


















## Symbols

|   |  |   |  |
|---|--|---|--|
|    | Type designation                                 |    | Thread standard  |
|    | Steel shaft without clamping surface             |    | Thread with undercut (Trio-Cut)  |
|    | Steel shaft with Weldon clamping surface         |    | for right- and left hand internal thread<br>for left hand thread modify your NC-program! |
|    | Solid carbide shaft without clamping surface     |    | for right- and left hand external thread<br>for left hand thread modify your NC-program! |
|    | Solid carbide shaft with Weldon clamping surface |    | Full form thread milling   |
|    | Cutter with tightening thread                    |    | Partial form thread milling  |
|    | Smallest necessary bore-diameter                 |    | Point angle  |
|  | Internal coolant supply                          |  | Thread standard  |
|  | Number of inserts                                |   |  |

## Short Descriptions

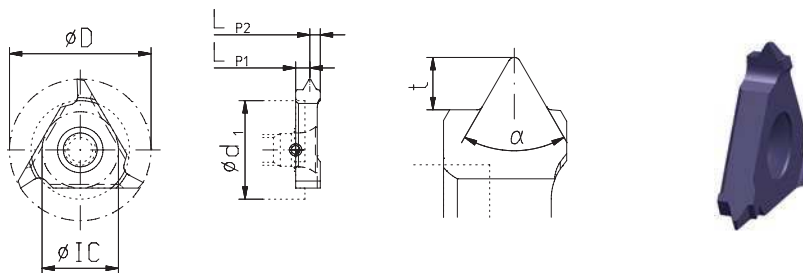
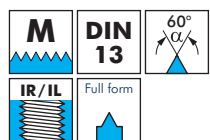
|                    |  |                 |  |
|--------------------|--|-----------------|--|
| Alpha ( $\alpha$ ) | Point angle of milling insert                  | F               | Width of trailing chamfer                              |
| A                  | Groove width                                   | HP              | Insert height  |
| A <sub>1</sub>     | Basic width in the Groove                      | HS              | Slider height (Axial grooving tool)                    |
| B <sub>f6</sub>    | Insert holder width of axial grooving tool     | L               | Length of milling tool                                 |
| B <sub>H7</sub>    | Groove width of axial grooving tool            | L <sub>1</sub>  | Clamping length of milling tool                        |
| B <sub>w</sub>     | Tool width of axial grooving tool              | L <sub>G</sub>  | Usable thread length at the multi-tooth thread milling |
| C                  | Chamfer width                                  | L <sub>HA</sub> | Holder length  |
| D                  | Cutting diameter                               | L <sub>P1</sub> | Insert height of milling body – edge                   |
| d <sub>1</sub>     | Milling body diameter (front)                  | L <sub>P2</sub> | Insert height of edge – interfering contour            |
| d <sub>2</sub>     | Large diameter of milling body                 | L <sub>PF</sub> | Length of fitting face                                 |
| d <sub>g6</sub>    | Fitting face diameter of threaded milling tool | L <sub>S</sub>  | Shaft length – clamping length (Depth)                 |
| D <sub>h6</sub>    | Shaft diameter of milling body (Arbor)         | M               | Thread size  |
| D <sub>P</sub>     | Flight circle of insert                        | P               | Pitch  |
| D <sub>R</sub>     | Nominal diameter of concave radius insert      | R               | Radius (general/common)                                |
| E                  | Width blank insert                             |                 |  |

## Formula for Tool Lengths

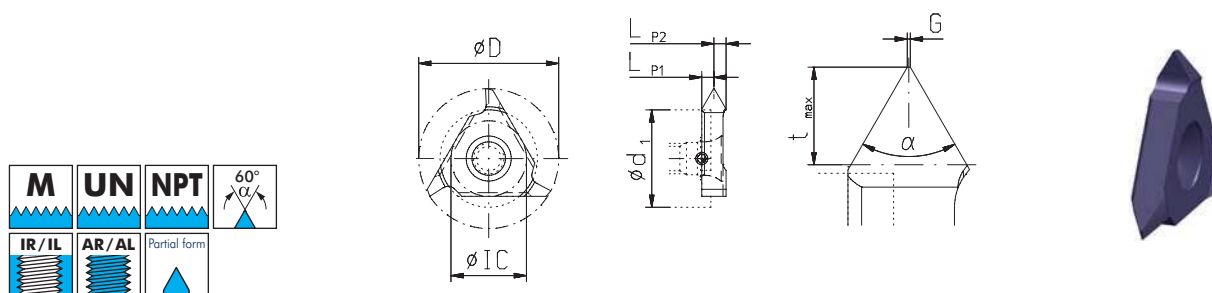
$$L_{WKZ} = L_{GK} + L_1 + L_{P1} (+L_{P2})$$

