0812.R.04.C1250-EF | V57 72062 | 0.812      | 1.250          | 1.575      | 7.876       | 3.248      | 4.626       | 1/8" NPT     | WOEX 040304 | 1,01                | 20601 |
| KUB-T.4D.0828.R.04.C1250-E  | V57 72102 | 0.828      | 1.250          | 1.575      | 7.940       | 3.312      | 4.690       | 1/8" NPT     | WOEX 040304 | 1,01                | 21001 |
| KUB-T.4D.0843.R.04.C1250-EF | V57 72142 | 0.843      | 1.250          | 1.575      | 8.000       | 3.372      | 4.750       | 1/8" NPT     | WOEX 040304 | 1,01                | 21401 |
| KUB-T.4D.0875.R.04.C1250-EF | V57 72222 | 0.875      | 1.250          | 1.575      | 8.128       | 3.500      | 4.878       | 1/8" NPT     | WOEX 040304 | 1,01                | 22201 |
| KUB-T.4D.0906.R.04.C1250-E  | V57 72302 | 0.906      | 1.250          | 1.575      | 8.252       | 3.624      | 5.002       | 1/8" NPT     | WOEX 040304 | 1,01                | 23001 |
| KUB-T.4D.0937.R.04.C1250-EF | V57 72382 | 0.937      | 1.250          | 1.575      | 8.376       | 3.748      | 5.126       | 1/8" NPT     | WOEX 040304 | 1,01                | 23801 |
| KUB-T.4D.0985.R.05.C1250-E  | V57 72502 | 0.985      | 1.250          | 1.575      | 8.568       | 3.940      | 5.318       | 1/8" NPT     | WOEX 05T304 | 1,28                | 25001 |
| KUB-T.4D.1000.R.05.C1250-EF | V57 72542 | 1.000      | 1.250          | 1.575      | 8.628       | 4.000      | 5.378       | 1/8" NPT     | WOEX 05T304 | 1,28                | 25401 |
| KUB-T.4D.1031.R.05.C1250-EF | V57 72622 | 1.031      | 1.250          | 1.575      | 8.752       | 4.124      | 5.502       | 1/8" NPT     | WOEX 05T304 | 1,28                | 26201 |
| KUB-T.4D.1062.R.05.C1250-E  | V57 72702 | 1.062      | 1.250          | 1.575      | 8.876       | 4.248      | 5.626       | 1/8" NPT     | WOEX 05T304 | 1,28                | 27001 |
| KUB-T.4D.1109.R.05.C1250-EF | V57 72822 | 1.109      | 1.250          | 1.575      | 9.064       | 4.436      | 5.814       | 1/8" NPT     | WOEX 05T304 | 1,28                | 28201 |
| KUB-T.4D.1125.R.05.C1250-EF | V57 72862 | 1.125      | 1.250          | 1.575      | 9.128       | 4.500      | 5.878       | 1/8" NPT     | WOEX 05T304 | 1,28                | 28601 |
| KUB-T.4D.1156.R.05.C1250-EF | V57 72942 | 1.156      | 1.250          | 1.575      | 9.252       | 4.624      | 6.002       | 1/8" NPT     | WOEX 05T304 | 1,28                | 29401 |
| KUB-T.4D.1187.R.05.C1250-EF | V57 73022 | 1.187      | 1.250          | 1.575      | 9.589       | 4.748      | 6.339       | 1/8" NPT     | WOEX 05T304 | 1,28                | 30101 |
| KUB-T.4D.1218.R.05.C1250-EF | V57 73092 | 1.218      | 1.250          | 1.575      | 9.713       | 4.872      | 6.463       | 1/8" NPT     | WOEX 05T304 | 1,28                | 30901 |
| KUB-T.4D.1250.R.05.C1250-EF | V57 73182 | 1.250      | 1.250          | 1.575      | 9.841       | 5.000      | 6.591       | 1/8" NPT     | WOEX 05T304 | 1,28                | 31801 |
| KUB-T.4D.1281.R.05.C1250-E  | V57 73252 | 1.281      | 1.250          | 1.575      | 9.965       | 5.124      | 6.715       | 1/8" NPT     | WOEX 05T304 | 1,28                | 32501 |
| KUB-T.4D.1312.R.05.C1250-EF | V57 73332 | 1.312      | 1.250          | 1.575      | 10.089      | 5.248      | 6.839       | 1/8" NPT     | WOEX 05T304 | 1,28                | 33301 |
| KUB-T.4D.1328.R.05.C1250-EF | V57 73372 | 1.328      | 1.250          | 1.575      | 10.137      | 5.312      | 6.887       | 1/8" NPT     | WOEX 05T304 | 1,28                | 33701 |
| KUB-T.4D.1375.R.05.C1250-EF | V57 73492 | 1.375      | 1.250          | 1.575      | 10.341      | 5.500      | 7.091       | 1/8" NPT     | WOEX 05T304 | 1,28                | 34901 |
| KUB-T.4D.1406.R.05.C1250-EF | V57 73572 | 1.406      | 1.250          | 1.575      | 10.449      | 5.624      | 7.199       | 1/8" NPT     | WOEX 05T304 | 1,28                | 35701 |
| KUB-T.4D.1437.R.05.C1250-E  | V57 73652 | 1.437      | 1.250          | 1.575      | 10.589      | 5.748      | 7.339       | 1/8" NPT     | WOEX 05T304 | 1,28                | 36501 |
| KUB-T.4D.1469.R.06.C1250-EF | V57 73732 | 1.469      | 1.250          | 1.575      | 11.095      | 5.876      | 7.845       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 37301 |
| KUB-T.4D.1500.R.06.C1250-EF | V57 73812 | 1.500      | 1.250          | 1.575      | 11.219      | 6.000      | 7.969       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 38101 |
| KUB-T.4D.1531.R.06.C1250-EF | V57 73892 | 1.531      | 1.250          | 1.575      | 11.343      | 6.124      | 8.093       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 38901 |
| KUB-T.4D.1562.R.06.C1250-EF | V57 73972 | 1.562      | 1.250          | 1.575      | 11.467      | 6.248      | 8.217       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 39701 |
| KUB-T.4D.1625.R.06.C1250-EF | V57 74132 | 1.625      | 1.250          | 1.575      | 11.719      | 6.500      | 8.469       | 1/8" NPT     | WOEX 06T304 | 2,8                 | 41301 |
| KUB-T.4D.1656.R.06.C1500-EF | V57 74212 | 1.656      | 1.500          | 1.970      | 13.593      | 6.624      | 8.593       | 1/4" NPT     | WOEX 06T304 | 2,8                 | 42102 |
| KUB-T.4D.1687.R.06.C1500-EF | V57 74292 | 1.687      | 1.500          | 1.970      | 13.717      | 6.748      | 8.717       | 1/4" NPT     | WOEX 06T304 | 2,8                 | 42802 |
| KUB-T.4D.1750.R.06.C1500-EF | V57 74452 | 1.750      | 1.500          | 1.970      | 13.969      | 7.000      | 8.969       | 1/4" NPT     | WOEX 06T304 | 2,8                 | 44502 |



80 950 ...

10 950 ...

**Spare parts**

| DC            |     |       |
|---------------|-----|-------|
| 0.562 - 0.781 | 123 | 10000 |
| 0.812 - 0.937 | 123 | 10700 |
| 0.985 - 1.437 | 125 | 10500 |
| 1.469 - 1.750 | 127 | 10600 |

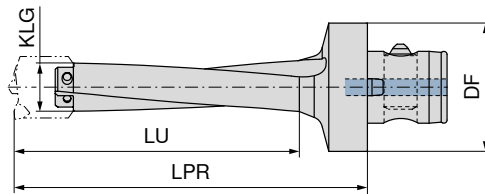
Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Centron – basic element

▲ KLG = Coupling Size



ABS

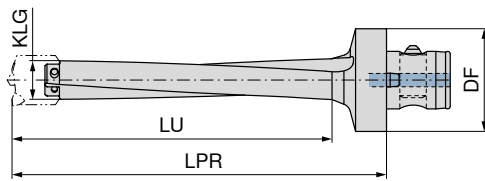


10 864 ...

| Designation           | KOMET no. | DF<br>inch | LU<br>inch | LPR<br>inch | KLG  |       |
|-----------------------|-----------|------------|------------|-------------|------|-------|
| KUB-C.GH.4D.190-ABS50 | V47 20201 | 1.969      | 4.449      | 5.709       | 19   | 19095 |
| KUB-C.GH.4D.250-ABS50 | V47 20261 | 1.969      | 5.118      | 6.299       | 25   | 25095 |
| KUB-C.GH.4D.320-ABS50 | V47 20331 | 1.969      | 6.299      | 7.677       | 32   | 32095 |
| KUB-C.GH.4D.385-ABS63 | V47 20401 | 2.480      | 7.283      | 9.252       | 38,5 | 38596 |
| KUB-C.GH.4D.445-ABS80 | V47 20461 | 3.150      | 8.465      | 11.024      | 44,5 | 44598 |
| KUB-C.GH.4D.535-ABS80 | V47 20551 | 3.150      | 10.236     | 12.795      | 53,5 | 53598 |



ABS

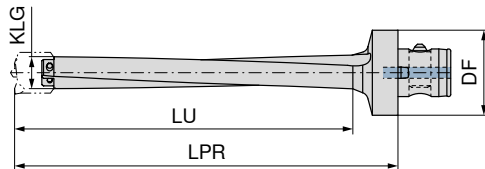


10 866 ...

| Designation           | KOMET no. | DF<br>inch | LU<br>inch | LPR<br>inch | KLG  |       |
|-----------------------|-----------|------------|------------|-------------|------|-------|
| KUB-C.GH.6D.190-ABS50 | V47 40201 | 1.969      | 5.906      | 7.283       | 19   | 19095 |
| KUB-C.GH.6D.250-ABS50 | V47 40261 | 1.969      | 6.890      | 8.268       | 25   | 25095 |
| KUB-C.GH.6D.320-ABS50 | V47 40331 | 1.969      | 8.465      | 10.039      | 32   | 32095 |
| KUB-C.GH.6D.385-ABS63 | V47 40401 | 2.480      | 10.236     | 12.205      | 38,5 | 38596 |
| KUB-C.GH.6D.445-ABS80 | V47 40461 | 3.150      | 12.205     | 14.764      | 44,5 | 44598 |
| KUB-C.GH.6D.535-ABS80 | V47 40551 | 3.150      | 14.567     | 17.126      | 53,5 | 53598 |



ABS



10 869 ...

| Designation           | KOMET no. | DF<br>inch | LU<br>inch | LPR<br>inch | KLG  |       |
|-----------------------|-----------|------------|------------|-------------|------|-------|
| KUB-C.GH.9D.190-ABS50 | V47 60201 | 1.969      | 7.874      | 9.252       | 19   | 19095 |
| KUB-C.GH.9D.250-ABS50 | V47 60261 | 1.969      | 9.055      | 10.236      | 25   | 25095 |
| KUB-C.GH.9D.320-ABS50 | V47 60331 | 1.969      | 11.417     | 12.992      | 32   | 32095 |
| KUB-C.GH.9D.385-ABS63 | V47 60401 | 2.480      | 13.386     | 15.354      | 38,5 | 38596 |
| KUB-C.GH.9D.445-ABS80 | V47 60461 | 3.150      | 16.339     | 18.898      | 44,5 | 44598 |
| KUB-C.GH.9D.535-ABS80 | V47 60551 | 3.150      | 19.488     | 22.047      | 53,5 | 53598 |

For correct assembly, please observe the operating instructions provided.

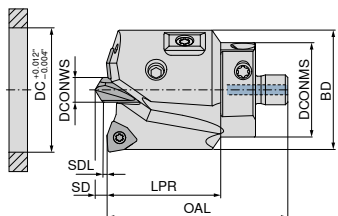
Matching holders can be found in our Online-Shop at [cuttingtools.ceratizit.com](http://cuttingtools.ceratizit.com) and in the metric clamping technology catalog

# KUB Centron – drill head Ø 0.812–2.500 Inch

- ▲ The pre-assembled drill head is ready to use
- ▲ The indexable inserts and centering tip must be professionally assembled
- ▲ Tightening torque refers to the clamping screw of the indexable inserts
- ▲ KLG = Coupling size

### Scope of supply:

- ▲ Drill head incl. screws, guide pads and shim set
- ▲ Order centering tip and indexable inserts separately



NEW



15 860 ...

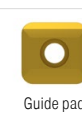
| Designation               | KOMET no. | DC<br>inch | OAL<br>inch | LPR<br>inch | SD<br>inch | BD<br>inch | SDL<br>inch | DCONMS<br>inch | DCONWS<br>inch | KLG  | torque moment<br>Nm | Insert      |       |
|---------------------------|-----------|------------|-------------|-------------|------------|------------|-------------|----------------|----------------|------|---------------------|-------------|-------|
| KUB-C.BK.0812.R.03.19-F   | V46 52060 | 0.812      | 1.440       | 0.910       | 0.089      | 0.768      | 0.039       | 0.748          | 0.197          | 19   | 0,62                | WOEX 030204 | 20600 |
| KUB-C.BK.0875.R.03.19-F   | V46 52220 | 0.875      | 1.440       | 0.910       | 0.089      | 0.835      | 0.039       | 0.748          | 0.197          | 19   | 0,62                | WOEX 030204 | 22200 |
| KUB-C.BK.1000.R.03.19-F   | V46 52540 | 1.000      | 1.440       | 0.910       | 0.089      | 0.961      | 0.039       | 0.748          | 0.197          | 19   | 0,62                | WOEX 030204 | 25400 |
| KUB-C.BK.1125.R.04.25-F   | V46 52860 | 1.125      | 1.500       | 0.910       | 0.104      | 1.083      | 0.043       | 0.984          | 0.236          | 25   | 1,01                | WOEX 040304 | 28600 |
| KUB-C.BK.1250.R.04.25-F   | V46 53180 | 1.250      | 1.500       | 0.910       | 0.104      | 1.211      | 0.043       | 0.984          | 0.236          | 25   | 1,01                | WOEX 040304 | 31800 |
| KUB-C.BK.1375.R.05.32-F   | V46 53490 | 1.375      | 1.540       | 0.910       | 0.104      | 1.335      | 0.043       | 1.260          | 0.236          | 32   | 1,28                | WOEX 05T304 | 34900 |
| KUB-C.BK.1500.R.05.32-F   | V46 53810 | 1.500      | 1.540       | 0.910       | 0.104      | 1.461      | 0.043       | 1.260          | 0.236          | 32   | 1,28                | WOEX 05T304 | 38100 |
| KUB-C.BK.1625.R.05.38,5-F | V46 54130 | 1.625      | 1.700       | 0.980       | 0.133      | 1.567      | 0.049       | 1.516          | 0.315          | 38,5 | 1,28                | WOEX 05T304 | 41300 |
| KUB-C.BK.1750.R.05.38,5-F | V46 54450 | 1.750      | 1.700       | 0.980       | 0.133      | 1.689      | 0.049       | 1.516          | 0.315          | 38,5 | 1,28                | WOEX 05T304 | 44500 |
| KUB-C.BK.1875.R.06.44,5-F | V46 54760 | 1.875      | 1.850       | 0.980       | 0.152      | 1.815      | 0.049       | 1.752          | 0.394          | 44,5 | 2,8                 | WOEX 06T304 | 47600 |
| KUB-C.BK.2000.R.06.44,5-F | V46 55080 | 2.000      | 1.850       | 0.980       | 0.152      | 1.941      | 0.049       | 1.752          | 0.394          | 44,5 | 2,8                 | WOEX 06T304 | 50800 |
| KUB-C.BK.2250.R.08.53,5-F | V46 55720 | 2.250      | 2.050       | 1.180       | 0.152      | 2.193      | 0.049       | 2.106          | 0.394          | 53,5 | 6,25                | WOEX 080404 | 57200 |
| KUB-C.BK.2375.R.08.53,5-F | V46 56030 | 2.375      | 2.050       | 1.180       | 0.152      | 2.315      | 0.049       | 2.106          | 0.394          | 53,5 | 6,25                | WOEX 080404 | 60300 |
| KUB-C.BK.2500.R.08.53,5-F | V46 56350 | 2.500      | 2.050       | 1.180       | 0.150      | 2.441      | 0.049       | 2.106          | 0.394          | 53,5 | 6,25                | WOEX 080404 | 63500 |



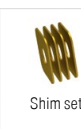
Guide pad clamping screw



Indexable insert clamping screw



Guide pad



Shim set

10 950 ...

10 950 ...

10 950 ...

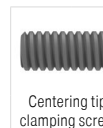
10 950 ...

