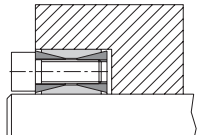
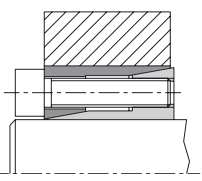
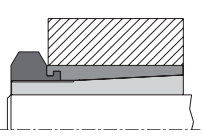
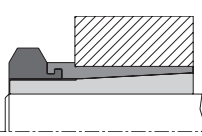
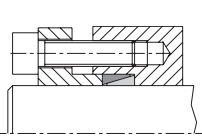
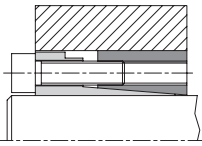
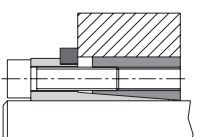


# CLAMPEX® CLAMPING ELEMENTS

## TYPES AND OPERATING DESCRIPTION

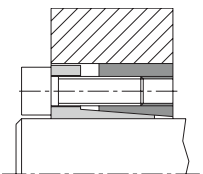
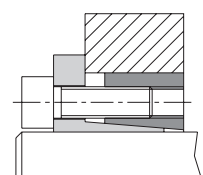
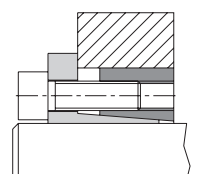
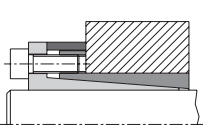
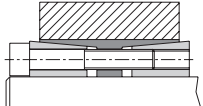
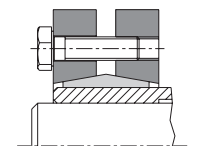
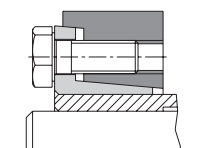
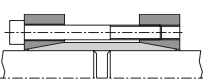
### Properties of clamping elements

| Type                       | Series                                                                                      | Shaft diameter [mm] | Transmittable torque T [Nm] | Centering of hub to shaft via the clamping element | Centering between hub and shaft required | Axial displacement of hub during assembly of clamping element | Details on page |
|----------------------------|---------------------------------------------------------------------------------------------|---------------------|-----------------------------|----------------------------------------------------|------------------------------------------|---------------------------------------------------------------|-----------------|
| Internal clamping elements |  KTR 100   | 17 – 1,000          | 260 – 3,017,100             |                                                    | ●                                        |                                                               | 308<br>309      |
|                            |  KTR 105   | 5 – 50              | 5 – 1,900                   | ●                                                  |                                          | ●                                                             | 310<br>311      |
|                            |  KTR 130  | 5 – 50              | 10 – 2,320                  | ●                                                  |                                          | ●                                                             | 312<br>313      |
|                            |  KTR 131 | 5 – 35              | 10 – 836                    | ●                                                  |                                          | ●                                                             | 312<br>313      |
|                            |  KTR 150 | 6 – 440             | 2 – 215,000                 |                                                    | ●                                        | ●*                                                            | 314<br>315      |
|                            |  KTR 200 | 20 – 200            | 530 – 68,000                | ●                                                  |                                          | ●                                                             | 316<br>317      |
|                            |  KTR 201 | 20 – 200            | 320 – 48,800                | ●                                                  |                                          |                                                               | 316<br>317      |

\* Depending on mounting position

# CLAMPEX® CLAMPING ELEMENTS

## TYPES AND OPERATING DESCRIPTION

| Type                       | Series                                                                                      | Shaft diameter [mm] | Transmittable torque T [Nm] | Centering of hub to shaft via the clamping element | Centering between hub and shaft required | Axial displacement of hub during assembly of clamping element | Details on page |
|----------------------------|---------------------------------------------------------------------------------------------|---------------------|-----------------------------|----------------------------------------------------|------------------------------------------|---------------------------------------------------------------|-----------------|
| Internal clamping elements |  KTR 203   | 18 — 400            | 370 — 487,000               | ●                                                  |                                          | ●                                                             | 318<br>319      |
|                            |  KTR 206   | 18 — 400            | 290 — 342,000               | ●                                                  |                                          |                                                               | 318<br>319      |
|                            |  KTR 225  | 14 — 50             | 287 — 1,796                 | ●                                                  |                                          |                                                               | 320<br>321      |
|                            |  KTR 250 | 6 — 130             | 11 — 25,000                 | ●                                                  |                                          |                                                               | 322<br>323      |
|                            |  KTR 400 | 24 — 600            | 700 — 1,640,000             | ●                                                  |                                          | ●                                                             | 324<br>325      |
| External clamping elements |  KTR 603 | 10 — 420            | 28 — 1,460,000              | ●                                                  |                                          |                                                               | 326<br>-<br>329 |
|                            |  KTR 620 | 13 — 700            | 70 — 7,394,000              | ●                                                  |                                          |                                                               | 330<br>-<br>333 |
| Shaft couplings            |  KTR 700 | 10 — 100            | 62 — 8,350                  | ●                                                  |                                          |                                                               | 334<br>335      |

CLAMPEX®

Clamping nuts

KTR Precision joints

Clamping sets

### Guide for selection

#### 1. Which properties of a clamping set are required?

- Shall shaft and hub be centered to each other by the clamping set?
- Is axial displacement of the hub permissible during assembly of the clamping set?