# Thread Milling

- Insert holder see page 36
- Cutting data see page 189



| Type | Pitch mm | D mm | IC mm | LP1 mm | LP2 mm | t mm  | Thread      | Order No.<br>TINAMATIC |
|------|----------|------|-------|--------|--------|-------|-------------|------------------------|
| 03   | 1,0      | 10,6 | 5,5   | 1,64   | 0,7    | 0,578 | $\geq M 12$ | 141613                 |
|      | 1,5      | 10,6 | 5,5   | 1,39   | 0,95   | 0,864 | $\geq M 14$ | 141674                 |
|      | 2,0      | 10,6 | 5,5   | 2,0    | 1,0    | 1,159 | $\geq M 16$ | 141647                 |
| 02   | 1,0      | 17,5 | 9,2   | 2,8    | 0,7    | 0,578 |             | 141443                 |
|      | 1,5      | 17,5 | 9,2   | 2,55   | 0,95   | 0,864 |             | 141482                 |
|      | 2,0      | 17,5 | 9,2   | 2,3    | 1,2    | 1,159 |             | 141484                 |
|      | 2,5      | 17,5 | 9,2   | 2,05   | 1,45   | 1,444 |             | 141514                 |
|      | 2,5      | 16,0 | 9,2   | 1,75   | 1,75   | 1,444 | only M20    | 141516                 |
| 01   | 3,0      | 17,5 | 9,2   | 2,1    | 1,4    | 1,728 |             | 141494                 |
|      | 1,0      | 23,0 | 12,4  | 3,3    | 0,7    | 0,578 |             | 141317                 |
|      | 1,5      | 23,0 | 12,4  | 3,05   | 0,95   | 0,864 |             | 141291                 |
|      | 2,0      | 23,0 | 12,4  | 2,8    | 1,2    | 1,159 |             | 141312                 |
|      | 2,5      | 23,0 | 12,4  | 2,55   | 1,45   | 1,444 |             | 141287                 |
|      | 3,0      | 23,0 | 12,4  | 2,3    | 1,7    | 1,728 |             | 141339                 |
|      | 3,5      | 23,0 | 12,4  | 2,3    | 1,7    | 2,023 |             | 141300                 |
|      | 4,0      | 23,0 | 12,4  | 2,3    | 1,7    | 2,308 |             | 141347                 |
|      | 4,5      | 23,0 | 12,4  | 4,0    | 2,5    | 2,602 |             | 141365                 |
|      | 5,0      | 23,0 | 12,4  | 4,0    | 2,5    | 2,887 |             | 141342                 |
| 5,5* | 23,0     | 12,4 | 3,6   | 2,9    | 3,182  |       | 141350      |                        |
| 6,0* | 23,0     | 12,4 | 3,2   | 3,3    | 3,467  |       | 141369      |                        |

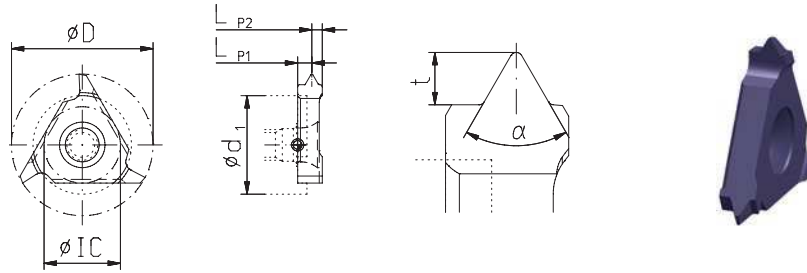
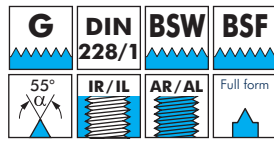


| Type | Pitch mm | D mm | IC mm | LP1 mm | LP2 mm | G mm | t <sub>max</sub> mm | Order No.<br>TINAMATIC |
|------|----------|------|-------|--------|--------|------|---------------------|------------------------|
| 03   | 1-2,0    | 10,6 | 5,5   | 1,5    | 1,5    | 0,1  | 1,6                 | 141677                 |
| 02   | 1-3,5    | 17,5 | 9,2   | 1,59   | 1,91   | 0,1  | 2,15                | 141528                 |
| 01   | 1-4,0    | 23,0 | 12,4  | 1,85   | 2,15   | 0,1  | 2,45                | 141366                 |

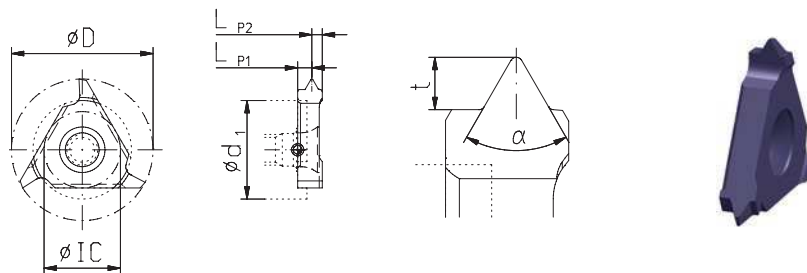
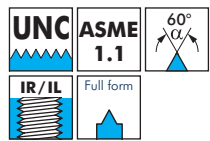
\* Not suited for cutters 123415, 170320 and 123416