### Spare parts DC

|               |                         |       |                 |       |       |       |
|---------------|-------------------------|-------|-----------------|-------|-------|-------|
| 0.812 - 1.000 | M2,5x4,2 - 8IP - 1,28Nm | 11900 | M2,0x4,3 - 06IP | 10000 | 14600 | 15200 |
| 1.125 - 1.250 | M2,5x4,5 - 8IP - 1,28Nm | 11700 | M2,2x5,5 - 06IP | 10700 | 14700 | 15200 |
| 1.375 - 1.750 | M2,5x4,5 - 8IP - 1,28Nm | 11700 | M2,5x7,2 - 08IP | 10500 | 14800 | 15200 |
| 1.875 - 2.000 | M3,5x5,0 - 8IP - 2,25Nm | 11800 | M3,5x7,3 - 10IP | 10600 | 15000 | 15300 |
| 2.250 - 2.500 | M3,5x5,0 - 8IP - 2,25Nm | 11800 | M4,5x9 - 15IP   | 12700 | 15100 | 15300 |



Basic element clamping screw



Centering tip clamping screw

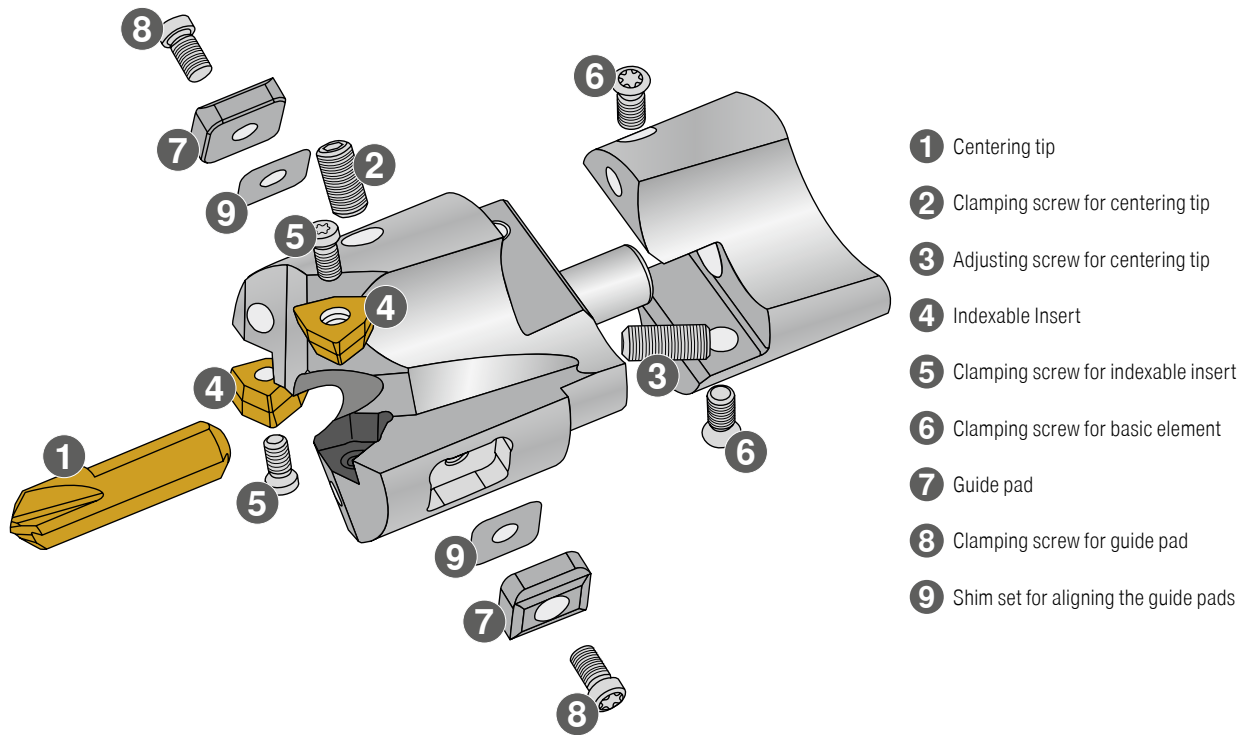
10 950 ...

10 950 ...

### Spare parts DC

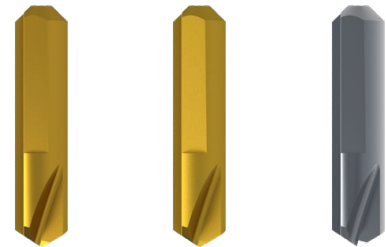
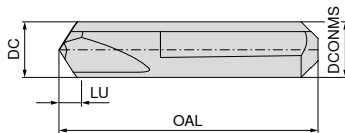
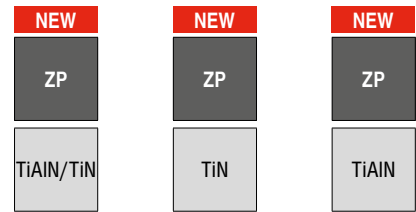
|               |                          |       |                       |       |
|---------------|--------------------------|-------|-----------------------|-------|
| 0.812 - 1.000 | M2,5x6,4 - 08IP - 1,28Nm | 12400 | M4x6 - SW2 - 1,5Nm    | 12800 |
| 1.125 - 1.250 | M3x7,4 - 08IP - 2,25Nm   | 12500 | M5x10 - SW2,5 - 2,5Nm | 13000 |
| 1.375 - 1.750 | M4x8,9 - 15IP - 4,3Nm    | 12000 | M5x12 - SW2,5 - 2,5Nm | 13100 |
| 1.875 - 2.000 | M5x11,5 - 20IP - 6,25Nm  | 12100 | M8x16 - SW4 - 8Nm     | 13300 |
| 2.250 - 2.500 | M5,5x14 - 20IP - 6,25Nm  | 12200 | M8x16 - SW4 - 8Nm     | 13300 |

## Exploded drawing of the drill head Ø 0.812–2.500 inch



 For correct assembly, please observe the operating instructions provided.

# KUB Centron – centering tip



| DC<br>inch | KOMET no.      | OAL<br>inch | LU<br>inch | DCONMS<br>inch | 120°                        |                   |                   |
|------------|----------------|-------------|------------|----------------|-----------------------------|-------------------|-------------------|
|            |                |             |            |                | Solid carbide<br>10 863 ... | HSS<br>10 862 ... | HSS<br>10 862 ... |
| 0.197      | V95 10012.0089 | 0.846       | 0.089      | 0.197          |                             | 00500             |                   |
| 0.197      | V95 10012.0090 | 0.846       | 0.089      | 0.197          |                             |                   | 10500             |
| 0.197      | V95 10310.8450 | 0.846       | 0.089      | 0.197          | 20500                       |                   |                   |
| 0.236      | V95 10022.0089 | 0.906       | 0.104      | 0.236          |                             | 00600             |                   |
| 0.236      | V95 10022.0090 | 0.906       | 0.104      | 0.236          |                             |                   | 10600             |
| 0.236      | V95 10320.8450 | 0.906       | 0.104      | 0.236          | 20600                       |                   |                   |
| 0.315      | V95 10032.0089 | 1.063       | 0.133      | 0.315          |                             | 00800             |                   |
| 0.315      | V95 10032.0090 | 1.063       | 0.133      | 0.315          |                             |                   | 10800             |
| 0.315      | V95 10330.8450 | 1.063       | 0.133      | 0.315          | 20800                       |                   |                   |
| 0.394      | V95 10042.0089 | 1.102       | 0.152      | 0.394          |                             | 01000             |                   |
| 0.394      | V95 10042.0090 | 1.102       | 0.152      | 0.394          |                             |                   | 11000             |
| 0.394      | V95 10340.8450 | 1.102       | 0.152      | 0.394          | 21000                       |                   |                   |
| P          |                |             |            |                | ●                           | ●                 |                   |
| M          |                |             |            |                | ●                           |                   | ●                 |
| K          |                |             |            |                | ●                           |                   | ●                 |
| N          |                |             |            |                | ●                           | ●                 |                   |
| S          |                |             |            |                | ○                           |                   | ●                 |
| H          |                |             |            |                |                             |                   |                   |
| O          |                |             |            |                | ○                           | ○                 |                   |

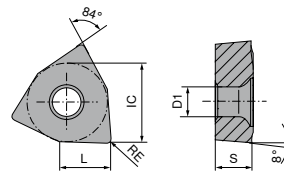
→ v<sub>c</sub> Page 54+55

- The cutting data of the KUB Centron depends on the centering tip and not on the indexable inserts. Please select the cutting data of the centering tip.
- For correct assembly, please observe the operating instructions provided.
- Article No. 10 863 ... is only suitable up to drilling depth 6xD.



### WOEX

| Designation | L<br>inch | IC<br>inch | S<br>inch | D1<br>inch |
|-------------|-----------|------------|-----------|------------|
| WOEW 0201.. | 0.106     | 0.156      | 0.062     | 0.090      |
| WOEX 0302.. | 0.125     | 0.196      | 0.090     | 0.090      |
| WOEX 0403.. | 0.161     | 0.250      | 0.125     | 0.100      |
| WOEX 05T3.. | 0.208     | 0.314      | 0.149     | 0.112      |
| WOEX 06T3.. | 0.259     | 0.393      | 0.149     | 0.159      |
| WOEX 0804.. | 0.311     | 0.472      | 0.188     | 0.192      |
| WOEX 0804.. | 0.311     | 0.472      | 0.188     | 0.194      |
| WOEX 1005.. | 0.389     | 0.590      | 0.208     | 0.192      |
| WOEX 1206.. | 0.456     | 0.692      | 0.236     | 0.236      |



### WOEX

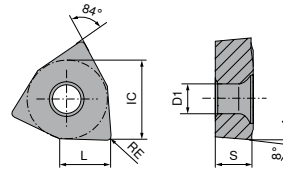
| ISO    | KOMET no.        | RE<br>inch | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;">-01<br/>BK8425</div> <div>WOEX</div> </div> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;">-03<br/>BK8425</div> <div>WOEX</div> </div> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;">-13<br/>BK8425</div> <div>WOEX</div> </div> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;">-01<br/>BK7935</div> <div>WOEX</div> </div> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;">-01<br/>BK6115</div> <div>WOEX</div> </div> </div> |       |       |            |            |
|--------|------------------|------------|--|-------|-------|------------|------------|
|        |                  |            |  |       |       | 10 821 ... | 10 821 ... |
| 030204 | W29 10130.048425 | 0.016      |  |       | 30313 |            |            |
| 030204 | W29 10010.046115 | 0.016      |  |       |       |            | 40301      |
| 030204 | W29 10010.047935 | 0.016      |  |       |       | 50301      |            |
| 030204 | W29 10030.048425 | 0.016      |  | 30303 |       |            |            |
| 030204 | W29 10010.048425 | 0.016      | 30301  |       |       |            |            |
| 040304 | W29 18130.048425 | 0.016      |  |       | 30413 |            |            |
| 040304 | W29 18010.046115 | 0.016      |  |       |       |            | 40401      |
| 040304 | W29 18010.047935 | 0.016      |  |       |       | 50401      |            |
| 040304 | W29 18030.048425 | 0.016      |  | 30403 |       |            |            |
| 040304 | W29 18010.048425 | 0.016      | 30401  |       |       |            |            |
| 05T304 | W29 24130.048425 | 0.016      |  |       | 30513 |            |            |
| 05T304 | W29 24010.046115 | 0.016      |  |       |       |            | 40501      |
| 05T304 | W29 24010.047935 | 0.016      |  |       |       | 50501      |            |
| 05T304 | W29 24030.048425 | 0.016      |  | 30503 |       |            |            |
| 05T304 | W29 24010.048425 | 0.016      | 30501  |       |       |            |            |
| 06T304 | W29 34130.048425 | 0.016      |  |       | 30613 |            |            |
| 06T304 | W29 34010.046115 | 0.016      |  |       |       |            | 40601      |
| 06T304 | W29 34010.047935 | 0.016      |  |       |       | 50601      |            |
| 06T304 | W29 34030.048425 | 0.016      |  | 30603 |       |            |            |
| 06T304 | W29 34010.048425 | 0.016      | 30601  |       |       |            |            |
| 080404 | W29 42130.048425 | 0.016      |  |       | 30813 |            |            |
| 080404 | W29 42010.046115 | 0.016      |  |       |       |            | 40801      |
| 080404 | W29 42010.048425 | 0.016      | 30801  |       |       |            |            |
| 100504 | W29 50130.048425 | 0.016      |  |       | 31013 |            |            |
| 100504 | W29 50010.046115 | 0.016      |  |       |       |            | 41001      |
| 100504 | W29 50010.048425 | 0.016      | 31001  |       |       |            |            |
| 100508 | W29 50010.088425 | 0.031      | 39001  |       |       |            |            |
| 120608 | W29 58130.088425 | 0.031      |  |       | 38213 |            |            |
| 120608 | W29 58010.086115 | 0.031      |  |       |       |            | 41201      |
| P      |                  |            | ●  | ●     | ●     | ●          | ●          |
| M      |                  |            | ●  | ●     | ●     | ●          | ●          |
| K      |                  |            | ●  | ●     | ●     | ●          | ●          |
| N      |                  |            | ○  | ○     | ○     | ○          | ○          |
| S      |                  |            | ○  | ○     | ○     | ●          | ○          |
| H      |                  |            | ○  | ○     | ○     | ○          | ○          |
| O      |                  |            | ○  | ○     | ○     | ○          | ○          |

→ v<sub>c</sub> Page 48

**1** BK8425 -03 and BK6115 -01 are exclusively recommended for use on the peripheral cutting edge!

### WOEX

| Designation | L<br>inch | IC<br>inch | S<br>inch | D1<br>inch |
|-------------|-----------|------------|-----------|------------|
| WOEX 0302.. | 0.125     | 0.196      | 0.090     | 0.090      |
| WOEX 0403.. | 0.161     | 0.250      | 0.125     | 0.100      |
| WOEX 05T3.. | 0.208     | 0.314      | 0.149     | 0.112      |
| WOEX 06T3.. | 0.259     | 0.393      | 0.149     | 0.159      |
| WOEX 0804.. | 0.311     | 0.472      | 0.188     | 0.194      |



### WOEX

|        | -01<br>BK7615    | -01<br>BK62 | -11<br>BK77 | -13<br>BK79 |
|--------|------------------|-------------|-------------|-------------|
|        |                  |             |             |             |
|        | WOEX             | WOEX        | WOEX        | WOEX        |
|        | 10 821 ...       | 10 821 ...  | 10 821 ...  | 10 821 ...  |
| ISO    | KOMET no.        | RE<br>inch  |             |             |
| 030204 | W29 10010.0462   | 0.016       |             |             |
| 030204 | W29 10130.0479   | 0.016       |             | 20301       |
| 030204 | W29 10110.0477   | 0.016       |             | 15313       |
| 030204 | W29 10010.047615 | 0.016       | 05301       | 80311       |
| 040304 | W29 18010.0462   | 0.016       |             |             |
| 040304 | W29 18130.0479   | 0.016       |             | 20401       |
| 040304 | W29 18110.0477   | 0.016       |             | 15413       |
| 040304 | W29 18010.047615 | 0.016       | 05401       | 80411       |
| 05T304 | W29 24010.0462   | 0.016       |             |             |
| 05T304 | W29 24130.0479   | 0.016       |             | 20501       |
| 05T304 | W29 24110.0477   | 0.016       |             | 15513       |
| 05T304 | W29 24010.047615 | 0.016       | 05501       | 80511       |
| 06T304 | W29 34010.0462   | 0.016       |             |             |
| 06T304 | W29 34130.0479   | 0.016       |             | 20601       |
| 06T304 | W29 34110.0477   | 0.016       |             | 15613       |
| 06T304 | W29 34010.047615 | 0.016       | 05601       | 80611       |
| 080404 | W29 42010.0462   | 0.016       |             |             |
| 080404 | W29 42130.0479   | 0.016       |             | 20801       |
| 080404 | W29 42110.0477   | 0.016       |             | 15813       |
| 080404 | W29 42010.047615 | 0.016       | 05801       | 80811       |
| 100504 | W29 50010.0462   | 0.016       |             |             |
| 100504 | W29 50130.0479   | 0.016       |             | 21001       |
| 100504 | W29 50110.0477   | 0.016       |             | 16013       |
| 100508 | W29 50010.087615 | 0.031       | 08001       | 81011       |
| 120608 | W29 58010.087615 | 0.031       | 08201       |             |
| 120608 | W29 58130.0879   | 0.031       |             | 16213       |
| 120608 | W29 58010.0862   | 0.031       | 28201       |             |

|   |  |   |   |   |
|---|--|---|---|---|
| P |  |   |   | ● |
| M |  |   |   | ● |
| K |  | ● | ● | ● |
| N |  |   |   | ○ |
| S |  |   |   | ● |
| H |  |   | ○ | ○ |
| O |  |   |   | ○ |

