



# THE GENERALIST WITH TWO KNURLING WHEELS -TWICE THE RIGIDITY, EASY TO USE!



141-08 M 100404 - A

 $10 \times 4 \times 4 (\emptyset \times width \times bore)$ 

Machine type: Conventional and CNC – suitable for:

• Swiss type autolathes

Application: Form knurling (non-cutting forming)

Knurling profile on work piece DIN 82: **Knurling** 

RAA RGE30° RGE45°

2 x AA 1 x BL30° / 1 x BR30° wheels: Tool direction:

• Plunge knurling Feed knurling

Product highlights:

- Modular shank construction for conversion to alternative shank sizes
- Modular system: universal knurling tool for both right-/ and left-hand orientation. Retooling through fast and easy turning of the knurling head
- Flexible centering of the tool head
- Integrated set screws for clearance angle adjustment
- Pin with face fixed by a screw for a quick replacement of the knurling wheel
- Special surface hardening for increased wear resistance

# **TOOL TYPES:**

Tool holder No.

Shank size 8 x 8 mm •-

Modular •-

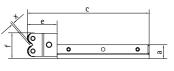
**ORDER EXAMPLE:** 

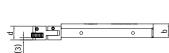
|   | Tool holder<br>No. | Working area<br>Ø mm | a<br>mm | b<br>mm | c<br>mm | d<br>mm | e<br>mm | f<br>mm | x<br>mm | Knurling<br>mm (Ø x wi |
|---|--------------------|----------------------|---------|---------|---------|---------|---------|---------|---------|------------------------|
|   | 141-08M100404-A    | 3-12                 | 8       | 8       | 105,5   | 12      | 26      | 21      | 1       | 10 x 4                 |
| ĺ | 141-10M100404-A    | 3-12                 | 10      | 10      | 105,5   | 12      | 26      | 21      | 1       | 10 x 4                 |
|   | 141-12M100404-A    | 3-12                 | 12      | 12      | 105,5   | 12      | 26      | 23      | 1       | 10 x 4                 |
|   | 141-16M100404-A    | 3-12                 | 16      | 16      | 105,5   | 12      | 26      | 27      | 1       | 10 x 4                 |
|   | 141-16M150604-A    | 5-40                 | 16      | 16      | 129     | 16      | 39      | 33      | 1,5     | 15 x 6                 |

| Knurling wheels mm (Ø x width x bore) | Spare part<br>Pin |
|---------------------------------------|-------------------|
| 10 x 4 x 4                            | 06TER0960         |
| 10 x 4 x 4                            | 06TER0960         |
| 10 x 4 x 4                            | 06TER0960         |
| 10 x 4 x 4                            | 06TER0960         |
| 15 x 6 x 4                            | 06TER0964         |



1 x BL45° / 1 x BR45°





#### FLEXIBILITY:

Fast and easy turning of the tool head for right-/ and left-hand use



| SHANK ADA  | APTORS: • |      |  |  |  |  |  |
|--|-----------|------|--|--|--|--|--|
| Shank size   | Part-No.  |      |  |  |  |  |  |
| 10 x 10  | 21BHR0833 |      |  |  |  |  |  |
| 12 x 12  | 21BHR0834 |      |  |  |  |  |  |
| 16 x 16  | 21BHR0835 | 4200 |  |  |  |  |  |
|  |           |      |  |  |  |  |  |
| Modular shank construction for conversion to alternative shank sizes |           |      |  |  |  |  |  |

### zeus® FORM KNURLING TOOL 141:

## THE GENERALIST WITH TWO KNURLING WHEELS -**DOUBLE THE RIGIDITY, EASY TO USE!**



**Machine type:** Conventional and CNC – suitable for:

- · Automatic short-turning lathes, Universal lathes, Turning- / milling centre
- Multispindle automatic lathes

Form knurling (non-cutting forming) Application:

Knurling profile on work piece DIN 82: RAA







Knurling wheels:

• Plunge knurling

Tool Feed knurling direction:

Product highlights:

- Flexible centering of the tool head • Integrated set screws for clearance angle adjustment
- Pin with face fixed by a screw for a quick replacement of the knurling wheel
- Carbide pins
- Special surface hardening for increased wear resistance

#### **TOOL TYPES:**

**ORDER EXAMPLE:** 

Shank size 20 x 20 mm •-

Tool holder No.

| Tool holder       | Working area | а  | b  | С   | d  | e  | f  | X   |
|-------------------|--------------|----|----|-----|----|----|----|-----|
| No.               | Ø mm         | mm | mm | mm  | mm | mm | mm | mm  |
| 141-20M200806-A   | 10-80        | 20 | 20 | 130 | 20 | 50 | 42 | 2,5 |
| 141-25M250806-A   | 50-200       | 25 | 20 | 156 | 20 | 56 | 55 | 2,5 |
|                   |              |    |    |     |    |    |    |     |
| With ClickPin®:   |              |    |    |     |    |    |    |     |
| 141-20M200806-A-Z | 10-80        | 20 | 20 | 130 | 20 | 50 | 42 | 2,5 |
| 141-25M250806-A-Z | 50-200       | 25 | 20 | 156 | 20 | 56 | 55 | 2,5 |

141 - 20M 200806 - A - (Z) - with ClickPin®

20 x 8 x 6 (Ø x width x bore)

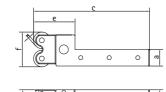
| x<br>n mm |     | Knurling wheels mm (Ø x width x bore) | Spare part<br>Pin |  |  |  |  |
|-----------|-----|---------------------------------------|-------------------|--|--|--|--|
|           | 2,5 | 20 x 8 x 6                            | 06TER0965         |  |  |  |  |
|           | 2,5 | 25 x 8 x 6                            | 06TER0965         |  |  |  |  |
|           |     |                                       |                   |  |  |  |  |
|           |     |                                       |                   |  |  |  |  |
|           | 2,5 | 20 x 8 x 6                            | 06TER1018         |  |  |  |  |
|           | 2,5 | 25 x 8 x 6                            | 06TER1018         |  |  |  |  |
|           |     |                                       |                   |  |  |  |  |

| _   | O6TERO | 965                        |
|-----|--------|----------------------------|
|     | O6TERO | 969                        |
|     | O6TERO | 989                        |
|     |        |                            |
|     | - 4    |                            |
|     | 400    |                            |
| -16 | - 10   |                            |
|     |        | 06TER0<br>06TER0<br>06TER0 |

| Tool holder     | Working area | а    | b  | С   | d  | e  | f  | X  |
|-----------------|--------------|------|----|-----|----|----|----|----|
| No.             | Ø mm         | inch | mm | mm  | mm | mm | mm | mm |
| 141-80M581414-A | 6-15         | 5/8" | 16 | 119 | 16 | 29 | 34 | 2  |
| 141-85M343814-A | 10-80        | 3/4" | 20 | 130 | 20 | 50 | 41 | 2  |
| 141-90M343814-A | 10-80        | 1"   | 20 | 140 | 20 | 50 | 41 | 2  |
|                 |              |      |    |     |    |    |    |    |

| n | Knurling wheels inch (Ø x width x bore) | Spare part<br>Pin |
|---|---|-------------------|
|   | 5/8" x 1/4" x 1/4"                      | 06TER0969         |
|   | 3/4" x 3/8" x 1/4"                      | 06TER0989         |
|   | 3/4" x 3/8" x 1/4"                      | 06TER0989         |
|   |   |                   |





## CLICK-PIN®-SYSTEM:



For fast and safe change of the knurling wheel:

or vibration

- --> No more break off through overtightening --> No more loosening through impact, hits
- --> Quick change and positioning of the

#### FLEXIBILITY:

Fast and easy turning of the tool head for right-/ and left-hand use



22