# Thread Milling

- Insert holder see page 36
- Cutting data see page 189



| Type | Pitch mm | Pitch /" | D mm | IC mm | LP1 mm | LP2 mm | t mm  | Thread | TINAMATIC         |
|------|----------|----------|------|-------|--------|--------|-------|--------|-------------------|
| 03   | 1,337    | 19       | 10,6 | 5,5   | 1,25   | 1,09   | 0,871 | G 1/4" | 141652            |
|      | 1,337    | 19       | 10,6 | 5,5   | 1,25   | 1,09   | 0,871 | G 3/8" | 141682            |
| 02   | 1,814    | 14       | 16,0 | 9,2   | 1,75   | 1,75   | 1,162 | G 1/2" | 141508            |
|      | 1,814    | 14       | 17,5 | 9,2   | 2,2    | 1,3    | 1,162 |        | 141488            |
|      | 2,309    | 11       | 17,5 | 9,2   | 1,9    | 1,6    | 1,494 |        | 141522            |
|      | 3,175    | 8        | 17,5 | 9,2   | 1,75   | 1,75   | 1,830 | BSW 1" | 160665 <b>NEW</b> |
|      | 3,175    | 8        | 17,5 | 9,2   | 1,75   | 1,75   | 1,830 | BSF    | 161718 <b>NEW</b> |
| 01   | 2,309    | 11       | 23,0 | 12,4  | 2,4    | 1,6    | 1,494 |        | 141381            |

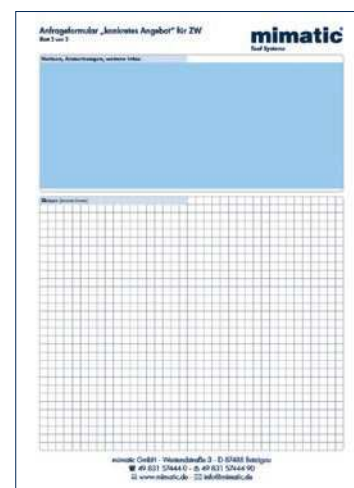
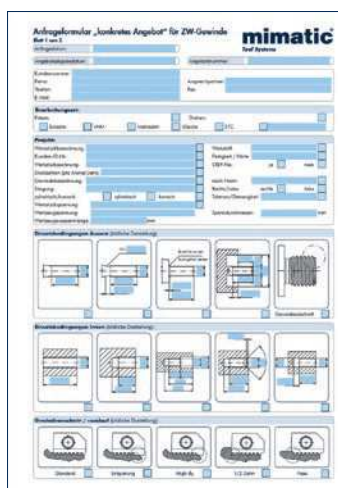


| Type | Pitch mm | Pitch /" | D mm | IC mm | LP1 mm | LP2 mm | t mm  | Thread | TINAMATIC |
|------|----------|----------|------|-------|--------|--------|-------|--------|-----------|
| 03   | 1,954    | 13       | 10,0 | 5,5   | 1,17   | 1,17   | 1,099 | 1/2-13 | 149460    |
|      | 2,309    | 11       | 10,6 | 5,5   | 1,17   | 1,17   | 1,349 | 5/8-11 | 149204    |
|      | 2,540    | 10       | 10,6 | 5,5   | 1,17   | 1,17   | 1,470 | 3/4-10 | 149732    |

## Request Form for Tread Milling

Please download our fillable PDF form for a detailed thread milling request and fax or send us back via email: [info@mimatic.de](mailto:info@mimatic.de)

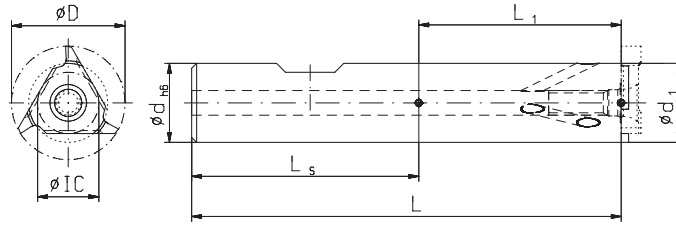
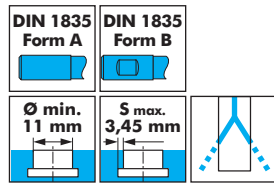
Request form:  
[www.mimatic.de/CL/GEW-EN](http://www.mimatic.de/CL/GEW-EN)