→ v<sub>c</sub> Page 48


# Material examples for cutting data tables


|                 | Material sub-group                         | Index                 | Composition / Structure / Heat treatment       | Tensile strength<br>lbf/in <sup>2</sup> / HB / HRC | Material<br>number                 | Material<br>designation | Material<br>number | Material<br>designation |
|-----------------|--|-----------------------|--|--|------------------------------------|-------------------------|--------------------|-------------------------|
| P               | Unalloyed steel                            | P.1.1                 | < 0.15 % C<br>Annealed                         | 60900 lbf/in <sup>2</sup> / 125 HB                 | 1.0401                             | 1015                    | 1.0301             | 1010                    |
|                 |  | P.1.2                 | < 0.45 % C<br>Annealed                         | 92800 lbf/in <sup>2</sup> / 190 HB                 | 1.1191                             | 1045                    | 1.0737             | 12L14                   |
|                 |  | P.1.3                 | < 0.45 % C<br>Tempered                         | 121800 lbf/in <sup>2</sup> / 250 HB                | 1.1191                             | 1045                    | 1.0503             | 1043                    |
|                 |  | P.1.4                 | < 0.75 % C<br>Annealed                         | 132000 lbf/in <sup>2</sup> / 270 HB                | 1.1223                             | 1060                    | 1.0535             | 1055                    |
|                 |  | P.1.5                 | < 0.75 % C<br>Tempered                         | 146500 lbf/in <sup>2</sup> / 300 HB                | 1.1223                             | 1060                    | 1.1274             | 1095                    |
|                 | Low-alloy steel                            | P.2.1                 | Annealed                                       | 88500 lbf/in <sup>2</sup> / 180 HB                 | 1.7131                             | 5115                    | 1.6523             | 8620                    |
|                 |  | P.2.2                 | Tempered                                       | 134900 lbf/in <sup>2</sup> / 275 HB                | 1.7131                             | 5115                    | 1.6582             | 4340                    |
|                 |  | P.2.3                 | Tempered                                       | 146500 lbf/in <sup>2</sup> / 300 HB                | 1.7225                             | 4142                    | 1.7131             | 5115                    |
|                 |  | P.2.4                 | Tempered                                       | 174000 lbf/in <sup>2</sup> / 375 HB                | 1.7225                             | 4142                    | 1.7223             | 4140                    |
|                 | High-alloy steel and high-alloy tool steel | P.3.1                 | Annealed                                       | 98600 lbf/in <sup>2</sup> / 200 HB                 | 1.4021                             | 420                     | 1.2379             | D2                      |
|                 |  | P.3.2                 | Hardened and tempered                          | 159500 lbf/in <sup>2</sup> / 300 HB                | 1.2343                             | H11                     | 1.3343             | M2                      |
|                 |  | P.3.3                 | Hardened and tempered                          | 188500 lbf/in <sup>2</sup> / 400 HB                | 1.2343                             | H11                     | 1.2363             | A2                      |
|                 | Stainless steel                            | P.4.1                 | Ferritic / martensitic<br>Annealed             | 98600 lbf/in <sup>2</sup> / 200 HB                 | 1.4016                             | 430                     | 1.4125             | 440C                    |
|                 |  | P.4.2                 | Martensitic<br>Tempered                        | 117500 lbf/in <sup>2</sup> / 250 HB                | 1.4112                             | S44003                  | 1.4021             | 420                     |
| M               | Stainless steel                            | M.1.1                 | Austenitic / austenitic-ferritic<br>Quenched   | 88500 lbf/in <sup>2</sup> / 200 HB                 | 1.4301                             | 304                     | 1.4401             | 316                     |
|                 |  | M.2.1                 | Austenitic<br>Tempered                         | 300 HB   | 1.4841                             | 314                     | 1.4568             | 17-7 PH                 |
|                 |  | M.3.1                 | Austenitic / ferritic (Duplex)                 | 113100 lbf/in <sup>2</sup> / 230 HB                | 1.4462                             | S32205                  | 1.4410             | S32750                  |
| K               | Grey cast iron                             | K.1.1                 | Pearlitic / ferritic                           | 88500 lbf/in <sup>2</sup> / 180 HB                 | 0.6010                             | A48-20B                 | 0.6025             | A48-40 B                |
|                 |  | K.1.2                 | Pearlitic (martensitic)                        | 127600 lbf/in <sup>2</sup> / 260 HB                | 0.6030                             | A48-45B                 | 0.6040             | A48-60 B                |
|                 | Spherulitic graphite cast iron             | K.2.1                 | Ferritic                                       | 78300 lbf/in <sup>2</sup> / 160 HB                 | 0.7040                             | 60-40-18                | 0.7050             | 65-45-12                |
|                 |  | K.2.2                 | Pearlitic                                      | 122600 lbf/in <sup>2</sup> / 250 HB                | 0.7070                             | 100-70-03               | 0.7660             | A439 Type D2            |
|                 | Malleable iron                             | K.3.1                 | Ferritic                                       | 63800 lbf/in <sup>2</sup> / 130 HB                 | 0.8035                             | GTW-35-04               |                    |                         |
|                 |  | K.3.2                 | Pearlitic                                      | 113100 lbf/in <sup>2</sup> / 230 HB                | 0.8170                             | 70003                   |                    |                         |
| N               | Aluminium wrought alloy                    | N.1.1                 | Non-hardenable                                 | 60 HB  | 3.0255                             | A91060                  | 3.0255             | A91060                  |
|                 |  | N.1.2                 | Hardenable                                     | 49300 lbf/in <sup>2</sup> / 100 HB                 | 3.1355                             | 2024                    | 3.1355             | 2024                    |
|                 | Cast aluminium alloy                       | N.2.1                 | ≤ 12 % Si, non-hardenable                      | 36300 lbf/in <sup>2</sup> / 75 HB                  | 3.2581                             | A04130 / A413-0         | 3.2581             | A04130 / A413-0         |
|                 |  | N.2.2                 | ≤ 12 % Si, hardenable                          | 43500 lbf/in <sup>2</sup> / 90 HB                  | 3.2134                             | G-AISi5Cu1Mg            |                    |                         |
|                 |  | N.2.3                 | > 12 % Si, non-hardenable                      | 63800 lbf/in <sup>2</sup> / 130 HB                 |                                    | G-AISi17Cu4Mg           |                    |                         |
|                 | Copper and copper alloys (bronze/brass)    | N.3.1                 | Free-machining alloys, PB > 1 %                | 54400 lbf/in <sup>2</sup> / 110 HB                 | 2.0380                             | CuZn39Pb2 (Ms58)        | 2.0380             | C37700                  |
|                 |  | N.3.2                 | CuZn, CuSnZn                                   | 43500 lbf/in <sup>2</sup> / 90 HB                  | 2.0331                             | CuZn15                  | 2.0331             | C34000                  |
|                 |  | N.3.3                 | CuSn, lead-free copper and electrolytic copper | 49300 lbf/in <sup>2</sup> / 100 HB                 | 2.0060                             | E-Cu57                  |                    |                         |
|                 | Magnesium alloys                           | N.4.1                 | Magnesium and magnesium alloys                 | 70 HB  | 3.5612                             | MgAl6Zn                 |                    |                         |
|                 | S  | Heat-resistant alloys | S.1.1  | Fe - basis<br>Annealed                             | 98600 lbf/in <sup>2</sup> / 200 HB | 1.4864                  | X12NiCrSi 36-16    | 1.4864                  |
| S.1.2           |  |                       | Fe - basis                                     | 137800 lbf/in <sup>2</sup> / 280 HB                | 1.4980                             | X6NiCrTiMoVB25-15-2     | 1.4980             | S66286                  |
| S.2.1           |  |                       | Ni or Co basis<br>Annealed                     | 121800 lbf/in <sup>2</sup> / 250 HB                | 2.4856                             | Inconel 625             | 2.4812             | Hastelloy C             |
| S.2.2           |  |                       | Ni or Co basis                                 | 171100 lbf/in <sup>2</sup> / 350 HB                | 2.4952                             | Nimonic 80A             | 2.4668             | Inconel 718             |
| S.2.3           |  |                       | Ni or Co basis<br>Cast                         | 156600 lbf/in <sup>2</sup> / 320 HB                | 2.4674                             | Nimocast PK24           | 2.4670             | Nimocast 713            |
| Titanium alloys |  | S.3.1                 | Pure titanium                                  | 5800 lbf/in <sup>2</sup>                           | 3.7025                             | Ti99,8                  |                    |                         |
|                 |  | S.3.2                 | Alpha + beta alloys                            | 152300 lbf/in <sup>2</sup>                         | 3.7165                             | TiAl6V4                 |                    |                         |
|                 |  | S.3.3                 | Beta alloys                                    | 203100 lbf/in <sup>2</sup> / 410 HB                | Ti555.3                            | Ti-5Al-5V-5Mo-3Cr       |                    |                         |
| H               | Hardened steel                             | H.1.1                 | Hardened and tempered                          | 46-55 HRC  |                                    |                         |                    |                         |
|                 |  | H.1.2                 | Hardened and tempered                          | 56-60 HRC  |                                    |                         |                    |                         |
|                 |  | H.1.3                 | Hardened and tempered                          | 61-65 HRC  |                                    |                         |                    |                         |
|                 |  | H.1.4                 | Hardened and tempered                          | 66-70 HRC  |                                    |                         |                    |                         |
|                 | Chilled iron                               | H.2.1                 | Cast   | 400 HB   |                                    |                         |                    |                         |
|                 | Hardened cast iron                         | H.3.1                 | Hardened and tempered                          | 55 HRC   |                                    |                         |                    |                         |
| O               | Non-metal materials                        | O.1.1                 | Plastics, duroplastic                          | ≤ 21800 lbf/in <sup>2</sup>                        |                                    |                         |                    |                         |
|                 |  | O.1.2                 | Plastics, thermoplastic                        | ≤ 14500 lbf/in <sup>2</sup>                        |                                    |                         |                    |                         |
|                 |  | O.2.1                 | Aramid fibre-reinforced                        | ≤ 145000 lbf/in <sup>2</sup>                       |                                    |                         |                    |                         |
|                 |  | O.2.2                 | Glass/carbon-fibre reinforced                  | ≤ 145000 lbf/in <sup>2</sup>                       |                                    |                         |                    |                         |
|                 |  | O.3.1                 | Graphite                                       |  |                                    |                         |                    |                         |

\* Tensile Strength at Rupture (Rm)

## Cutting data standard values for SOGX indexable inserts


| Index | SOGX<br>10 820 ...        |               |               |               |               |               |               |
|-------|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|       | -01 / -13 / -32<br>BK8425 | -03<br>BK8430 | -34<br>BK8425 | -01<br>BK7935 | -01<br>BK6115 | -01<br>BK6425 | -01<br>BK7710 |
|       | v <sub>c</sub> in ft/min  |               |               |               |               |               |               |
| P.1.1 | 850                       | 850           |               | 820           | 980           | 1050          |               |
| P.1.2 | 850                       | 850           | 850           | 720           | 980           | 1050          |               |
| P.1.3 | 890                       | 890           |               | 890           | 890           | 920           |               |
| P.1.4 | 820                       | 820           |               | 820           | 820           | 820           |               |
| P.1.5 | 890                       | 890           | 890           | 660           | 980           | 950           |               |
| P.2.1 | 890                       | 890           |               | 890           | 890           | 920           |               |
| P.2.2 | 850                       | 850           |               | 850           | 850           | 890           |               |
| P.2.3 | 590                       | 590           | 590           | 520           | 790           | 850           |               |
| P.2.4 | 490                       | 490           | 490           | 430           | 660           | 690           |               |
| P.3.1 | 520                       | 520           | 520           | 460           | 660           | 720           |               |
| P.3.2 | 430                       | 430           | 430           | 390           | 520           | 590           |               |
| P.3.3 | 390                       | 390           | 390           | 360           | 460           | 520           |               |
| P.4.1 | 590                       | 590           |               | 490           | 720           | 790           |               |
| P.4.2 | 430                       | 430           |               | 390           | 520           | 590           |               |
| M.1.1 | 490                       | 490           |               | 520           | 720           | 660           |               |
| M.2.1 | 490                       | 490           |               | 520           | 720           | 660           |               |
| M.3.1 | 460                       | 460           |               | 490           | 660           | 590           |               |
| K.1.1 | 520                       | 520           | 520           | 490           | 790           | 660           |               |
| K.1.2 | 390                       | 390           | 390           | 390           | 590           | 490           |               |
| K.2.1 | 520                       | 520           | 520           | 490           | 520           | 520           |               |
| K.2.2 | 330                       | 330           | 330           | 300           | 330           | 330           |               |
| K.3.1 | 390                       | 390           | 390           | 360           | 390           | 390           |               |
| K.3.2 | 330                       | 330           | 330           | 300           | 330           | 330           |               |
| N.1.1 | 1310                      | 1310          |               | 1310          |               |               | 1640          |
| N.1.2 | 1310                      | 1310          |               | 1310          |               |               | 1640          |
| N.2.1 | 820                       | 820           |               | 820           |               |               | 920           |
| N.2.2 | 820                       | 820           |               | 820           |               |               | 920           |
| N.2.3 | 750                       | 750           |               | 750           |               |               | 820           |
| N.3.1 | 660                       | 660           |               | 660           |               |               | 820           |
| N.3.2 | 720                       | 720           |               | 720           |               |               | 920           |
| N.3.3 | 1080                      | 1080          |               | 1080          |               |               | 1280          |
| N.4.1 | 660                       | 660           |               | 660           |               |               | 820           |
| S.1.1 | 200                       | 200           |               | 200           |               |               |               |
| S.1.2 | 160                       | 160           |               | 160           |               |               |               |
| S.2.1 | 200                       | 200           |               | 200           |               |               |               |
| S.2.2 | 160                       | 160           |               | 160           |               |               |               |
| S.2.3 | 100                       | 100           |               | 100           |               |               |               |
| S.3.1 | 330                       | 330           |               | 330           |               |               | 330           |
| S.3.2 | 260                       | 260           |               | 260           |               |               | 260           |
| S.3.3 | 160                       | 160           |               | 160           |               |               | 160           |
| H.1.1 | 330                       | 330           |               |               | 330           |               |               |
| H.1.2 | 260                       | 260           |               |               | 260           |               |               |
| H.1.3 | 160                       | 160           |               |               | 160           |               |               |
| H.1.4 |                           |               |               |               |               |               |               |
| H.2.1 | 330                       | 330           |               |               | 330           |               |               |
| H.3.1 | 260                       | 260           |               |               | 260           |               |               |
| O.1.1 |                           |               |               | 330           |               |               | 330           |
| O.1.2 |                           |               |               | 330           |               |               | 330           |
| O.2.1 |                           |               |               |               |               |               |               |
| O.2.2 |                           |               |               | 330           |               |               | 330           |
| O.3.1 |                           |               |               | 330           |               |               | 330           |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

# Cutting data standard values for KUB Pentron – 4xD


| ABS / C<br>10 874 ... / 15 874 ... |               |               |               |               |               |               |               |               |               |               |               |         |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------|
| Index                              | Ø 0.562-0.625 | Ø 0.656-0.703 | Ø 0.750-0.781 | Ø 0.812-0.828 | Ø 0.875-0.937 | Ø 0.985-1.000 | Ø 1.031-1.062 | Ø 1.109-1.218 | Ø 1.250-1.328 | Ø 1.375-1.469 | Ø 1.500-1.687 | Ø 1.750 |
|                                    | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch    |
| f in inch/rev.                     |               |               |               |               |               |               |               |               |               |               |               |         |
| P.1.1                              | 0.002         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| P.1.2                              | 0.003         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| P.1.3                              | 0.002         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| P.1.4                              | 0.002         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| P.1.5                              | 0.003         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| P.2.1                              | 0.002         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| P.2.2                              | 0.002         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| P.2.3                              | 0.003         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| P.2.4                              | 0.002         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| P.3.1                              | 0.003         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| P.3.2                              | 0.002         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| P.3.3                              | 0.002         | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| P.4.1                              | 0.004         | 0.005         | 0.005         | 0.007         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008   |
| P.4.2                              | 0.002         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| M.1.1                              | 0.003         | 0.004         | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| M.2.1                              | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| M.3.1                              | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| K.1.1                              | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.009         | 0.010         | 0.010         | 0.010         | 0.010         | 0.010         | 0.010   |
| K.1.2                              | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008   |
| K.2.1                              | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.009         | 0.010         | 0.010         | 0.010         | 0.010         | 0.010         | 0.010   |
| K.2.2                              | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008   |
| K.3.1                              | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.009         | 0.010         | 0.010         | 0.010         | 0.010         | 0.010         | 0.010   |
| K.3.2                              | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008   |
| N.1.1                              | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| N.1.2                              | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| N.2.1                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.2.2                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.2.3                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.3.1                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.3.2                              | 0.004         | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| N.3.3                              | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.4.1                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| S.1.1                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.1.2                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.2.1                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.2.2                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.2.3                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.3.1                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| S.3.2                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| S.3.3                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.1.1                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.1.2                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.1.3                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.1.4                              |               |               |               |               |               |               |               |               |               |               |               |         |
| H.2.1                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.3.1                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| O.1.1                              | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| O.1.2                              | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| O.2.1                              |               |               |               |               |               |               |               |               |               |               |               |         |
| O.2.2                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003   |
| O.3.1                              | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

# Cutting data standard values for KUB Pentron – 5xD


| ABS / C<br>10 875 ... / 15 875 ... |               |               |               |               |               |               |               |               |               |               |               |         |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------|
| Index                              | Ø 0.562-0.625 | Ø 0.656-0.703 | Ø 0.750-0.781 | Ø 0.812-0.828 | Ø 0.875-0.937 | Ø 0.985-1.000 | Ø 1.031-1.062 | Ø 1.109-1.218 | Ø 1.250-1.328 | Ø 1.375-1.469 | Ø 1.500-1.687 | Ø 1.750 |
|                                    | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch    |
| f in inch/rev.                     |               |               |               |               |               |               |               |               |               |               |               |         |
| P.1.1                              | 0.002         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| P.1.2                              | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| P.1.3                              | 0.002         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| P.1.4                              | 0.002         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| P.1.5                              | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| P.2.1                              | 0.002         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| P.2.2                              | 0.002         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| P.2.3                              | 0.003         | 0.004         | 0.004         | 0.006         | 0.007         | 0.007         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| P.2.4                              | 0.002         | 0.003         | 0.003         | 0.005         | 0.006         | 0.006         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| P.3.1                              | 0.003         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| P.3.2                              | 0.002         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| P.3.3                              | 0.002         | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| P.4.1                              | 0.004         | 0.005         | 0.005         | 0.007         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008   |
| P.4.2                              | 0.002         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| M.1.1                              | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.006         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| M.2.1                              | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| M.3.1                              | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| K.1.1                              | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.008         | 0.009         | 0.009         | 0.009         | 0.009         | 0.009         | 0.009   |
| K.1.2                              | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| K.2.1                              | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.008         | 0.009         | 0.009         | 0.009         | 0.009         | 0.009         | 0.009   |
| K.2.2                              | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| K.3.1                              | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         | 0.008         | 0.009         | 0.009         | 0.009         | 0.009         | 0.009         | 0.009   |
| K.3.2                              | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| N.1.1                              | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| N.1.2                              | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005   |
| N.2.1                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.2.2                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.2.3                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.3.1                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.3.2                              | 0.004         | 0.006         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007   |
| N.3.3                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| N.4.1                              | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006   |
| S.1.1                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.1.2                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.2.1                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.2.2                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.2.3                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| S.3.1                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| S.3.2                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| S.3.3                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.1.1                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.1.2                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.1.3                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.1.4                              |               |               |               |               |               |               |               |               |               |               |               |         |
| H.2.1                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| H.3.1                              | 0.001         | 0.001         | 0.001         | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002   |
| O.1.1                              | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| O.1.2                              | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |
| O.2.1                              |               |               |               |               |               |               |               |               |               |               |               |         |
| O.2.2                              | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003   |
| O.3.1                              | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004   |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