\* Not suited for cutters 123489

## Circular Milling Tools

- Inserts see page 34
- Cutting data see page 189



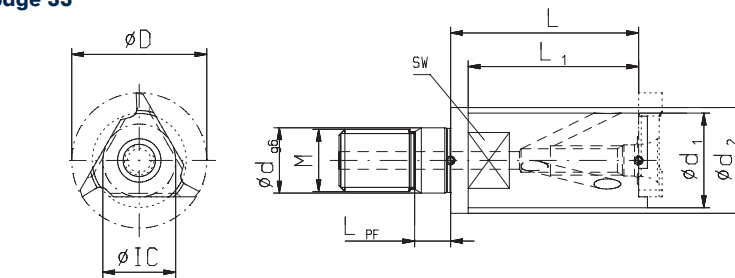
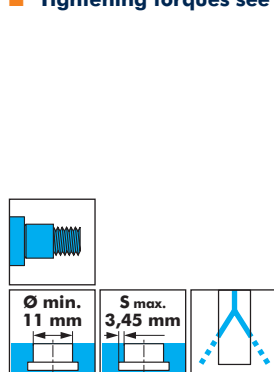
| Type | Order No. | Form | Bore Ø min. | D mm | IC mm | d <sub>h6</sub> mm | d <sub>1</sub> mm | S <sub>max.</sub> mm | L mm  | L <sub>1</sub> mm | Shaft   | Spare part No.   |        |
|------|-----------|------|-------------|------|-------|--------------------|-------------------|----------------------|-------|-------------------|---------|------------------|--------|
|      |           |      |             |      |       |                    |                   |                      |       |                   |         | Screw-driver     | Screw  |
| 03   | 123477*   | B    | 11          | 10,6 | 5,5   | 10                 | 7,4               | 1,6                  | 57,2  | 17,2              | Steel   | T6 IP<br>111705  | 107530 |
|      | 123478*   | B    | 11          | 10,6 | 5,5   | 12                 | 7,4               | 1,6                  | 64,66 | 17,2              | Steel   |                  |        |
|      | 123479*   | A    | 11          | 10,6 | 5,5   | 12                 | 7,4               | 1,6                  | 64,66 | 17,2              | Steel   |                  |        |
|      | 123480    | B    | 11          | 10,6 | 5,5   | 10                 | 7,4               | 1,6                  | 74,2  | 34,2              | Carbide |                  |        |
|      | 123489    | A    | 11          | 10,6 | 5,5   | 8                  | 8                 | 1,25                 | 77,66 | -                 | Carbide |                  |        |
| 02   | 123445    | B    | 20          | 17,5 | 9,2   | 12                 | 12                | 2,6                  | 74,05 | 28,7              | Steel   | T15 IP<br>111671 | 107547 |
|      | 123446    | B    | 20          | 17,5 | 9,2   | 16                 | 12                | 2,6                  | 78,6  | 28,7              | Steel   |                  |        |
|      | 123447    | A    | 20          | 17,5 | 9,2   | 16                 | 12                | 2,6                  | 78,6  | 28,7              | Steel   |                  |        |
|      | 123448    | B    | 20          | 17,5 | 9,2   | 12                 | 12                | 2,6                  | 108,7 | 63,7              | Carbide |                  |        |
|      | 123470    | A    | 20          | 17,5 | 9,2   | 12                 | 12                | 2,6                  | 79,3  | -                 | Carbide |                  |        |
|      | 123471    | A    | 20          | 17,5 | 9,2   | 12                 | 12                | 2,6                  | 96,5  | -                 | Carbide |                  |        |
|      | 123474    | A    | 20          | 17,5 | 9,2   | 12                 | 12                | 2,6                  | 121,5 | -                 | Carbide |                  |        |
| 01   | 123412    | B    | 25          | 23,0 | 12,4  | 16                 | 16                | 3,45                 | 87,0  | 38,5              | Steel   | T20 IP<br>111594 | 107551 |
|      | 123414    | B    | 25          | 23,0 | 12,4  | 16                 | 16                | 3,45                 | 116,0 | 67,5              | Steel   |                  |        |
|      | 123415**  | A    | 25          | 23,0 | 12,4  | 20                 | 17                | 3,0                  | 93,0  | 41,0              | Steel   |                  |        |
|      | 170320    | A    | 25          | 23,0 | 12,4  | 16                 | 17                | 3,0                  | 137,0 | 88,5              | Carbide |                  |        |
|      | 123416    | B    | 25          | 23,0 | 12,4  | 16                 | 17                | 3,0                  | 137,0 | 88,5              | Carbide |                  |        |
|      | 123440    | A    | 25          | 23,0 | 12,4  | 16                 | 16                | 3,45                 | 111,0 | -                 | Carbide |                  |        |
|      | 123441    | A    | 25          | 23,0 | 12,4  | 16                 | 16                | 3,45                 | 148,5 | -                 | Carbide |                  |        |

\* Without internal coolant supply    \*\* Also suitable as basic body for a tandem cutter.

Screw torques max.

|        |        |        |
|--------|--------|--------|
| 107530 | T6 IP  | 0,9 Nm |
| 107547 | T15 IP | 3,8 Nm |
| 107551 | T20 IP | 5,5 Nm |

- Tightening torques see page 33



**Please adapt cutting data to overhangs length**

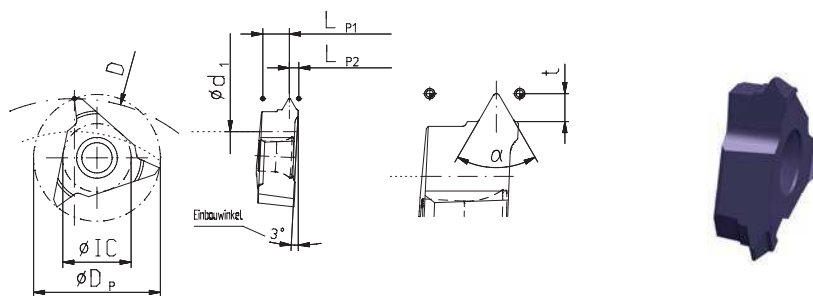
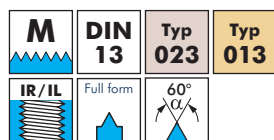
| Type | Order No. | Bore Ø min. | D mm | IC mm | d <sub>g6</sub> mm | d <sub>1</sub> mm | d <sub>2</sub> mm | S <sub>max.</sub> mm | L mm  | L <sub>1</sub> mm | M | Spare part No. |        |
|------|-----------|-------------|------|-------|--------------------|-------------------|-------------------|----------------------|-------|-------------------|---|----------------|--------|
|      |           |             |      |       |                    |                   |                   |                      |       |                   |   | Screw-driver   | Screw  |
| 03   | 123481    | 11          | 10,6 | 5,5   | 6,5                | 7,4               | 10,0              | 1,60                 | 22,66 | 13,66             |   | 111705         | 107530 |
| 02   | 123450    | 20          | 17,5 | 9,2   | 8,5                | 12,2              | 15,4              | 2,60                 | 27,5  | 18,5              |   | 111671         | 107547 |
| 01   | 123419    | 25          | 23,0 | 12,4  | 10,5               | 16,1              | 18,0              | 3,45                 | 32,0  | 29,0              |   | 111594         | 107551 |

Screw torques max.

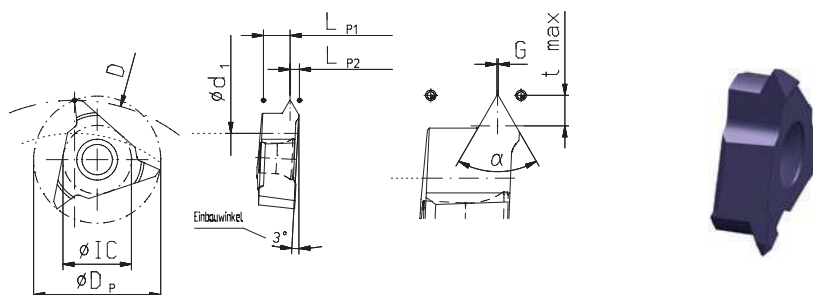
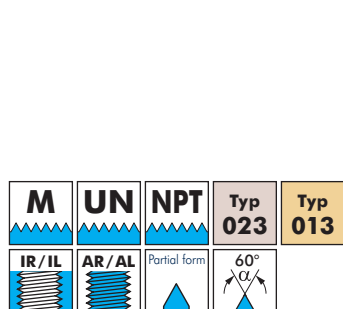
|        |        |        |
|--------|--------|--------|
| 107530 | T6 IP  | 0,9 Nm |
| 107547 | T15 IP | 3,8 Nm |
| 107551 | T20 IP | 5,5 Nm |

# Thread Milling

- Insert holder see page 39-40
- Cutting data see page 189



| Type | Pitch mm | DP mm | IC mm | LP1 mm | LP2 mm | t mm  | Order No. TINAMATIC |
|------|----------|-------|-------|--------|--------|-------|---------------------|
| 023  | 1,5      | 17,5  | 9,2   | 4,08   | 0,95   | 0,864 | 142020              |
|      | 2,0      | 17,5  | 9,2   | 3,83   | 1,2    | 1,159 | 142003              |
|      | 2,5      | 17,5  | 9,2   | 3,52   | 1,51   | 1,444 | 141989              |
|      | 3,0      | 17,5  | 9,2   | 3,33   | 1,7    | 1,728 | 141988              |
|      | 4,0      | 17,5  | 9,2   | 2,63   | 2,4    | 2,308 | 142028              |
|      | 4,5*     | 17,5  | 9,2   | 2,53   | 2,5    | 2,602 | 141998              |
|      | 5,0*     | 17,5  | 9,2   | 3,13   | 2,9    | 2,887 | 142009              |
|      | 5,5*     | 17,5  | 9,2   | 2,7    | 3,33   | 3,128 | 142032              |
|      | 6,0*     | 17,5  | 9,2   | 2,7    | 3,33   | 3,467 | 142000              |
| 013  | 1,5      | 23,0  | 12,4  | 5,58   | 0,95   | 0,864 | 141920              |
|      | 2,0      | 23,0  | 12,4  | 5,33   | 1,2    | 1,159 | 141910              |
|      | 2,5      | 23,0  | 12,4  | 5,02   | 1,51   | 1,444 | 141935              |
|      | 3,0      | 23,0  | 12,4  | 4,83   | 1,7    | 1,728 | 141943              |
|      | 3,5      | 23,0  | 12,4  | 4,83   | 1,7    | 2,023 | 141961              |
|      | 4,0      | 23,0  | 12,4  | 4,63   | 1,9    | 2,308 | 141947              |
|      | 4,5      | 23,0  | 12,4  | 4,03   | 2,5    | 2,602 | 141964              |
|      | 5,0      | 23,0  | 12,4  | 4,03   | 2,5    | 2,887 | 141955              |
|      | 6,0      | 23,0  | 12,4  | 3,23   | 3,3    | 3,467 | 141976              |
|      | 8,0      | 23,0  | 12,4  | 3,454  | 3,941  | 4,731 | 150338 <b>NEW</b>   |