## Cutting data standard values for SOEX indexable inserts


| Index | SOEX<br>10 822 ...       |        |        |        |        |        |
|-------|--------------------------|--------|--------|--------|--------|--------|
|       | BK8425                   | BK7935 | BK6115 | BK7710 | BK6420 | BK7615 |
|       | v <sub>c</sub> in ft/min |        |        |        |        |        |
| P.1.1 | 850                      | 820    | 980    |        | 980    |        |
| P.1.2 | 850                      | 720    | 980    |        | 980    |        |
| P.1.3 | 890                      | 890    | 890    |        | 890    |        |
| P.1.4 | 820                      | 820    | 820    |        | 820    |        |
| P.1.5 | 890                      | 660    | 980    |        | 890    |        |
| P.2.1 | 890                      | 890    | 890    |        | 890    |        |
| P.2.2 | 850                      | 850    | 850    |        | 850    |        |
| P.2.3 | 590                      | 520    | 790    |        | 790    |        |
| P.2.4 | 490                      | 430    | 660    |        | 620    |        |
| P.3.1 | 520                      | 460    | 660    |        | 660    |        |
| P.3.2 | 430                      | 390    | 520    |        | 520    |        |
| P.3.3 | 390                      | 360    | 460    |        | 460    |        |
| P.4.1 | 590                      | 490    | 720    |        | 720    |        |
| P.4.2 | 430                      | 390    | 520    |        | 520    |        |
| M.1.1 | 490                      | 520    | 720    |        | 720    |        |
| M.2.1 | 490                      | 520    | 720    |        | 720    |        |
| M.3.1 | 460                      | 490    | 660    |        | 660    |        |
| K.1.1 | 520                      | 490    | 790    |        | 660    | 850    |
| K.1.2 | 390                      | 390    | 590    |        | 490    | 520    |
| K.2.1 | 520                      | 490    | 520    |        | 520    | 590    |
| K.2.2 | 330                      | 300    | 330    |        | 330    | 390    |
| K.3.1 | 390                      | 360    | 390    |        | 390    | 460    |
| K.3.2 | 330                      | 300    | 330    |        | 330    | 390    |
| N.1.1 | 1310                     | 1310   |        | 1640   |        |        |
| N.1.2 | 1310                     | 1310   |        | 1640   |        |        |
| N.2.1 | 820                      | 820    |        | 920    |        |        |
| N.2.2 | 820                      | 820    |        | 920    |        |        |
| N.2.3 | 750                      | 750    |        | 820    |        |        |
| N.3.1 | 660                      | 660    |        | 820    |        |        |
| N.3.2 | 720                      | 720    |        | 920    |        |        |
| N.3.3 | 1080                     | 1080   |        | 1280   |        |        |
| N.4.1 | 660                      | 660    |        | 820    |        |        |
| S.1.1 | 200                      | 200    |        |        |        |        |
| S.1.2 | 160                      | 160    |        |        |        |        |
| S.2.1 | 200                      | 200    |        |        |        |        |
| S.2.2 | 160                      | 160    |        |        |        |        |
| S.2.3 | 100                      | 100    |        |        |        |        |
| S.3.1 | 330                      | 330    |        | 330    |        |        |
| S.3.2 | 260                      | 260    |        | 260    |        |        |
| S.3.3 | 160                      | 160    |        | 160    |        |        |
| H.1.1 | 330                      |        | 330    |        |        |        |
| H.1.2 | 260                      |        | 260    |        |        |        |
| H.1.3 | 160                      |        | 160    |        |        |        |
| H.1.4 |                          |        |        |        |        |        |
| H.2.1 | 330                      |        | 330    |        |        |        |
| H.3.1 | 260                      |        | 260    |        |        |        |
| O.1.1 |                          | 330    |        | 330    |        |        |
| O.1.2 |                          | 330    |        | 330    |        |        |
| O.2.1 |                          |        |        |        |        |        |
| O.2.2 |                          | 330    |        | 330    |        |        |
| O.3.1 |                          | 330    |        | 330    |        |        |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

# Cutting data standard values for KUB Quatron – 2xD, 3xD

| Index          | ABS / C   |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|----------------|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                | 10 879 ... / 15 879 ... / 10 880 ... / 15 880 ... |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|                | Ø 0.562-0.656<br>inch                             | Ø 0.687-0.781<br>inch | Ø 0.812-0.968<br>inch | Ø 0.985-1.156<br>inch | Ø 1.187-1.437<br>inch | Ø 1.469-1.562<br>inch | Ø 1.625-1.750<br>inch | Ø 1.781-1.812<br>inch | Ø 1.875-2.062<br>inch | Ø 2.125-2.500<br>inch |
| f in inch/rev. |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| P.1.1          | 0.004   | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| P.1.2          | 0.006   | 0.006                 | 0.007                 | 0.010                 | 0.012                 | 0.012                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 |
| P.1.3          | 0.005   | 0.006                 | 0.008                 | 0.008                 | 0.010                 | 0.010                 | 0.008                 | 0.008                 | 0.008                 | 0.008                 |
| P.1.4          | 0.004   | 0.005                 | 0.007                 | 0.007                 | 0.009                 | 0.009                 | 0.007                 | 0.007                 | 0.007                 | 0.007                 |
| P.1.5          | 0.005   | 0.006                 | 0.007                 | 0.009                 | 0.011                 | 0.011                 | 0.009                 | 0.009                 | 0.009                 | 0.009                 |
| P.2.1          | 0.005   | 0.006                 | 0.008                 | 0.008                 | 0.010                 | 0.010                 | 0.008                 | 0.008                 | 0.008                 | 0.008                 |
| P.2.2          | 0.004   | 0.005                 | 0.007                 | 0.007                 | 0.009                 | 0.009                 | 0.007                 | 0.007                 | 0.007                 | 0.007                 |
| P.2.3          | 0.006   | 0.006                 | 0.008                 | 0.008                 | 0.010                 | 0.010                 | 0.008                 | 0.008                 | 0.008                 | 0.008                 |
| P.2.4          | 0.005   | 0.006                 | 0.007                 | 0.007                 | 0.009                 | 0.009                 | 0.007                 | 0.007                 | 0.007                 | 0.007                 |
| P.3.1          | 0.004   | 0.005                 | 0.005                 | 0.007                 | 0.008                 | 0.008                 | 0.007                 | 0.007                 | 0.007                 | 0.007                 |
| P.3.2          | 0.003   | 0.004                 | 0.004                 | 0.006                 | 0.007                 | 0.007                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| P.3.3          | 0.007   | 0.004                 | 0.004                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| P.4.1          | 0.004   | 0.005                 | 0.005                 | 0.008                 | 0.009                 | 0.009                 | 0.008                 | 0.008                 | 0.008                 | 0.008                 |
| P.4.2          | 0.003   | 0.004                 | 0.004                 | 0.006                 | 0.007                 | 0.007                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| M.1.1          | 0.003   | 0.003                 | 0.005                 | 0.006                 | 0.007                 | 0.007                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| M.2.1          | 0.002   | 0.003                 | 0.005                 | 0.005                 | 0.006                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| M.3.1          | 0.002   | 0.003                 | 0.004                 | 0.004                 | 0.005                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| K.1.1          | 0.006   | 0.006                 | 0.010                 | 0.012                 | 0.012                 | 0.012                 | 0.012                 | 0.012                 | 0.012                 | 0.012                 |
| K.1.2          | 0.005   | 0.005                 | 0.008                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 |
| K.2.1          | 0.006   | 0.006                 | 0.008                 | 0.008                 | 0.010                 | 0.010                 | 0.008                 | 0.008                 | 0.008                 | 0.008                 |
| K.2.2          | 0.005   | 0.006                 | 0.008                 | 0.008                 | 0.009                 | 0.009                 | 0.008                 | 0.008                 | 0.008                 | 0.008                 |
| K.3.1          | 0.006   | 0.006                 | 0.009                 | 0.009                 | 0.010                 | 0.010                 | 0.009                 | 0.009                 | 0.009                 | 0.009                 |
| K.3.2          | 0.005   | 0.006                 | 0.008                 | 0.008                 | 0.009                 | 0.009                 | 0.008                 | 0.008                 | 0.008                 | 0.008                 |
| N.1.1          | 0.003   | 0.003                 | 0.004                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| N.1.2          | 0.003   | 0.003                 | 0.004                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| N.2.1          | 0.004   | 0.005                 | 0.006                 | 0.006                 | 0.008                 | 0.008                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| N.2.2          | 0.004   | 0.005                 | 0.006                 | 0.006                 | 0.008                 | 0.008                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| N.2.3          | 0.004   | 0.004                 | 0.006                 | 0.006                 | 0.007                 | 0.007                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| N.3.1          | 0.005   | 0.006                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.008                 | 0.008                 |
| N.3.2          | 0.005   | 0.006                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.009                 | 0.009                 |
| N.3.3          | 0.003   | 0.003                 | 0.004                 | 0.005                 | 0.006                 | 0.006                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| N.4.1          | 0.005   | 0.006                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.010                 | 0.008                 | 0.008                 |
| S.1.1          | 0.002   | 0.003                 | 0.004                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| S.1.2          | 0.002   | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| S.2.1          | 0.002   | 0.003                 | 0.004                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| S.2.2          | 0.002   | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| S.2.3          | 0.001   | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| S.3.1          | 0.003   | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| S.3.2          | 0.002   | 0.003                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| S.3.3          | 0.002   | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| H.1.1          | 0.002   | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| H.1.2          | 0.002   | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| H.1.3          | 0.001   | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| H.1.4          |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| H.2.1          | 0.002   | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| H.3.1          | 0.002   | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| O.1.1          | 0.003   | 0.003                 | 0.004                 | 0.005                 | 0.006                 | 0.006                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| O.1.2          | 0.003   | 0.003                 | 0.004                 | 0.005                 | 0.006                 | 0.006                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |
| O.2.1          |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |
| O.2.2          | 0.003   | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| O.3.1          | 0.003   | 0.003                 | 0.004                 | 0.005                 | 0.006                 | 0.006                 | 0.005                 | 0.005                 | 0.005                 | 0.005                 |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.


 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.



## Cutting data standard values for WOEX indexable inserts


| Index | WOEX<br>10 821 ...       |        |        |        |      |      |      |
|-------|--------------------------|--------|--------|--------|------|------|------|
|       | BK8425                   | BK7935 | BK6115 | BK7615 | BK62 | BK77 | BK79 |
|       | v <sub>c</sub> in ft/min |        |        |        |      |      |      |
| P.1.1 | 850                      | 820    | 980    |        |      |      | 850  |
| P.1.2 | 850                      | 720    | 980    |        |      |      | 850  |
| P.1.3 | 890                      | 890    | 890    |        |      |      | 890  |
| P.1.4 | 790                      | 790    | 820    |        |      |      | 790  |
| P.1.5 | 750                      | 660    | 890    |        |      |      | 750  |
| P.2.1 | 890                      | 890    | 890    |        |      |      | 890  |
| P.2.2 | 850                      | 850    | 850    |        |      |      | 850  |
| P.2.3 | 590                      | 520    | 790    |        |      |      | 590  |
| P.2.4 | 490                      | 430    | 620    |        |      |      | 490  |
| P.3.1 | 520                      | 460    | 660    |        |      |      | 520  |
| P.3.2 | 430                      | 360    | 520    |        |      |      | 430  |
| P.3.3 | 390                      | 330    | 460    |        |      |      | 390  |
| P.4.1 | 590                      | 520    | 720    |        |      |      | 590  |
| P.4.2 | 430                      | 360    | 520    |        |      |      | 430  |
| M.1.1 | 490                      | 520    | 720    |        |      |      | 490  |
| M.2.1 | 490                      | 520    | 720    |        |      |      | 490  |
| M.3.1 | 430                      | 490    | 660    |        |      |      | 430  |
| K.1.1 | 520                      | 490    | 790    | 850    | 790  |      | 520  |
| K.1.2 | 390                      | 360    | 460    | 520    | 460  |      | 390  |
| K.2.1 | 520                      | 490    | 520    | 590    | 520  |      | 520  |
| K.2.2 | 330                      | 300    | 330    | 390    | 330  |      | 330  |
| K.3.1 | 390                      | 360    | 390    | 460    | 390  |      | 390  |
| K.3.2 | 330                      | 300    | 330    | 390    | 330  |      | 330  |
| N.1.1 | 1310                     | 1310   |        |        |      |      | 1310 |
| N.1.2 | 1310                     | 1310   |        |        |      |      | 1310 |
| N.2.1 | 820                      | 820    |        |        |      |      | 820  |
| N.2.2 | 820                      | 820    |        |        |      |      | 820  |
| N.2.3 | 750                      | 750    |        |        |      |      | 750  |
| N.3.1 | 660                      | 660    |        |        |      |      | 660  |
| N.3.2 | 720                      | 720    |        |        |      |      | 720  |
| N.3.3 | 1080                     | 1080   |        |        |      |      | 1080 |
| N.4.1 | 660                      | 660    |        |        |      |      | 660  |
| S.1.1 |                          | 160    |        |        |      | 160  |      |
| S.1.2 |                          | 130    |        |        |      | 130  |      |
| S.2.1 |                          | 160    |        |        |      | 160  |      |
| S.2.2 |                          | 130    |        |        |      | 130  |      |
| S.2.3 |                          | 100    |        |        |      | 100  |      |
| S.3.1 |                          | 230    |        |        |      | 230  |      |
| S.3.2 |                          | 200    |        |        |      | 200  |      |
| S.3.3 |                          | 130    |        |        |      | 130  |      |
| H.1.1 | 330                      |        | 330    |        | 330  | 130  |      |
| H.1.2 | 260                      |        | 260    |        | 260  | 100  |      |
| H.1.3 | 160                      |        | 160    |        | 160  | 70   |      |
| H.1.4 |                          |        |        |        |      |      |      |
| H.2.1 | 330                      |        | 330    |        | 330  | 130  |      |
| H.3.1 | 260                      |        | 260    |        | 260  | 100  |      |
| O.1.1 |                          |        |        |        |      | 330  |      |
| O.1.2 |                          |        |        |        |      | 330  |      |
| O.2.1 |                          |        |        |        |      |      |      |
| O.2.2 |                          |        |        |        |      | 330  |      |
| O.3.1 |                          |        |        |        |      | 330  |      |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

# Cutting data standard values for KUB Trigon – 2xD


| Index | ABS<br>15 892 ... |               |               |               |               |               |               |               |               |               |               |               |               |
|-------|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|       | Ø 0.562-0.625     | Ø 0.687-0.781 | Ø 0.812-0.937 | Ø 0.985-1.156 | Ø 1.187-1.437 | Ø 1.469-1.562 | Ø 1.625-1.750 | Ø 1.781-1.812 | Ø 1.875-2.062 | Ø 2.125-2.500 | Ø 2.593-2.656 | Ø 2.750-2.875 | Ø 3.000-3.250 |
|       | inch              | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          |
|       | f in inch/rev.    |               |               |               |               |               |               |               |               |               |               |               |               |
| P.1.1 | 0.003             | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         |
| P.1.2 | 0.003             | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         |
| P.1.3 | 0.002             | 0.003         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.010         | 0.010         |
| P.1.4 | 0.002             | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.005         | 0.006         | 0.007         | 0.009         | 0.009         |
| P.1.5 | 0.003             | 0.004         | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.009         | 0.009         | 0.009         |
| P.2.1 | 0.002             | 0.003         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.010         | 0.010         | 0.010         |
| P.2.2 | 0.002             | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.005         | 0.006         | 0.007         | 0.009         | 0.009         |
| P.2.3 | 0.002             | 0.003         | 0.004         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         |
| P.2.4 | 0.002             | 0.002         | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.007         | 0.007         |
| P.3.1 | 0.002             | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         |
| P.3.2 | 0.002             | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| P.3.3 | 0.002             | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         |
| P.4.1 | 0.003             | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         |
| P.4.2 | 0.002             | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| M.1.1 | 0.002             | 0.002         | 0.003         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         |
| M.2.1 | 0.002             | 0.002         | 0.003         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         |
| M.3.1 | 0.002             | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.006         | 0.006         | 0.006         |
| K.1.1 | 0.004             | 0.005         | 0.006         | 0.008         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         | 0.012         | 0.012         | 0.012         |
| K.1.2 | 0.003             | 0.003         | 0.004         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.008         | 0.010         | 0.010         |
| K.2.1 | 0.003             | 0.004         | 0.006         | 0.008         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         | 0.012         | 0.012         | 0.012         |
| K.2.2 | 0.003             | 0.004         | 0.005         | 0.008         | 0.005         | 0.005         | 0.005         | 0.006         | 0.009         | 0.009         | 0.010         | 0.010         | 0.010         |
| K.3.1 | 0.004             | 0.005         | 0.006         | 0.010         | 0.006         | 0.006         | 0.006         | 0.007         | 0.010         | 0.010         | 0.012         | 0.012         | 0.012         |
| K.3.2 | 0.003             | 0.004         | 0.005         | 0.008         | 0.005         | 0.005         | 0.005         | 0.006         | 0.009         | 0.009         | 0.010         | 0.010         | 0.010         |
| N.1.1 | 0.002             | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| N.1.2 | 0.002             | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| N.2.1 | 0.004             | 0.005         | 0.006         | 0.007         | 0.007         | 0.008         | 0.008         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         |
| N.2.2 | 0.004             | 0.005         | 0.006         | 0.007         | 0.007         | 0.008         | 0.008         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         |
| N.2.3 | 0.004             | 0.004         | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         |
| N.3.1 | 0.002             | 0.003         | 0.005         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         |
| N.3.2 | 0.002             | 0.004         | 0.005         | 0.007         | 0.007         | 0.008         | 0.009         | 0.009         | 0.009         | 0.009         | 0.010         | 0.010         | 0.010         |
| N.3.3 | 0.002             | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         |
| N.4.1 | 0.002             | 0.003         | 0.005         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         |
| S.1.1 | 0.002             | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         |
| S.1.2 | 0.001             | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         |
| S.2.1 | 0.002             | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         |
| S.2.2 | 0.001             | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         |
| S.2.3 | 0.001             | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| S.3.1 | 0.003             | 0.004         | 0.004         | 0.005         | 0.004         | 0.005         | 0.005         | 0.005         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         |
| S.3.2 | 0.002             | 0.003         | 0.004         | 0.005         | 0.004         | 0.005         | 0.005         | 0.005         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         |
| S.3.3 | 0.002             | 0.002         | 0.002         | 0.003         | 0.002         | 0.003         | 0.003         | 0.003         | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         |
| H.1.1 | 0.002             | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         |
| H.1.2 | 0.002             | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         |
| H.1.3 | 0.002             | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |               |               |               |               |               |               |
| H.1.4 |                   |               |               |               |               |               |               |               |               |               |               |               |               |
| H.2.1 | 0.002             | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| H.3.1 | 0.002             | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| O.1.1 | 0.003             | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |
| O.1.2 | 0.003             | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |
| O.2.1 |                   |               |               |               |               |               |               |               |               |               |               |               |               |
| O.2.2 | 0.002             | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         |
| O.3.1 | 0.004             | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