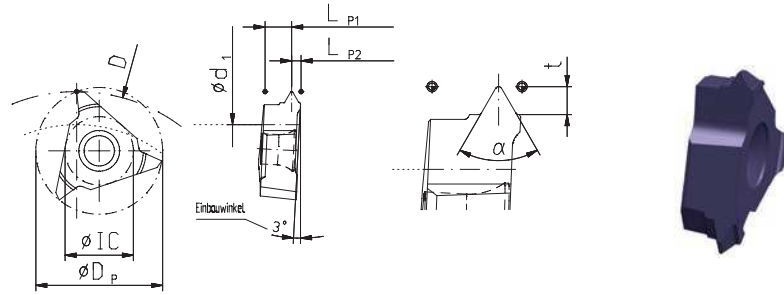
| Type | Pitch mm | DP mm | IC mm | LP1 mm | LP2 mm | G mm | S <sub>max.</sub> mm | Order No. TINAMATIC |
|------|----------|-------|-------|--------|--------|------|----------------------|---------------------|
| 023  | 1-3,5    | 17,5  | 9,2   | 3,28   | 1,75   | 0,10 | 2,15                 | 141996              |
|      | 3-6,0*   | 17,5  | 9,2   | 2,7    | 3,33   | 0,25 | 3,75                 | 142010              |
| 013  | 1-3,0    | 23,0  | 12,4  | 4,88   | 1,65   | 0,10 | 2,15                 | 141969              |
|      | 3,5-6    | 23,0  | 12,4  | 2,8    | 3,73   | 0,40 | 4,75                 | 141951              |

\* Not suited for cutters 123462

## Thread Milling

- Insert holder see page 39-40
- Cutting data see page 189

|              |                     |            |            |                   |                   |
|--------------|---------------------|------------|------------|-------------------|-------------------|
| <b>G</b>     | <b>DIN</b><br>228/1 | <b>BSW</b> | <b>BSF</b> | Typ<br><b>023</b> | Typ<br><b>013</b> |
| <b>IR/IL</b> | <b>AR/AL</b>        | Full form  | 55°<br>α   |                   |                   |



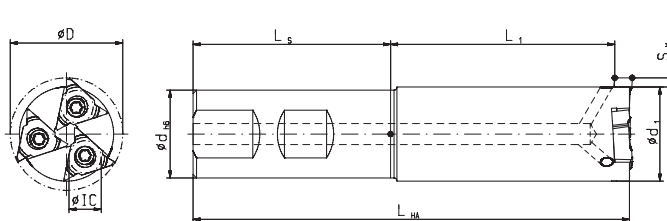
| Type       | Pitch<br>mm | Pitch / ° | DP<br>mm | IC<br>mm | LP1<br>mm | LP2<br>mm | t<br>mm | Order No.<br>TINAMATIC |
|------------|-------------|-----------|----------|----------|-----------|-----------|---------|------------------------|
| <b>023</b> | 2,309       | 11        | 17,5     | 9,2      | 3,33      | 1,7       | 1,494   | 142022                 |
| <b>013</b> | 2,309       | 11        | 23,0     | 12,4     | 4,14      | 2,39      | 1,494   | 141941                 |



## Circular Milling Tools

- Inserts see page 37-38
- Cutting data see page 189
- Carbide grades see page 123

|                   |                    |           |
|-------------------|--------------------|-----------|
| Typ<br><b>023</b> | DIN 1835<br>Form B | IC<br>9,2 |
| Ø min.<br>33 mm   | S max.<br>2,6 mm   |           |



| Order No. | Bore Ø min. | D mm | d h6 mm | d1 mm | Smax. mm | LHA mm | L mm   | L1 mm | Inserts | Shaft |
|-----------|-------------|------|---------|-------|----------|--------|--------|-------|---------|-------|
| 123462    | 33          | 32   | 25      | 26,8  | 2,6      | 124,2  | 119,97 | 61,97 | 3       | Steel |

Spare part No.

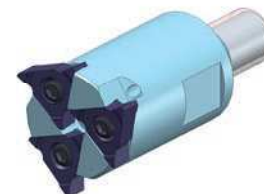
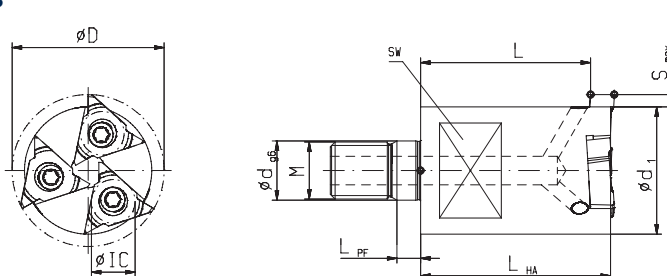
|                        |        |
|------------------------|--------|
| T15 IP<br>Screw-driver | Screw  |
| 111671                 | 107547 |

Screw torque max. 3,8 Nm

- Tightening torques see page 33

Please adapt cutting data to overhangs length

|                   |                  |           |
|-------------------|------------------|-----------|
| Typ<br><b>023</b> |                  | IC<br>9,2 |
| Ø min.<br>33 mm   | S max.<br>3,4 mm |           |

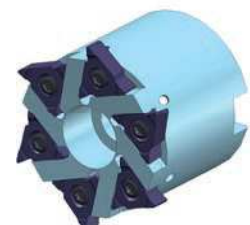
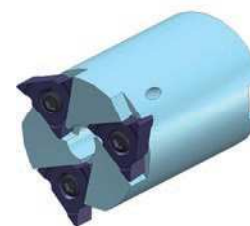
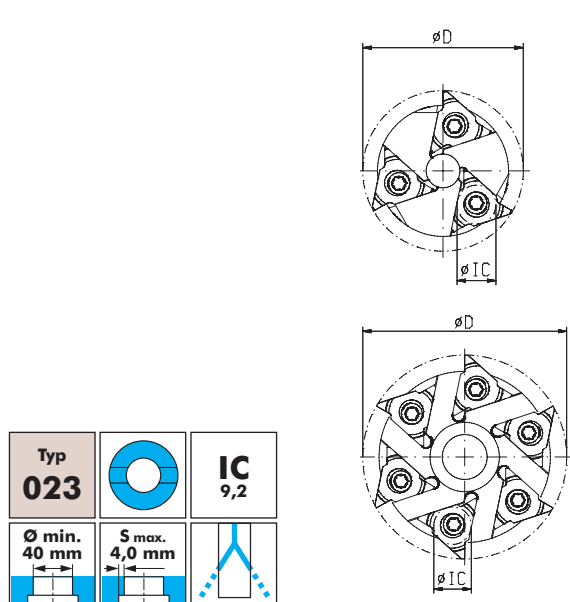


| Order No. | Bore Ø min. | D mm | d g6 mm | d1 mm | Smax. mm | LHA mm | L mm  | Inserts | M   |
|-----------|-------------|------|---------|-------|----------|--------|-------|---------|-----|
| 123465    | 33          | 32   | 12,5    | 24,3  | 3,8      | 40     | 34,97 | 3       | M12 |

Spare part No.

|                        |        |
|------------------------|--------|
| T15 IP<br>Screw-driver | Screw  |
| 111671                 | 107547 |

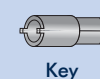
Screw torque max. 3,8 Nm



|                   |                  |           |
|-------------------|------------------|-----------|
| Typ<br><b>023</b> |                  | IC<br>9,2 |
| Ø min.<br>40 mm   | S max.<br>4,0 mm |           |

| Order No. | Bore Ø min. | D mm | dH6 mm | d1 mm | Smax. mm | LHA mm | L mm  | BMN mm | Inserts |
|-----------|-------------|------|--------|-------|----------|--------|-------|--------|---------|
| 123464    | 40          | 38   | 16     | 31    | 3,4      | 45,3   | 40,97 | 8,4    | 3       |
| 123461*   | 55          | 50   | 22     | 42    | 3,9      | 39,3   | 34,97 | 10,4   | 6       |

Accessories



134984

Spare part No.

|                        |        |
|------------------------|--------|
| T15 IP<br>Screw-driver | Screw  |
| 111671                 | 107547 |
| 111671                 | 107547 |

Screw torque max. 3,8 Nm


\* Cutter clamping screw internal hexagon



Order No. 114684

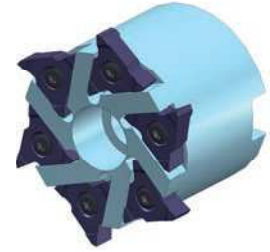
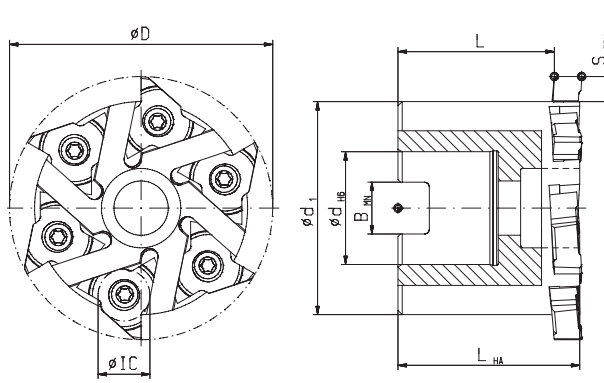