# Cutting data standard values for KUB Trigon – 2.5xD


|                |               | C<br>15 896 ... |               |               |               |               |               |               |               |               |
|----------------|---------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Index          | Ø 0.562–0.625 | Ø 0.687–0.781   | Ø 0.812–0.937 | Ø 0.985–1.156 | Ø 1.187–1.437 | Ø 1.469–1.562 | Ø 1.625–1.750 | Ø 1.812–2.000 | Ø 2.125–2.500 | Ø 2.750–3.250 |
|                | inch          | inch            | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          |
| f in inch/rev. |               |                 |               |               |               |               |               |               |               |               |
| P.1.1          | 0.003         | 0.004           | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         |
| P.1.2          | 0.003         | 0.004           | 0.005         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.010         | 0.010         |
| P.1.3          | 0.002         | 0.003           | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.010         |
| P.1.4          | 0.002         | 0.003           | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         | 0.009         |
| P.1.5          | 0.003         | 0.004           | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.008         | 0.009         | 0.009         |
| P.2.1          | 0.002         | 0.003           | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.010         |
| P.2.2          | 0.002         | 0.003           | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         | 0.009         |
| P.2.3          | 0.002         | 0.003           | 0.004         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         |
| P.2.4          | 0.002         | 0.002           | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         |
| P.3.1          | 0.002         | 0.003           | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| P.3.2          | 0.002         | 0.002           | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.006         | 0.006         | 0.006         |
| P.3.3          | 0.002         | 0.002           | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         |
| P.4.1          | 0.003         | 0.004           | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.007         | 0.007         | 0.007         |
| P.4.2          | 0.002         | 0.002           | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.006         | 0.006         | 0.006         |
| M.1.1          | 0.002         | 0.002           | 0.003         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| M.2.1          | 0.002         | 0.002           | 0.003         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         |
| M.3.1          | 0.002         | 0.002           | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.006         | 0.006         |
| K.1.1          | 0.004         | 0.005           | 0.006         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.012         | 0.012         |
| K.1.2          | 0.003         | 0.003           | 0.004         | 0.006         | 0.006         | 0.006         | 0.007         | 0.007         | 0.008         | 0.010         |
| K.2.1          | 0.003         | 0.004           | 0.006         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.012         | 0.012         |
| K.2.2          | 0.003         | 0.004           | 0.005         | 0.008         | 0.005         | 0.005         | 0.006         | 0.009         | 0.010         | 0.010         |
| K.3.1          | 0.004         | 0.005           | 0.006         | 0.010         | 0.006         | 0.006         | 0.007         | 0.010         | 0.012         | 0.012         |
| K.3.2          | 0.003         | 0.004           | 0.005         | 0.008         | 0.005         | 0.005         | 0.006         | 0.009         | 0.010         | 0.010         |
| N.1.1          | 0.002         | 0.003           | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         |
| N.1.2          | 0.002         | 0.003           | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         |
| N.2.1          | 0.004         | 0.005           | 0.006         | 0.007         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         |
| N.2.2          | 0.004         | 0.005           | 0.006         | 0.007         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         |
| N.2.3          | 0.004         | 0.004           | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         |
| N.3.1          | 0.002         | 0.003           | 0.005         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.010         | 0.010         |
| N.3.2          | 0.002         | 0.004           | 0.005         | 0.007         | 0.007         | 0.008         | 0.009         | 0.009         | 0.010         | 0.010         |
| N.3.3          | 0.002         | 0.003           | 0.003         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         |
| N.4.1          | 0.002         | 0.003           | 0.005         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.010         | 0.010         |
| S.1.1          | 0.002         | 0.002           | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         |
| S.1.2          | 0.001         | 0.002           | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         |
| S.2.1          | 0.002         | 0.002           | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         |
| S.2.2          | 0.001         | 0.002           | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         |
| S.2.3          | 0.001         | 0.001           | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| S.3.1          | 0.003         | 0.004           | 0.004         | 0.005         | 0.004         | 0.005         | 0.005         | 0.004         | 0.005         | 0.006         |
| S.3.2          | 0.002         | 0.003           | 0.004         | 0.005         | 0.004         | 0.005         | 0.005         | 0.004         | 0.005         | 0.006         |
| S.3.3          | 0.002         | 0.002           | 0.002         | 0.003         | 0.002         | 0.003         | 0.003         | 0.002         | 0.003         | 0.003         |
| H.1.1          | 0.002         | 0.002           | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         |
| H.1.2          | 0.002         | 0.002           | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         |
| H.1.3          | 0.002         | 0.002           | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |               |               |               |
| H.1.4          |               |                 |               |               |               |               |               |               |               |               |
| H.2.1          | 0.002         | 0.002           | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| H.3.1          | 0.002         | 0.002           | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| O.1.1          | 0.003         | 0.003           | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |
| O.1.2          | 0.003         | 0.003           | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |
| O.2.1          |               |                 |               |               |               |               |               |               |               |               |
| O.2.2          | 0.002         | 0.002           | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         |
| O.3.1          | 0.004         | 0.004           | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

# Cutting data standard values for KUB Trigon – 3xD


| Index | ABS<br>10 893 ... / 15 893 ... |               |               |               |               |               |               |               |               |               |               |               |               |
|-------|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|       | Ø 0.562-0.656                  | Ø 0.687-0.781 | Ø 0.812-0.937 | Ø 0.985-1.156 | Ø 1.187-1.437 | Ø 1.469-1.562 | Ø 1.625-1.750 | Ø 1.781-1.812 | Ø 1.875-2.062 | Ø 2.125-2.500 | Ø 2.593-2.656 | Ø 2.750-2.875 | Ø 3.000-3.250 |
|       | inch                           | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          | inch          |
|       | f in inch/rev.                 |               |               |               |               |               |               |               |               |               |               |               |               |
| P.1.1 | 0.003                          | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         |
| P.1.2 | 0.003                          | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         | 0.010         |
| P.1.3 | 0.002                          | 0.003         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.010         | 0.010         | 0.010         |
| P.1.4 | 0.002                          | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.005         | 0.006         | 0.007         | 0.009         | 0.009         | 0.009         |
| P.1.5 | 0.003                          | 0.004         | 0.004         | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.008         | 0.009         | 0.009         | 0.009         | 0.009         |
| P.2.1 | 0.002                          | 0.003         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.010         | 0.010         | 0.010         |
| P.2.2 | 0.002                          | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.005         | 0.006         | 0.007         | 0.009         | 0.009         | 0.009         |
| P.2.3 | 0.002                          | 0.003         | 0.004         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.008         |
| P.2.4 | 0.002                          | 0.002         | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         |
| P.3.1 | 0.002                          | 0.003         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         |
| P.3.2 | 0.002                          | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         |
| P.3.3 | 0.002                          | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         |
| P.4.1 | 0.003                          | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         |
| P.4.2 | 0.002                          | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         |
| M.1.1 | 0.002                          | 0.002         | 0.003         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         | 0.006         |
| M.2.1 | 0.002                          | 0.002         | 0.003         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| M.3.1 | 0.002                          | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.006         | 0.006         | 0.006         | 0.006         |
| K.1.1 | 0.004                          | 0.005         | 0.006         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         | 0.012         | 0.012         | 0.012         | 0.012         |
| K.1.2 | 0.003                          | 0.003         | 0.004         | 0.006         | 0.006         | 0.006         | 0.007         | 0.007         | 0.007         | 0.008         | 0.010         | 0.010         | 0.010         |
| K.2.1 | 0.003                          | 0.004         | 0.006         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         | 0.012         | 0.012         | 0.012         | 0.012         |
| K.2.2 | 0.003                          | 0.004         | 0.005         | 0.008         | 0.008         | 0.008         | 0.008         | 0.009         | 0.009         | 0.010         | 0.010         | 0.010         | 0.010         |
| K.3.1 | 0.004                          | 0.005         | 0.006         | 0.010         | 0.010         | 0.010         | 0.010         | 0.010         | 0.010         | 0.012         | 0.012         | 0.012         | 0.012         |
| K.3.2 | 0.003                          | 0.004         | 0.005         | 0.008         | 0.008         | 0.008         | 0.008         | 0.009         | 0.009         | 0.010         | 0.010         | 0.010         | 0.010         |
| N.1.1 | 0.002                          | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| N.1.2 | 0.002                          | 0.003         | 0.003         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| N.2.1 | 0.004                          | 0.005         | 0.006         | 0.007         | 0.007         | 0.008         | 0.008         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         |
| N.2.2 | 0.004                          | 0.005         | 0.006         | 0.007         | 0.007         | 0.008         | 0.008         | 0.007         | 0.008         | 0.008         | 0.008         | 0.008         | 0.008         |
| N.2.3 | 0.004                          | 0.004         | 0.005         | 0.006         | 0.006         | 0.007         | 0.007         | 0.006         | 0.007         | 0.007         | 0.007         | 0.007         | 0.007         |
| N.3.1 | 0.002                          | 0.003         | 0.005         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         | 0.010         |
| N.3.2 | 0.002                          | 0.004         | 0.005         | 0.007         | 0.007         | 0.008         | 0.009         | 0.009         | 0.009         | 0.010         | 0.010         | 0.010         | 0.010         |
| N.3.3 | 0.002                          | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.006         | 0.006         | 0.006         | 0.006         |
| N.4.1 | 0.002                          | 0.003         | 0.005         | 0.006         | 0.006         | 0.007         | 0.008         | 0.008         | 0.008         | 0.010         | 0.010         | 0.010         | 0.010         |
| S.1.1 | 0.002                          | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         |
| S.1.2 | 0.001                          | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         |
| S.2.1 | 0.002                          | 0.002         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.005         | 0.005         | 0.005         | 0.005         |
| S.2.2 | 0.001                          | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         |
| S.2.3 | 0.001                          | 0.001         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| S.3.1 | 0.003                          | 0.004         | 0.004         | 0.005         | 0.004         | 0.005         | 0.005         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         |
| S.3.2 | 0.002                          | 0.003         | 0.004         | 0.005         | 0.004         | 0.005         | 0.005         | 0.004         | 0.004         | 0.005         | 0.005         | 0.006         | 0.006         |
| S.3.3 | 0.002                          | 0.002         | 0.002         | 0.003         | 0.002         | 0.003         | 0.003         | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         |
| H.1.1 | 0.002                          | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         |
| H.1.2 | 0.002                          | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.002         | 0.002         | 0.002         | 0.002         | 0.003         | 0.003         |
| H.1.3 | 0.001                          | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |               |               |               |               |               |               |
| H.1.4 |                                |               |               |               |               |               |               |               |               |               |               |               |               |
| H.2.1 | 0.002                          | 0.003         | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| H.3.1 | 0.002                          | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         | 0.002         |
| O.1.1 | 0.003                          | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |
| O.1.2 | 0.003                          | 0.003         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |
| O.2.1 |                                |               |               |               |               |               |               |               |               |               |               |               |               |
| O.2.2 | 0.002                          | 0.002         | 0.002         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         | 0.003         |
| O.3.1 | 0.004                          | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         | 0.004         |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

## Cutting data standard values for KUB Trigon – 4xD


| Index | ABS<br>10 894 ... / 15 894 ... |                       |                       |                       |                       |                       |                       |
|-------|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|       | Ø 0.562-0.656<br>inch          | Ø 0.687-0.781<br>inch | Ø 0.812-0.937<br>inch | Ø 0.985-1.156<br>inch | Ø 1.187-1.437<br>inch | Ø 1.469-1.562<br>inch | Ø 1.625-1.750<br>inch |
|       | f in inch/rev.                 |                       |                       |                       |                       |                       |                       |
| P.1.1 | 0.002                          | 0.003                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| P.1.2 | 0.002                          | 0.003                 | 0.004                 | 0.005                 | 0.006                 | 0.006                 | 0.007                 |
| P.1.3 | 0.002                          | 0.002                 | 0.004                 | 0.005                 | 0.005                 | 0.005                 | 0.006                 |
| P.1.4 | 0.002                          | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| P.1.5 | 0.002                          | 0.003                 | 0.004                 | 0.004                 | 0.005                 | 0.005                 | 0.006                 |
| P.2.1 | 0.002                          | 0.002                 | 0.004                 | 0.005                 | 0.005                 | 0.005                 | 0.006                 |
| P.2.2 | 0.002                          | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| P.2.3 | 0.002                          | 0.002                 | 0.003                 | 0.005                 | 0.006                 | 0.006                 | 0.006                 |
| P.2.4 | 0.001                          | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| P.3.1 | 0.002                          | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| P.3.2 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.004                 |
| P.3.3 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| P.4.1 | 0.002                          | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| P.4.2 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.004                 |
| M.1.1 | 0.002                          | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| M.2.1 | 0.002                          | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| M.3.1 | 0.002                          | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| K.1.1 | 0.003                          | 0.004                 | 0.005                 | 0.007                 | 0.007                 | 0.007                 | 0.009                 |
| K.1.2 | 0.002                          | 0.002                 | 0.003                 | 0.005                 | 0.005                 | 0.006                 | 0.006                 |
| K.2.1 | 0.002                          | 0.003                 | 0.005                 | 0.007                 | 0.007                 | 0.007                 | 0.009                 |
| K.2.2 | 0.002                          | 0.003                 | 0.004                 | 0.007                 | 0.007                 | 0.007                 | 0.007                 |
| K.3.1 | 0.003                          | 0.004                 | 0.006                 | 0.009                 | 0.009                 | 0.009                 | 0.009                 |
| K.3.2 | 0.002                          | 0.003                 | 0.004                 | 0.007                 | 0.007                 | 0.007                 | 0.007                 |
| N.1.1 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.004                 | 0.004                 |
| N.1.2 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.004                 | 0.004                 |
| N.2.1 | 0.003                          | 0.004                 | 0.005                 | 0.006                 | 0.006                 | 0.007                 | 0.007                 |
| N.2.2 | 0.003                          | 0.004                 | 0.005                 | 0.006                 | 0.006                 | 0.007                 | 0.007                 |
| N.2.3 | 0.003                          | 0.004                 | 0.004                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| N.3.1 | 0.001                          | 0.002                 | 0.004                 | 0.006                 | 0.006                 | 0.006                 | 0.007                 |
| N.3.2 | 0.001                          | 0.003                 | 0.004                 | 0.006                 | 0.006                 | 0.007                 | 0.008                 |
| N.3.3 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.004                 |
| N.4.1 | 0.001                          | 0.002                 | 0.004                 | 0.006                 | 0.006                 | 0.006                 | 0.007                 |
| S.1.1 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| S.1.2 | 0.001                          | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| S.2.1 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| S.2.2 | 0.001                          | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| S.2.3 | 0.000                          | 0.001                 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| S.3.1 | 0.002                          | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| S.3.2 | 0.002                          | 0.002                 | 0.003                 | 0.004                 | 0.003                 | 0.004                 | 0.004                 |
| S.3.3 | 0.001                          | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| H.1.1 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| H.1.2 | 0.001                          | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| H.1.3 | 0.001                          | 0.001                 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| H.1.4 |                                |                       |                       |                       |                       |                       |                       |
| H.2.1 | 0.001                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| H.3.1 | 0.001                          | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| O.1.1 | 0.003                          | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| O.1.2 | 0.003                          | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| O.2.1 |                                |                       |                       |                       |                       |                       |                       |
| O.2.2 | 0.002                          | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| O.3.1 | 0.004                          | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

# Cutting data standard values for KUB Trigon – 4xD


| Index | C<br>15 894 ...       |                       |                       |                       |                       |                       |                       |
|-------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|       | Ø 0.562-0.656<br>inch | Ø 0.687-0.781<br>inch | Ø 0.812-0.937<br>inch | Ø 0.985-1.156<br>inch | Ø 1.187-1.437<br>inch | Ø 1.469-1.562<br>inch | Ø 1.625-1.750<br>inch |
|       | f in inch/rev.        |                       |                       |                       |                       |                       |                       |
| P.1.1 | 0.002                 | 0.003                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| P.1.2 | 0.002                 | 0.003                 | 0.004                 | 0.005                 | 0.006                 | 0.006                 | 0.007                 |
| P.1.3 | 0.002                 | 0.002                 | 0.004                 | 0.005                 | 0.005                 | 0.005                 | 0.006                 |
| P.1.4 | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| P.1.5 | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.005                 | 0.005                 | 0.006                 |
| P.2.1 | 0.002                 | 0.002                 | 0.004                 | 0.005                 | 0.005                 | 0.005                 | 0.006                 |
| P.2.2 | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| P.2.3 | 0.002                 | 0.002                 | 0.003                 | 0.005                 | 0.006                 | 0.006                 | 0.006                 |
| P.2.4 | 0.001                 | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| P.3.1 | 0.002                 | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| P.3.2 | 0.001                 | 0.002                 | 0.002                 | 0.003                 | 0.004                 | 0.003                 | 0.004                 |
| P.3.3 | 0.001                 | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| P.4.1 | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.005                 | 0.004                 | 0.005                 |
| P.4.2 | 0.001                 | 0.002                 | 0.002                 | 0.003                 | 0.004                 | 0.003                 | 0.004                 |
| M.1.1 | 0.002                 | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.005                 |
| M.2.1 | 0.002                 | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| M.3.1 | 0.002                 | 0.002                 | 0.002                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| K.1.1 | 0.003                 | 0.004                 | 0.005                 | 0.007                 | 0.007                 | 0.007                 | 0.009                 |
| K.1.2 | 0.002                 | 0.002                 | 0.003                 | 0.005                 | 0.005                 | 0.006                 | 0.006                 |
| K.2.1 | 0.002                 | 0.003                 | 0.005                 | 0.007                 | 0.007                 | 0.007                 | 0.009                 |
| K.2.2 | 0.002                 | 0.003                 | 0.004                 | 0.007                 | 0.007                 | 0.007                 | 0.007                 |
| K.3.1 | 0.003                 | 0.004                 | 0.006                 | 0.009                 | 0.009                 | 0.009                 | 0.009                 |
| K.3.2 | 0.002                 | 0.003                 | 0.004                 | 0.007                 | 0.007                 | 0.007                 | 0.007                 |
| N.1.1 | 0.001                 | 0.002                 | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 |
| N.1.2 | 0.001                 | 0.002                 | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 |
| N.2.1 | 0.003                 | 0.004                 | 0.005                 | 0.006                 | 0.007                 | 0.007                 | 0.007                 |
| N.2.2 | 0.003                 | 0.004                 | 0.005                 | 0.006                 | 0.007                 | 0.007                 | 0.007                 |
| N.2.3 | 0.003                 | 0.004                 | 0.004                 | 0.006                 | 0.006                 | 0.006                 | 0.006                 |
| N.3.1 | 0.002                 | 0.002                 | 0.004                 | 0.006                 | 0.006                 | 0.006                 | 0.007                 |
| N.3.2 | 0.002                 | 0.003                 | 0.004                 | 0.006                 | 0.007                 | 0.007                 | 0.008                 |
| N.3.3 | 0.001                 | 0.003                 | 0.003                 | 0.004                 | 0.004                 | 0.003                 | 0.004                 |
| N.4.1 | 0.002                 | 0.002                 | 0.004                 | 0.006                 | 0.006                 | 0.006                 | 0.007                 |
| S.1.1 | 0.001                 | 0.002                 | 0.003                 | 0.003                 | 0.004                 | 0.003                 | 0.003                 |
| S.1.2 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.003                 | 0.002                 | 0.002                 |
| S.2.1 | 0.001                 | 0.002                 | 0.003                 | 0.003                 | 0.004                 | 0.003                 | 0.003                 |
| S.2.2 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.003                 | 0.002                 | 0.002                 |
| S.2.3 | 0.001                 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| S.3.1 | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| S.3.2 | 0.002                 | 0.002                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| S.3.3 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| H.1.1 | 0.001                 | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| H.1.2 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| H.1.3 | 0.001                 | 0.001                 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| H.1.4 |                       |                       |                       |                       |                       |                       |                       |
| H.2.1 | 0.001                 | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| H.3.1 | 0.001                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 | 0.002                 |
| O.1.1 | 0.003                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| O.1.2 | 0.003                 | 0.003                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |
| O.2.1 |                       |                       |                       |                       |                       |                       |                       |
| O.2.2 | 0.002                 | 0.002                 | 0.002                 | 0.003                 | 0.003                 | 0.003                 | 0.003                 |
| O.3.1 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 | 0.004                 |


 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.


# Cutting data standard values for KUB Centron

| Index | Drill head diameter       |                                 |                       |     |                           |                                 |                       |     |                           |                                 |                       |     |
|-------|---------------------------|---------------------------------|-----------------------|-----|---------------------------|---------------------------------|-----------------------|-----|---------------------------|---------------------------------|-----------------------|-----|
|       | Ø 0.812–1.000 inch        |                                 |                       |     | Ø 1.125–1.250 inch        |                                 |                       |     | Ø 1.375–1.750 inch        |                                 |                       |     |
|       | f<br>inch/rev.            | Centering tip<br>V <sub>c</sub> |                       |     | f<br>inch/rev.            | Centering tip<br>V <sub>c</sub> |                       |     | f<br>inch/rev.            | Centering tip<br>V <sub>c</sub> |                       |     |
|       | 10 863 ...<br>(TiN/TiAlN) | 10 862 ...<br>(TiN)             | 10 862 ...<br>(TiAlN) |     | 10 863 ...<br>(TiN/TiAlN) | 10 862 ...<br>(TiN)             | 10 862 ...<br>(TiAlN) |     | 10 863 ...<br>(TiN/TiAlN) | 10 862 ...<br>(TiN)             | 10 862 ...<br>(TiAlN) |     |
| P.1.1 | 0.003                     | 820                             | 520                   |     | 0.003                     | 820                             | 520                   |     | 0.004                     | 820                             | 520                   |     |
| P.1.2 | 0.005                     | 820                             | 520                   |     | 0.006                     | 820                             | 520                   |     | 0.006                     | 820                             | 520                   |     |
| P.1.3 | 0.004                     | 660                             | 520                   |     | 0.005                     | 660                             | 520                   |     | 0.005                     | 660                             | 520                   |     |
| P.1.4 | 0.004                     | 590                             | 520                   |     | 0.004                     | 590                             | 520                   |     | 0.004                     | 590                             | 520                   |     |
| P.1.5 | 0.004                     | 750                             | 520                   |     | 0.005                     | 750                             | 520                   |     | 0.005                     | 750                             | 520                   |     |
| P.2.1 | 0.004                     | 660                             | 520                   |     | 0.005                     | 660                             | 520                   |     | 0.005                     | 660                             | 520                   |     |
| P.2.2 | 0.004                     | 620                             | 490                   |     | 0.004                     | 620                             | 490                   |     | 0.004                     | 620                             | 490                   |     |
| P.2.3 | 0.005                     | 590                             | 460                   |     | 0.006                     | 590                             | 460                   |     | 0.006                     | 590                             | 460                   |     |
| P.2.4 | 0.004                     | 490                             | 390                   |     | 0.005                     | 490                             | 390                   |     | 0.005                     | 490                             | 390                   |     |
| P.3.1 | 0.003                     | 520                             | 390                   |     | 0.004                     | 520                             | 390                   |     | 0.004                     | 520                             | 390                   |     |
| P.3.2 | 0.002                     | 460                             | 330                   |     | 0.003                     | 460                             | 330                   |     | 0.003                     | 460                             | 330                   |     |
| P.3.3 | 0.003                     | 430                             | 300                   |     | 0.003                     | 430                             | 300                   |     | 0.003                     | 430                             | 300                   |     |
| P.4.1 | 0.004                     | 590                             | 430                   |     | 0.004                     | 590                             | 430                   |     | 0.004                     | 590                             | 430                   |     |
| P.4.2 | 0.002                     | 460                             | 330                   |     | 0.003                     | 460                             | 330                   |     | 0.003                     | 460                             | 330                   |     |
| M.1.1 | 0.004                     | 520                             |                       | 230 | 0.005                     | 520                             |                       | 230 | 0.005                     | 520                             |                       | 230 |
| M.2.1 | 0.003                     | 390                             |                       | 230 | 0.004                     | 390                             |                       | 230 | 0.004                     | 390                             |                       | 230 |
| M.3.1 | 0.003                     | 360                             |                       | 200 | 0.003                     | 360                             |                       | 200 | 0.003                     | 360                             |                       | 200 |
| K.1.1 | 0.006                     | 660                             |                       | 330 | 0.006                     | 660                             |                       | 330 | 0.006                     | 660                             |                       | 330 |
| K.1.2 | 0.005                     | 520                             |                       | 330 | 0.006                     | 520                             |                       | 330 | 0.006                     | 520                             |                       | 330 |
| K.2.1 | 0.005                     | 520                             |                       | 330 | 0.006                     | 520                             |                       | 330 | 0.006                     | 520                             |                       | 330 |
| K.2.2 | 0.004                     | 330                             |                       | 260 | 0.005                     | 330                             |                       | 260 | 0.005                     | 330                             |                       | 260 |
| K.3.1 | 0.005                     | 390                             |                       | 330 | 0.006                     | 390                             |                       | 330 | 0.006                     | 390                             |                       | 330 |
| K.3.2 | 0.004                     | 330                             |                       | 260 | 0.005                     | 330                             |                       | 260 | 0.005                     | 330                             |                       | 260 |
| N.1.1 | 0.003                     | 1150                            | 1150                  |     | 0.003                     | 1150                            | 1150                  |     | 0.004                     | 1150                            | 1150                  |     |
| N.1.2 | 0.003                     | 1150                            | 1150                  |     | 0.003                     | 1150                            | 1150                  |     | 0.004                     | 1150                            | 1150                  |     |
| N.2.1 | 0.004                     | 820                             | 820                   |     | 0.005                     | 820                             | 820                   |     | 0.006                     | 820                             | 820                   |     |
| N.2.2 | 0.004                     | 820                             | 820                   |     | 0.005                     | 820                             | 820                   |     | 0.006                     | 820                             | 820                   |     |
| N.2.3 | 0.004                     | 750                             | 750                   |     | 0.004                     | 750                             | 750                   |     | 0.006                     | 750                             | 750                   |     |
| N.3.1 | 0.006                     | 660                             | 660                   |     | 0.006                     | 660                             | 660                   |     | 0.007                     | 660                             | 660                   |     |
| N.3.2 | 0.006                     | 720                             | 720                   |     | 0.007                     | 720                             | 720                   |     | 0.008                     | 720                             | 720                   |     |
| N.3.3 | 0.004                     | 820                             | 820                   |     | 0.004                     | 820                             | 820                   |     | 0.006                     | 820                             | 820                   |     |
| N.4.1 | 0.006                     | 660                             | 660                   |     | 0.006                     | 660                             | 660                   |     | 0.007                     | 660                             | 660                   |     |
| S.1.1 | 0.002                     | 160                             |                       | 80  | 0.002                     | 160                             |                       | 80  | 0.002                     | 160                             |                       | 80  |
| S.1.2 | 0.001                     | 130                             |                       | 70  | 0.002                     | 130                             |                       | 70  | 0.002                     | 130                             |                       | 70  |
| S.2.1 | 0.002                     | 160                             |                       | 80  | 0.002                     | 160                             |                       | 80  | 0.002                     | 160                             |                       | 80  |
| S.2.2 | 0.001                     | 130                             |                       | 70  | 0.002                     | 130                             |                       | 70  | 0.002                     | 130                             |                       | 70  |
| S.2.3 | 0.001                     | 100                             |                       | 70  | 0.002                     | 100                             |                       | 70  | 0.002                     | 100                             |                       | 70  |
| S.3.1 | 0.002                     | 260                             |                       | 160 | 0.003                     | 260                             |                       | 160 | 0.003                     | 260                             |                       | 160 |
| S.3.2 | 0.002                     | 260                             |                       | 130 | 0.002                     | 260                             |                       | 130 | 0.002                     | 260                             |                       | 130 |
| S.3.3 | 0.001                     | 160                             |                       | 100 | 0.002                     | 160                             |                       | 100 | 0.002                     | 160                             |                       | 100 |
| H.1.1 |                           |                                 |                       |     |                           |                                 |                       |     |                           |                                 |                       |     |
| H.1.2 |                           |                                 |                       |     |                           |                                 |                       |     |                           |                                 |                       |     |
| H.1.3 |                           |                                 |                       |     |                           |                                 |                       |     |                           |                                 |                       |     |
| H.1.4 |                           |                                 |                       |     |                           |                                 |                       |     |                           |                                 |                       |     |
| H.2.1 |                           |                                 |                       |     |                           |                                 |                       |     |                           |                                 |                       |     |
| H.3.1 |                           |                                 |                       |     |                           |                                 |                       |     |                           |                                 |                       |     |
| O.1.1 | 0.003                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     |
| O.1.2 | 0.003                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     |
| O.2.1 |                           |                                 |                       |     |                           |                                 |                       |     |                           |                                 |                       |     |
| O.2.2 | 0.003                     | 160                             | 100                   |     | 0.004                     | 160                             | 100                   |     | 0.004                     | 160                             | 100                   |     |
| O.3.1 | 0.003                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     |

 During the drilling operation on through holes a sharp disk will be produced. Safety precautions must be observed. A safety guard has to be provided as protection.

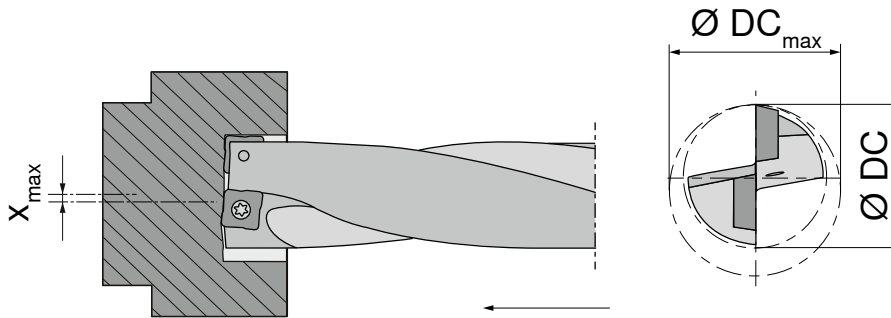
 In order to ensure efficient chip evacuation, coolant pressure must be at least 5 bar. Optimum pressure is > 15 bar.

| Index | Drill head diameter       |                                 |                       |     |                           |                                 |                       |     |
|-------|---------------------------|---------------------------------|-----------------------|-----|---------------------------|---------------------------------|-----------------------|-----|
|       | Ø 1.875–2.000 inch        |                                 |                       |     | Ø 2.250–2.500 inch        |                                 |                       |     |
|       | f<br>inch/rev.            | Centering tip<br>V <sub>c</sub> |                       |     | f<br>inch/rev.            | Centering tip<br>V <sub>c</sub> |                       |     |
|       | 10 863 ...<br>(TiN/TiAlN) | 10 862 ...<br>(TiN)             | 10 862 ...<br>(TiAlN) |     | 10 863 ...<br>(TiN/TiAlN) | 10 862 ...<br>(TiN)             | 10 862 ...<br>(TiAlN) |     |
| P.1.1 | 0.004                     | 820                             | 520                   |     | 0.004                     | 820                             | 520                   |     |
| P.1.2 | 0.006                     | 820                             | 520                   |     | 0.006                     | 820                             | 520                   |     |
| P.1.3 | 0.005                     | 660                             | 520                   |     | 0.006                     | 660                             | 520                   |     |
| P.1.4 | 0.004                     | 590                             | 520                   |     | 0.005                     | 590                             | 520                   |     |
| P.1.5 | 0.005                     | 750                             | 520                   |     | 0.006                     | 750                             | 520                   |     |
| P.2.1 | 0.005                     | 660                             | 520                   |     | 0.006                     | 660                             | 520                   |     |
| P.2.2 | 0.004                     | 620                             | 490                   |     | 0.005                     | 620                             | 490                   |     |
| P.2.3 | 0.006                     | 590                             | 460                   |     | 0.006                     | 590                             | 460                   |     |
| P.2.4 | 0.005                     | 490                             | 390                   |     | 0.005                     | 490                             | 390                   |     |
| P.3.1 | 0.004                     | 520                             | 390                   |     | 0.005                     | 520                             | 390                   |     |
| P.3.2 | 0.003                     | 460                             | 330                   |     | 0.004                     | 460                             | 330                   |     |
| P.3.3 | 0.003                     | 430                             | 300                   |     | 0.004                     | 430                             | 300                   |     |
| P.4.1 | 0.004                     | 590                             | 430                   |     | 0.006                     | 590                             | 430                   |     |
| P.4.2 | 0.003                     | 460                             | 330                   |     | 0.004                     | 460                             | 330                   |     |
| M.1.1 | 0.005                     | 520                             |                       | 230 | 0.005                     | 520                             |                       | 230 |
| M.2.1 | 0.004                     | 390                             |                       | 230 | 0.004                     | 390                             |                       | 230 |
| M.3.1 | 0.003                     | 360                             |                       | 200 | 0.003                     | 360                             |                       | 200 |
| K.1.1 | 0.006                     | 660                             |                       | 330 | 0.006                     | 660                             |                       | 330 |
| K.1.2 | 0.006                     | 520                             |                       | 330 | 0.006                     | 520                             |                       | 330 |
| K.2.1 | 0.006                     | 520                             |                       | 330 | 0.006                     | 520                             |                       | 330 |
| K.2.2 | 0.005                     | 330                             |                       | 260 | 0.005                     | 330                             |                       | 260 |
| K.3.1 | 0.006                     | 390                             |                       | 330 | 0.006                     | 390                             |                       | 330 |
| K.3.2 | 0.005                     | 330                             |                       | 260 | 0.005                     | 330                             |                       | 260 |
| N.1.1 | 0.004                     | 1150                            | 1150                  |     | 0.004                     | 1150                            | 1150                  |     |
| N.1.2 | 0.004                     | 1150                            | 1150                  |     | 0.004                     | 1150                            | 1150                  |     |
| N.2.1 | 0.006                     | 820                             | 820                   |     | 0.006                     | 820                             | 820                   |     |
| N.2.2 | 0.006                     | 820                             | 820                   |     | 0.006                     | 820                             | 820                   |     |
| N.2.3 | 0.006                     | 750                             | 750                   |     | 0.006                     | 750                             | 750                   |     |
| N.3.1 | 0.007                     | 660                             | 660                   |     | 0.007                     | 660                             | 660                   |     |
| N.3.2 | 0.008                     | 720                             | 720                   |     | 0.008                     | 720                             | 720                   |     |
| N.3.3 | 0.006                     | 820                             | 820                   |     | 0.006                     | 820                             | 820                   |     |
| N.4.1 | 0.007                     | 660                             | 660                   |     | 0.007                     | 660                             | 660                   |     |
| S.1.1 | 0.002                     | 160                             |                       | 80  | 0.002                     | 160                             |                       | 80  |
| S.1.2 | 0.002                     | 130                             |                       | 70  | 0.002                     | 130                             |                       | 70  |
| S.2.1 | 0.002                     | 160                             |                       | 80  | 0.002                     | 160                             |                       | 80  |
| S.2.2 | 0.002                     | 130                             |                       | 70  | 0.002                     | 130                             |                       | 70  |
| S.2.3 | 0.002                     | 100                             |                       | 70  | 0.002                     | 100                             |                       | 70  |
| S.3.1 | 0.003                     | 260                             |                       | 160 | 0.003                     | 260                             |                       | 160 |
| S.3.2 | 0.002                     | 260                             |                       | 130 | 0.002                     | 260                             |                       | 130 |
| S.3.3 | 0.002                     | 160                             |                       | 100 | 0.002                     | 160                             |                       | 100 |
| H.1.1 |                           |                                 |                       |     |                           |                                 |                       |     |
| H.1.2 |                           |                                 |                       |     |                           |                                 |                       |     |
| H.1.3 |                           |                                 |                       |     |                           |                                 |                       |     |
| H.1.4 |                           |                                 |                       |     |                           |                                 |                       |     |
| H.2.1 |                           |                                 |                       |     |                           |                                 |                       |     |
| H.3.1 |                           |                                 |                       |     |                           |                                 |                       |     |
| O.1.1 | 0.004                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     |
| O.1.2 | 0.004                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     |
| O.2.1 |                           |                                 |                       |     |                           |                                 |                       |     |
| O.2.2 | 0.004                     | 160                             | 100                   |     | 0.004                     | 160                             | 100                   |     |
| O.3.1 | 0.004                     | 330                             | 330                   |     | 0.004                     | 330                             | 330                   |     |

 The cutting data of the KUB Centron depends on the centering tip and not on the indexable inserts. Please select the cutting data of the centering tip.