## Circular Milling Tools

- Inserts see page 37-38
- Cutting data see page 189
- Carbide grades see page 123

Typ **013**  **IC 12,4**

Ø min. **65 mm**  S max. **6,0 mm** 



| Order No. | Bore Ø min. | D mm | dH6 mm | d1 mm | Smax. mm | LHA mm | L mm | B MN mm | Inserts |
|-----------|-------------|------|--------|-------|----------|--------|------|---------|---------|
| 123435    | 65          | 63   | 27     | 51    | 6        | 43,5   | 37,5 | 12,4    | 6       |


Spare part No.



|                            |        |
|----------------------------|--------|
| <b>T20 IP</b> Screw-driver | Screw  |
| 111594                     | 107551 |

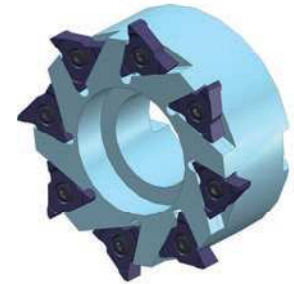
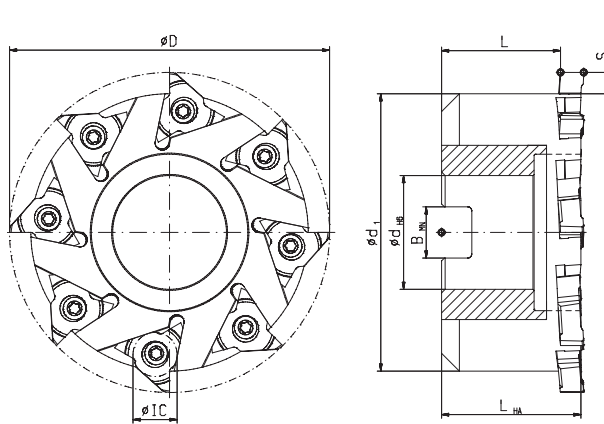
Screw torque 5,5 Nm

Cutter clamping screw internal hexagon

Order No. 114695

Typ **013**  **IC 12,4**

Ø min. **95 mm**  S max. **6,0 mm** 






| Order No. | Bore Ø min. | D mm | dH6 mm | d1 mm | Smax. mm | LHA mm | L mm | B MN mm | Inserts |
|-----------|-------------|------|--------|-------|----------|--------|------|---------|---------|
| 123436    | 95          | 90   | 32     | 78    | 6        | 39,2   | 33,5 | 14,4    | 8       |

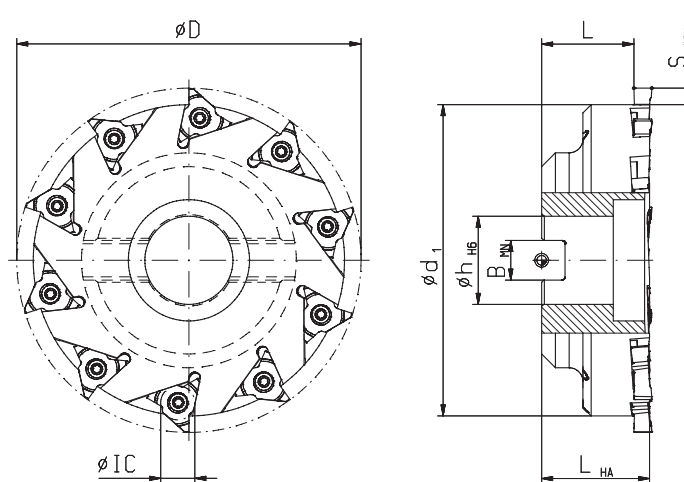
Spare part No.

|                            |        |
|----------------------------|--------|
| <b>T20 IP</b> Screw-driver | Screw  |
| 111594                     | 107551 |

Screw torque 5,5 Nm

Typ **013**  **IC 12,4**

Ø min. **95 mm**  S max. **6,0 mm** 



| Order No.         | Bore Ø min. | D mm | dH6 mm | d1 mm | Smax. mm | LHA mm | L mm | B MN mm | Inserts |
|-------------------|-------------|------|--------|-------|----------|--------|------|---------|---------|
| 134561 <b>NEW</b> | 130         | 125  | 32     | 113   | 6,0      | 39,2   | 33,5 | 14,4    | 10      |

Spare part No.

|                            |        |
|----------------------------|--------|
| <b>T20 IP</b> Screw-driver | Screw  |
| 111594                     | 107551 |

Screw torque 5,5 Nm