# Maximum adjustment range (X) during solid drilling / from the center for stationary applications – KUB Pentron

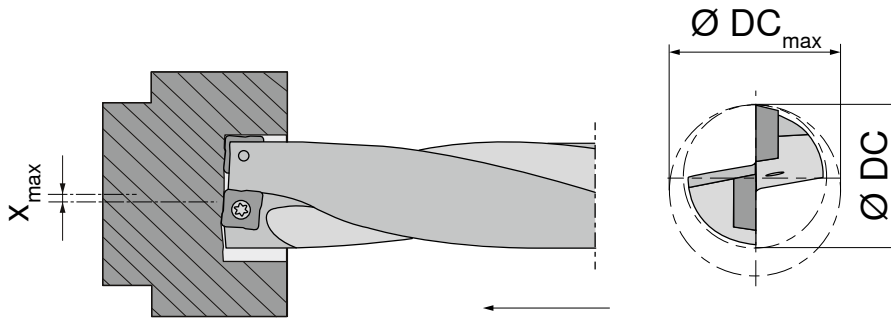


At max. offset X<sub>max</sub> the hole will be:  
 $DC_{max} = DC + 2X_{max}$   
 e.g. for DC = 0.750", X<sub>max</sub> = 0.010":  
 $DC_{max} = DC + 0.020" = 0.770"$

| Ø DC<br>inch | Insert size | X <sub>max</sub><br>inch | Ø DC <sub>max</sub><br>inch |
|--------------|-------------|--------------------------|-----------------------------|
| 0.562        |             | 0.010                    | 0.582                       |
| 0.593        | SOGX 04.... | 0.010                    | 0.613                       |
| 0.625        |             | 0.010                    | 0.645                       |
| 0.656        |             | 0.010                    | 0.676                       |
| 0.687        | SOGX 05.... | 0.010                    | 0.707                       |
| 0.703        |             | 0.010                    | 0.723                       |
| 0.750        |             | 0.010                    | 0.770                       |
| 0.765        | SOGX 06.... | 0.010                    | 0.785                       |
| 0.781        |             | 0.010                    | 0.801                       |
| 0.812        |             | 0.010                    | 0.832                       |
| 0.828        |             | 0.010                    | 0.848                       |
| 0.843        | SOGX 07.... | 0.010                    | 0.863                       |
| 0.875        |             | 0.010                    | 0.895                       |
| 0.906        |             | 0.010                    | 0.926                       |
| 0.937        |             | 0.010                    | 0.957                       |
| 0.985        | SOGX 08.... | 0.010                    | 1.005                       |
| 1.000        |             | 0.010                    | 1.020                       |
| 1.031        |             | 0.010                    | 1.051                       |
| 1.062        |             | 0.010                    | 1.082                       |
| 1.109        | SOGX 09.... | 0.010                    | 1.129                       |
| 1.125        |             | 0.010                    | 1.145                       |
| 1.156        |             | 0.010                    | 1.176                       |
| 1.187        |             | 0.010                    | 1.207                       |
| 1.218        |             | 0.010                    | 1.238                       |
| 1.250        | SOGX 10.... | 0.010                    | 1.270                       |
| 1.281        |             | 0.010                    | 1.301                       |
| 1.312        |             | 0.010                    | 1.332                       |
| 1.328        |             | 0.010                    | 1.348                       |
| 1.375        | SOGX 11.... | 0.010                    | 1.395                       |
| 1.437        |             | 0.010                    | 1.457                       |
| 1.469        |             | 0.010                    | 1.489                       |
| 1.500        |             | 0.010                    | 1.520                       |
| 1.531        | SOGX 12.... | 0.010                    | 1.551                       |
| 1.562        |             | 0.010                    | 1.582                       |
| 1.625        |             | 0.010                    | 1.645                       |
| 1.656        |             | 0.010                    | 1.676                       |
| 1.687        | SOGX 13.... | 0.010                    | 1.707                       |
| 1.750        |             | 0.010                    | 1.770                       |


 The maximum radial X-offset affects the cutting force balance of the drill, therefore, the use of lower feed rates is recommended!

# Maximum adjustment range (X) during solid drilling / from the center for stationary applications – KUB Quatron

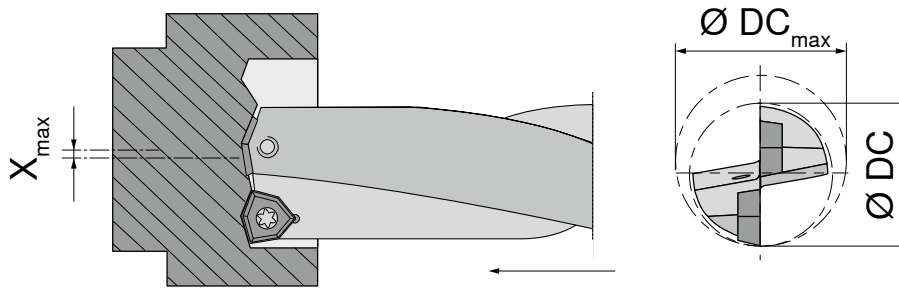


At max. offset  $X_{max}$  the hole will be:  
 $DC_{max} = DC + 2X_{max}$   
 e.g. for  $DC = 0.750"$ ,  $X_{max} = 0.010"$ :  
 $DC_{max} = DC + 0.020" = 0.770"$

| Ø DC<br>inch | Insert size | $X_{max}$<br>inch | Ø DC <sub>max</sub><br>inch | Ø DC<br>inch | Insert size | $X_{max}$<br>inch | Ø DC <sub>max</sub><br>inch |
|--------------|-------------|-------------------|-----------------------------|--------------|-------------|-------------------|-----------------------------|
| 0.562        | SOEX 05...  | 0.010             | 0.582                       | 1.312        | SOEX 12...  | 0.010             | 1.332                       |
| 0.593        |             | 0.010             | 0.613                       | 1.328        |             | 0.010             | 1.348                       |
| 0.625        |             | 0.010             | 0.645                       | 1.375        |             | 0.010             | 1.395                       |
| 0.656        |             | 0.010             | 0.676                       | 1.406        |             | 0.010             | 1.426                       |
| 0.687        |             | 0.010             | 0.707                       | 1.437        |             | 0.010             | 1.457                       |
| 0.703        | SOEX 06...  | 0.010             | 0.723                       | 1.469        | SOEX 07...  | 0.010             | 1.489                       |
| 0.718        |             | 0.010             | 0.738                       | 1.500        |             | 0.010             | 1.520                       |
| 0.750        |             | 0.010             | 0.770                       | 1.531        |             | 0.010             | 1.551                       |
| 0.765        |             | 0.010             | 0.785                       | 1.562        |             | 0.010             | 1.582                       |
| 0.781        |             | 0.010             | 0.801                       | 1.625        |             | 0.010             | 1.645                       |
| 0.812        |             | 0.010             | 0.832                       | 1.656        |             | 0.010             | 1.676                       |
| 0.828        |             | 0.010             | 0.848                       | 1.687        |             | 0.010             | 1.707                       |
| 0.843        | SOEX 07...  | 0.010             | 0.863                       | 1.750        | SOEX 09...  | 0.010             | 1.770                       |
| 0.875        |             | 0.010             | 0.895                       | 1.781        |             | 0.010             | 1.801                       |
| 0.906        |             | 0.010             | 0.926                       | 1.812        |             | 0.010             | 1.832                       |
| 0.937        |             | 0.010             | 0.957                       | 1.875        |             | 0.010             | 1.895                       |
| 0.968        |             | 0.010             | 0.988                       | 1.937        |             | 0.010             | 1.957                       |
| 0.985        |             | 0.010             | 1.005                       | 1.975        |             | 0.010             | 1.995                       |
| 1.000        |             | 0.010             | 1.020                       | 2.000        |             | 0.010             | 2.020                       |
| 1.031        | SOEX 09...  | 0.010             | 1.051                       | 2.062        | SOEX 09...  | 0.010             | 2.082                       |
| 1.062        |             | 0.010             | 1.082                       | 2.125        |             | 0.010             | 2.145                       |
| 1.109        |             | 0.010             | 1.129                       | 2.165        |             | 0.010             | 2.185                       |
| 1.125        |             | 0.010             | 1.145                       | 2.203        |             | 0.010             | 2.223                       |
| 1.156        |             | 0.010             | 1.176                       | 2.250        |             | 0.010             | 2.270                       |
| 1.187        |             | 0.010             | 1.207                       | 2.281        |             | 0.010             | 2.301                       |
| 1.218        |             | 0.010             | 1.238                       | 2.375        |             | 0.010             | 2.395                       |
| 1.250        | SOEX 09...  | 0.010             | 1.270                       | 2.437        | 0.010       | 2.457             |                             |
| 1.281        |             | 0.010             | 1.301                       | 2.500        |             | 2.520             |                             |


 The maximum radial X-offset affects the cutting force balance of the drill, therefore, the use of lower feed rates is recommended!

# Maximum adjustment range (X) during solid drilling / from the center for stationary applications – KUB Trigon



At max. offset X<sub>max</sub> the hole will be:  
 $DC_{max} = DC + 2X_{max}$   
 e.g. for DC = 0.750", X<sub>max</sub> = 0.020":  
 $DC_{max} = DC + 0.040" = 0.790"$

| Ø DC inch | Insert size | X <sub>max</sub> inch | Ø DC <sub>max</sub> inch | Ø DC inch | Insert size | X <sub>max</sub> inch | Ø DC <sub>max</sub> inch |
|-----------|-------------|-----------------------|--------------------------|-----------|-------------|-----------------------|--------------------------|
| 0.562     | WOEX 03...  | 0.020                 | 0.602                    | 1.469     | WOEX 06...  | 0.060                 | 1.589                    |
| 0.593     |             | 0.020                 | 0.633                    | 1.500     |             | 0.060                 | 1.620                    |
| 0.625     |             | 0.020                 | 0.665                    | 1.531     |             | 0.060                 | 1.651                    |
| 0.656     |             | 0.020                 | 0.696                    | 1.562     |             | 0.060                 | 1.682                    |
| 0.687     |             | 0.020                 | 0.727                    | 1.625     |             | 0.060                 | 1.745                    |
| 0.703     |             | 0.020                 | 0.743                    | 1.656     |             | 0.060                 | 1.776                    |
| 0.750     |             | 0.020                 | 0.790                    | 1.687     |             | 0.043                 | 1.773                    |
| 0.765     |             | 0.020                 | 0.805                    | 1.750     |             | 0.011                 | 1.772                    |
| 0.781     |             | 0.020                 | 0.821                    | 1.781     |             | 0.058                 | 1.897                    |
| 0.812     |             | WOEX 04...            | 0.020                    | 0.852     |             | 1.812                 | 0.059                    |
| 0.828     | 0.020       |                       | 0.868                    | 1.875     | 0.059       | 1.992                 |                          |
| 0.843     | 0.020       |                       | 0.883                    | 1.937     | 0.059       | 2.055                 |                          |
| 0.875     | 0.020       |                       | 0.915                    | 1.975     | 0.059       | 2.093                 |                          |
| 0.906     | 0.020       |                       | 0.946                    | 2.000     | 0.059       | 2.118                 |                          |
| 0.937     | 0.020       |                       | 0.977                    | 2.062     | 0.049       | 2.160                 |                          |
| 0.985     | 0.020       |                       | 1.025                    | 2.125     | 0.023       | 2.171                 |                          |
| 1.000     | 0.020       |                       | 1.040                    | 2.165     | 0.059       | 2.283                 |                          |
| 1.031     | 0.040       |                       | 1.111                    | 2.203     | 0.059       | 2.321                 |                          |
| 1.062     | 0.040       |                       | 1.142                    | 2.250     | 0.058       | 2.366                 |                          |
| 1.109     | WOEX 05...  | 0.060                 | 1.229                    | 2.281     | 0.058       | 2.397                 |                          |
| 1.125     |             | 0.065                 | 1.254                    | 2.375     | 0.027       | 2.429                 |                          |
| 1.156     |             | 0.060                 | 1.276                    | 2.437     | 0.059       | 2.555                 |                          |
| 1.187     |             | 0.050                 | 1.287                    | 2.500     | 0.065       | 2.630                 |                          |
| 1.218     |             | 0.050                 | 1.318                    | 2.593     | 0.059       | 2.711                 |                          |
| 1.250     |             | 0.041                 | 1.331                    | 2.625     | 0.058       | 2.740                 |                          |
| 1.281     |             | 0.040                 | 1.361                    | 2.656     | 0.059       | 2.774                 |                          |
| 1.312     |             | 0.040                 | 1.392                    | 2.750     | 0.058       | 2.866                 |                          |
| 1.328     |             | 0.040                 | 1.408                    | 2.875     | 0.059       | 2.992                 |                          |
| 1.375     |             | 0.020                 | 1.415                    | 3.000     | 0.059       | 3.118                 |                          |
| 1.406     | 0.020       | 1.446                 | 3.250                    | 0.018     | 3.285       |                       |                          |
| 1.437     | 0.020       | 1.477                 |                          |           |             |                       |                          |

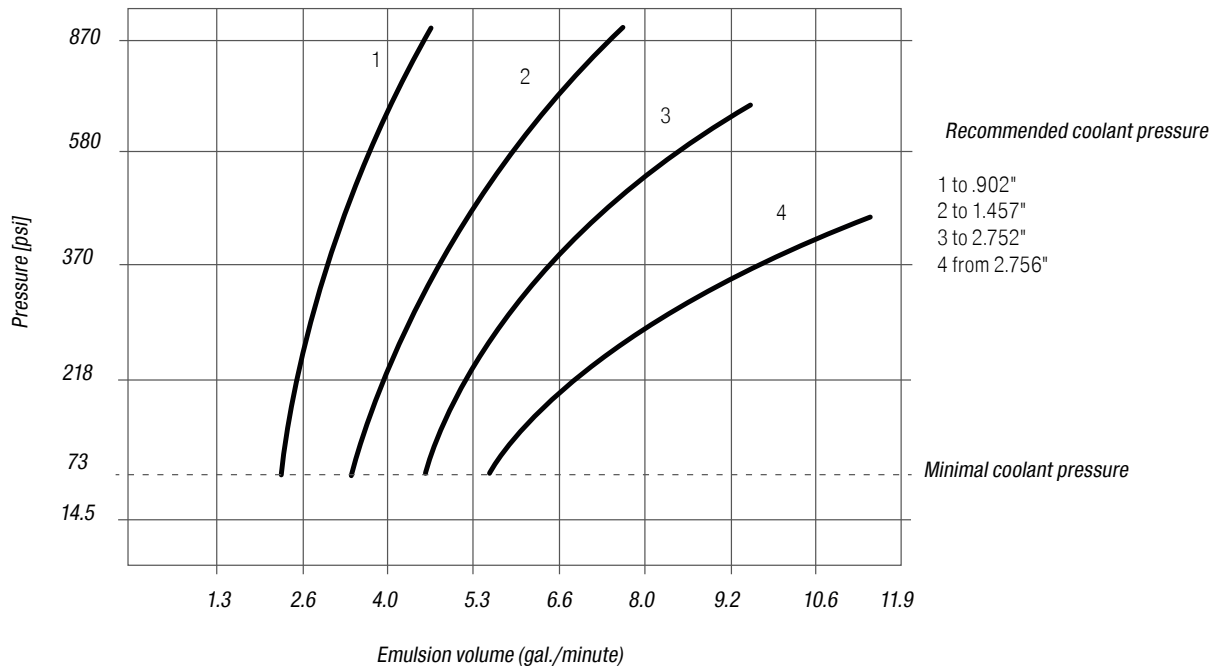
 The maximum radial X-offset affects the cutting force balance of the drill, therefore, the use of lower feed rates is recommended!

## Coding example indexable insert drilling

| System   | Length | Bore diameter | Direction of rotation | Insert size | Machine connection and size |
|----------|--------|---------------|-----------------------|-------------|-----------------------------|
| KUB-P    | 4D     | 0750          | R                     | 06          | ABS 50                      |
| KUB-Q    | 3D     | 1375          | R                     | 12          | ABS 50                      |
| KUB-T    | 2.5D   | 1125          | R                     | 05          | C1250                       |
| KUB-C.GH | 4D     | 320           | R                     |             | ABS 50                      |

|                                      |               |           |  |
|--------------------------------------|---------------|-----------|--|
| KUB-P = KUB Pentron                  | 0750 = 0.750" | R = right | ABS50 = ABS adapter size 50                          |
| KUB-Q = KUB Quatron                  | 1375 = 1.375" | R = right | ABS50 = ABS adapter size 50                          |
| KUB-T = KUB Trigon                   | 1125 = 1.125" | R = right | C1250 = Cylindrical shank with clamping flat Ø1.250" |
| KUB-C.GH = KUB Centron Basic Element | 320 = KLG 32  | R = right | ABS50 = ABS adapter size 50                          |

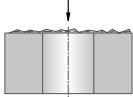
## Recommended coolant pressure and coolant flow



# Indexable insert drilling – problems / possible causes / solutions


|                                     |   |   |
|-------------------------------------|---|---|
| Rotating and stationary application |    | <b>Short service life / types of wear of indexable inserts</b> <ul style="list-style-type: none"> <li>▲ Cutting speed too high → select the correct cutting speed</li> <li>▲ Insert grade selection has too little wear resistance → select a wear resistant grade</li> <li>▲ Tool overhang too large → if possible, use a shorter tool</li> <li>▲ Damaged insert seat → check tool, replace if necessary</li> <li>▲ Clamping device stability too low → increase stability</li> </ul>  |
|                                     |    | <b>Hole tapers in</b> <ul style="list-style-type: none"> <li>▲ Chip jam on the outer cutting edge → use a different chip breakage geometry, increase the feed if necessary</li> <li>▲ Material very soft → increase the cutting speed, reduce the feed.<br/>Use a positive cutting edge geometry</li> </ul>   |
|                                     |    | <b>Hole tapers out</b> <ul style="list-style-type: none"> <li>▲ Chip jam on the inner cutting edge → use a different chip breakage geometry, increase the feed if necessary</li> </ul>  |
|                                     |    | <b>Poor surface quality</b> <ul style="list-style-type: none"> <li>▲ Poor chip evacuation → optimize the cutting parameters: Increase the cutting speed, reduce the feed</li> </ul>   |
|                                     |    | <b>Built-up edge</b> <ul style="list-style-type: none"> <li>▲ Cutting speed too low → increase cutting speed</li> <li>▲ Indexable insert too negative → use positive geometry</li> <li>▲ Unsuitable coating → select the correct coating</li> </ul>   |
|                                     |   | <b>Friction marks on the tool body</b> <ul style="list-style-type: none"> <li>▲ Drill diameter too small → check the setting</li> <li>▲ Chip evacuation problems → optimize the cutting parameters, check the geometry of the indexable insert</li> <li>▲ Cutting radius too large → use the correct cutting radius</li> </ul>  |
| Stationary application              |  | <b>Edge breakage on the inner cutting edge</b> <ul style="list-style-type: none"> <li>▲ Center height of the tool too high/too low → adjust tool turret/adaptor if necessary → Recalibrate the machine</li> <li>▲ Indexable insert grades interchanged → use correct indexable insert</li> <li>▲ Feed too high → reduce feed</li> <li>▲ Indexable insert grade too brittle → use a tougher indexable insert grade</li> <li>▲ Incorrect indexable insert geometry → if necessary use a geometry with a chamfered cutting edge</li> </ul> |
|                                     |  | <b>Edge breakage on the outer cutting edge</b> <ul style="list-style-type: none"> <li>▲ Feed too high → reduce feed</li> <li>▲ Interrupted cut → switch to a tougher grade of indexable insert</li> <li>▲ Cutting radius too small → use an indexable insert with a larger cutting radius</li> </ul>  |
|                                     |  | <b>Hole too small / too large with adjustable tools</b> <ul style="list-style-type: none"> <li>▲ Machine is not in the X-0 position → move axis to correct position</li> <li>▲ Machine axis has been moved → recalibrate the machine</li> </ul>   |
| Rotating application                |  | <b>Edge breakage on the inner cutting edge</b> <ul style="list-style-type: none"> <li>▲ Indexable insert grades interchanged → use correct indexable insert</li> <li>▲ Feed too high → reduce feed</li> <li>▲ Indexable insert grade too brittle → use a tougher indexable insert grade</li> <li>▲ Incorrect indexable insert geometry → if necessary use a geometry with a chamfered cutting edge</li> </ul>   |
|                                     |  | <b>Edge breakage on the outer cutting edge</b> <ul style="list-style-type: none"> <li>▲ Feed too high → reduce feed</li> <li>▲ Interrupted cut → switch to a tougher grade of indexable insert</li> <li>▲ Cutting radius too small → use an indexable insert with a larger cutting radius</li> </ul>  |
|                                     |  | <b>Hole too small / too large when using adjustable tools</b> <ul style="list-style-type: none"> <li>▲ Incorrect cutting radius used → use the correct cutting radius</li> <li>▲ Incorrect adjustment setting → set the tool to the correct diameter</li> <li>▲ Increase cutting fluid supply</li> </ul>  |

# KUB Centron – notes on drilling technology

1.  Center drill entering on uneven surfaces (casting surfaces)

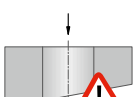
  - ▲ Generally possible
  - ▲ Reduce feed during drill entry

---

2.  Center drill entering on angled surfaces

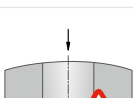
  - ▲ The entering drilling location must be spot faced in advance
  - ▲ Avoid chips jamming on the drill shank

---

3.  Angled drill exit


  - ▲ Possible under certain conditions
  - ▲ If necessary, reduce feed
  - ▲ Drilling angle max. 3°

---

4.  Center drill entering on convex surfaces

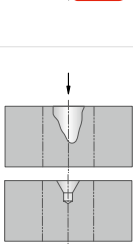
  - ▲ Centered drilling possible with reduced feed
  - ▲ If the drill entry location is outside the center of the radius, spot facing is required

---

5.  Drilling through a cross hole

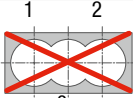
  - ▲ During the interruption, reduce the feed rate by 1/2
  - ▲ Cross hole max. 1/3 of the bore diameter
  - ▲ Off center cross hole not possible

---

6.  Center drill entering on pre-op or large center drilled hole

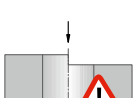
  - ▲ Possible under certain conditions
  - ▲ If necessary, reduce feed
  - ▲ In the case of a large center, facing is required in advance
  - ▲ If necessary, adjust the set length of the center drill. The center drill must be engaged before the inserts begin to cut.

---

7.  Drilling a cavity

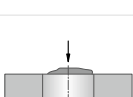
  - ▲ Not possible

---

8.  Center drill entering on an edge


  - ▲ Not possible with tools longer than 4xD
  - ▲ Preparation required due to undefined center drill entry location (spot facing, face milling)
  - ▲ Then continue as described under Point 1

---

9.  Center drill entering on a forging/welding/casting seam

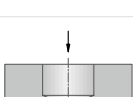
  - ▲ Reduce feed during drill entry
  - ▲ If necessary, face surface before drilling

---

10.  Drilling through stacks

  - ▲ Not possible

---

11.  Blind hole

  - ▲ Possible
  - ▲ Set guide pads .020" below actual  $\phi$

# KUB Centron – problems / possible causes / solutions

|                                     |   |  |
|-------------------------------------|---|--|
| Rotating and stationary application |    | <b>Short service life / types of wear of indexable inserts</b> <ul style="list-style-type: none"> <li>▲ Cutting speed too high → select the correct cutting speed</li> <li>▲ Grade has too little wear resistance → select a wear-resistant grade</li> <li>▲ Tool overhang too large → if possible, use a shorter tool</li> <li>▲ Damaged insert seat → check tool, replace if necessary</li> <li>▲ Clamping device stability too low → increase stability</li> </ul>                    |
|                                     |    | <b>Hole tapers in</b> <ul style="list-style-type: none"> <li>▲ Chip jam on the outer cutting edge → use a different chip breakage geometry, increase the feed if necessary</li> <li>▲ Material very soft → increase the cutting speed, reduce the feed</li> <li>▲ Use positive cutting edge geometry</li> <li>▲ Axial adjustment of the centering tip not optimal → adjust according to the setting sheet in the operating instructions</li> </ul>                                       |
|                                     |    | <b>Hole tapers out</b> <ul style="list-style-type: none"> <li>▲ Chip jam on the inner cutting edge → use a different chip breakage geometry, increase the feed if necessary</li> </ul>   |
|                                     |    | <b>Poor surface quality</b> <ul style="list-style-type: none"> <li>▲ Poor chip evacuation → optimize the cutting parameters: Increase the cutting speed, reduce the feed</li> </ul>  |
|                                     |    | <b>Built-up edge</b> <ul style="list-style-type: none"> <li>▲ Cutting speed too low → increase cutting speed</li> <li>▲ Indexable insert too negative → use positive geometry</li> <li>▲ Unsuitable coating → select the correct coating</li> </ul>  |
|                                     |  | <b>Friction marks on the tool body</b> <ul style="list-style-type: none"> <li>▲ Drill diameter too small → check the setting</li> <li>▲ Chip evacuation problems → optimize the cutting parameters, check the geometry of the indexable insert</li> <li>▲ Cutting radius too large → use the correct cutting radius</li> <li>▲ Chips stuck on the guide pads, broken guide pads, the guide pads do not have to be used for base elements of &lt;math&gt;&lt; 6xD&lt;/math&gt;</li> </ul> |
| Stationary application              |  | <b>Significant wear on one side of the centering tip</b> <ul style="list-style-type: none"> <li>▲ Tool not centered → tool turret/adapter may have moved → recalibrate the machine</li> </ul>  |
|                                     |  | <b>Single-sided retract marks</b> <ul style="list-style-type: none"> <li>▲ Tool not centered → tool turret/adapter may have moved → recalibrate the machine</li> </ul>   |
|                                     |  | <b>Edge breakage on the outer cutting edge</b> <ul style="list-style-type: none"> <li>▲ Feed too high → reduce feed</li> <li>▲ Interrupted cut → switch to a tougher grade of indexable insert</li> <li>▲ Cutting radius too small → use an indexable insert with a larger cutting radius</li> </ul>   |
|                                     |  | <b>Hole too small / too large with adjustable tools</b> <ul style="list-style-type: none"> <li>▲ Machine is not in the X-0 position → move axis to correct position</li> <li>▲ Machine axis has been moved → recalibrate the machine</li> </ul>  |
| Rotating application                |  | <b>Significant wear on one side of the centering tip</b> <ul style="list-style-type: none"> <li>▲ Insufficient guiding → check length adjustment of the centering tip</li> </ul>   |
|                                     |  | <b>Edge breakage on the outer cutting edge</b> <ul style="list-style-type: none"> <li>▲ Feed too high → reduce feed</li> <li>▲ Interrupted cut → switch to a tougher grade of indexable insert</li> <li>▲ Cutting radius too small → use an indexable insert with a larger cutting radius</li> </ul>   |
|                                     |  | <b>Hole too small / too large with adjustable tools</b> <ul style="list-style-type: none"> <li>▲ Incorrect cutting radius used → use the correct cutting radius</li> <li>▲ Incorrect adjustment setting → set the tool to the correct diameter</li> </ul>  |

## Grades Overview

|                |  |               |  |
|----------------|--|---------------|--|
| <b>CTPP430</b> | <ul style="list-style-type: none"> <li>▲ Carbide, TiAlN-coated</li> <li>▲ ISO   <b>P30</b>   <b>M25</b>   S25   K30   N25</li> <li>▲ The universal high-performance grade for steel, austenitic steel and heat-resistant alloys.</li> </ul>  | <b>BK8425</b> | <ul style="list-style-type: none"> <li>▲ Carbide, TiAlN/TiN-coated</li> <li>▲ ISO   <b>P25</b>   <b>M25</b>   <b>K25</b>   N25   <b>S25</b>   H25</li> <li>▲ Universally applicable grade with increased wear resistance thanks to the innovative PVD coating in a multilayer design.</li> </ul>                   |
| <b>CTPP420</b> | <ul style="list-style-type: none"> <li>▲ Carbide, TiCN-Al<sub>2</sub>O<sub>3</sub>-coated</li> <li>▲ ISO   <b>P20</b>   <b>K20</b></li> <li>▲ The wear-resistant solution for steel and cast iron materials at high cutting speeds.</li> </ul>   | <b>BK8430</b> | <ul style="list-style-type: none"> <li>▲ Carbide, TiAlN/TiN-coated</li> <li>▲ ISO   <b>P25</b>   <b>M25</b>   <b>K25</b>   N25   <b>S25</b>   H25</li> <li>▲ Fine-grain grade with high wear resistance</li> <li>▲ Extreme edge stability and maximum wear resistance in the middle and top speed range</li> </ul> |
| <b>BK7710</b>  | <ul style="list-style-type: none"> <li>▲ Carbide, TiB<sub>2</sub>-coated</li> <li>▲ ISO   <b>N10</b>   S10   O10</li> <li>▲ The wear-resistant grade with optimum cutting characteristics to prevent built-up edge formation for machining aluminium and titanium alloys.</li> </ul>                 | <b>BK6115</b> | <ul style="list-style-type: none"> <li>▲ Carbide, TiCN-TiN-Al<sub>2</sub>O<sub>3</sub>-coated</li> <li>▲ ISO   <b>P20</b>   <b>M20</b>   <b>K20</b>   H20</li> <li>▲ High-quality, surface-treated coating for machining cast iron materials under normal to stable conditions and high cutting speeds.</li> </ul> |
| <b>BK6425</b>  | <ul style="list-style-type: none"> <li>▲ Carbide, TiCN-Al<sub>2</sub>O<sub>3</sub>-TiN-coated</li> <li>▲ ISO   <b>P25</b>   <b>M15</b>   <b>K20</b></li> <li>▲ The extremely wear-resistant grade for machining all steel and stainless materials.</li> </ul>  | <b>BK7935</b> | <ul style="list-style-type: none"> <li>▲ Carbide, AlTiN-coated</li> <li>▲ ISO   <b>P35</b>   <b>M30</b>   <b>K30</b>   N30   <b>S30</b>   O30</li> <li>▲ The tough carbide grade for machining stainless steel and acid-resistant steels as well as special alloys.</li> </ul>                                     |
| <b>BK62</b>    | <ul style="list-style-type: none"> <li>▲ Carbide, TiN-TiCN-Al<sub>2</sub>O<sub>3</sub>-coated</li> <li>▲ ISO   <b>K15</b>   H15</li> <li>▲ Special carbide grade for machining cast iron materials at high cutting speeds. Not suitable for machining aluminium materials.</li> </ul>                | <b>BK77</b>   | <ul style="list-style-type: none"> <li>▲ Carbide, TiN-coated</li> <li>▲ ISO   <b>S10</b>   H10   O10</li> <li>▲ The wear-resistant carbide grade for machining aluminium alloys, superalloys and plastics at medium cutting speeds.</li> </ul>   |
| <b>BK79</b>    | <ul style="list-style-type: none"> <li>▲ Carbide, TiAlN-coated</li> <li>▲ ISO   <b>P40</b>   <b>M35</b>   <b>K25</b>   N30</li> <li>▲ Universally applicable grade with high wear-resistance</li> <li>▲ low to medium cutting speed for roughing and finishing as well as interrupted cut</li> </ul> | <b>BK7615</b> | <ul style="list-style-type: none"> <li>▲ Carbide, TiCN-Al<sub>2</sub>O<sub>3</sub>-coated</li> <li>▲ ISO   <b>K15</b></li> <li>▲ Highly productive grade with extreme edge stability for wet and dry machining of all cast iron materials</li> </ul>   |

## Chip breakers

|            |  |            |   |
|------------|--|------------|---|
| <b>-01</b> | <ul style="list-style-type: none"> <li>▲ Universal geometry suitable for a wide range of materials</li> <li>▲ Can be used for the center and peripheral insert</li> </ul>  | <b>-21</b> | <ul style="list-style-type: none"> <li>▲ Soft cutting geometry that reduces cutting forces</li> <li>▲ High positive chip breaker</li> </ul>   |
| <b>-03</b> | <ul style="list-style-type: none"> <li>▲ Geometry for chip breaking problems with excellent chip control at low feed rates</li> <li>▲ WOGX BK8425 -03: Can only be used for the peripheral insert</li> <li>▲ SOGX BK8425 -03: Suitable for the center and peripheral insert</li> <li>▲ Main application in low alloyed and stainless steels</li> </ul> | <b>-32</b> | <ul style="list-style-type: none"> <li>▲ For the machining of steel and cast iron materials</li> <li>▲ Minimised burr formation when entering and exiting the hole</li> <li>▲ Reliable separation of disc-shaped residual material when the drill exits the hole</li> </ul> |
| <b>-11</b> | <ul style="list-style-type: none"> <li>▲ Highly positive, minimally rounded chip breaker</li> <li>▲ For soft cutting use</li> <li>▲ Main application in aluminium</li> </ul>   | <b>-34</b> | <ul style="list-style-type: none"> <li>▲ High-feed geometry</li> <li>▲ Extremely sturdy indexable insert</li> <li>▲ Designed specially for steel and cast iron materials</li> </ul>   |
| <b>-13</b> | <ul style="list-style-type: none"> <li>▲ The dome-shaped chip breaker results in more controlled breaking of the chips</li> <li>▲ Can be used for center and periphery</li> <li>▲ Suitable for unstable machining conditions due to the low cutting forces</li> </ul>  |            |   |



# Application