For an explanation of the properties specified above see CLAMPEX® selection guide on page 306.

#### 2. Which dimensions of clamping sets are required?

- Internal diameter of clamping set
- External diameter of clamping set
- Length of clamping set

For dimensions of clamping sets see catalogue on page 309 et seqq.

#### 3. How much torque and/or axial force needs to be transmitted?

The following safety factors are recommended by KTR:

- ≥ 1.5 between the maximum torque of machine and the transmittable torque of clamping set.
- ≥ 2.0 between the rated torque of machine and the transmittable torque of clamping set.

#### 4. Are shaft and hub suitable for the clamping set connection?

Calculation of the components is possible via the following methods:

- Formula for calculation of components see page 305.
- Review of components as well as the entire application via KTR CLAMPEX® online tool at [www.KTR.com](http://www.KTR.com).

#### 5. Other selection criteria

For questions about the following subjects, please contact the KTR engineering department.

- The clamping set is to be mounted on a shaft with a feather keyway.
- Simultaneous transmission of torque and axial force.
- The clamping set is radially loaded.
- The clamping set is loaded on bending.
- High circumferential speeds (from 30 m/s).
- Low/high operating temperatures (below -20 °C or above +50 °C).
- Shaft with bore (hollow shaft).
- Clamping set in a corrosion-protected design.
- Use in potentially explosive atmosphere (ATEX).
- Concentricity and axial run-out accuracies.
- Notch impact factors.

| Table of screws |                                                                           |        |        |                              |      |      |
|-----------------|---------------------------------------------------------------------------|--------|--------|------------------------------|------|------|
| Dimension M     | Preload force $F_V$ and tightening torque $T_A$ with $\mu_{total} = 0.14$ |        |        |                              |      |      |
|                 | Preload force $F_V$ [N]                                                   |        |        | Tightening torque $T_A$ [Nm] |      |      |
|                 | 8.8                                                                       | 10.9   | 12.9   | 8.8                          | 10.9 | 12.9 |
| M3              | 2210                                                                      | 3110   | 3730   | 1.34                         | 1.89 | 2.25 |
| M4              | 3900                                                                      | 5450   | 6550   | 2.9                          | 4.1  | 4.9  |
| M5              | 6350                                                                      | 8950   | 10700  | 6                            | 8.5  | 10   |
| M6              | 9000                                                                      | 12600  | 15100  | 10                           | 14   | 17   |
| M8              | 16500                                                                     | 23200  | 27900  | 25                           | 35   | 41   |
| M10             | 26200                                                                     | 36900  | 44300  | 49                           | 69   | 83   |
| M12             | 38300                                                                     | 54000  | 64500  | 86                           | 120  | 145  |
| M14             | 52500                                                                     | 74000  | 88500  | 135                          | 190  | 230  |
| M16             | 73000                                                                     | 102000 | 123000 | 210                          | 295  | 355  |
| M18             | 88000                                                                     | 124000 | 148000 | 290                          | 405  | 485  |
| M20             | 114000                                                                    | 160000 | 192000 | 410                          | 580  | 690  |
| M22             | 141000                                                                    | 199000 | 239000 | 550                          | 780  | 930  |
| M24             | 164000                                                                    | 230000 | 276000 | 710                          | 1000 | 1200 |
| M27             | 215000                                                                    | 302000 | 363000 | 1050                         | 1500 | 1800 |
| M30             | 262000                                                                    | 368000 | 442000 | 1450                         | 2000 | 2400 |

### Selection

| Symbol          | Definition resp. explanation                                        |
|-----------------|---------------------------------------------------------------------|
| $\sigma_{N0.2}$ | Yield point of hub material [N/mm <sup>2</sup> ]                    |
| $\sigma_{W0.2}$ | Yield point of shaft material [N/mm <sup>2</sup> ]                  |
| C               | Specific heat capacity C of hub type (see illustration on page 323) |
| d               | Internal diameter of clamping element [mm]                          |
| $d_{iW}$        | Internal diameter of hollow shaft [mm]                              |
| D               | External diameter of clamping element [mm]                          |
| $D_N$           | Required external diameter of hub [mm]                              |
| T               | Transmittable torque [Nm]                                           |
| $T_S$           | Peak torque to be transmitted [Nm]                                  |
| $T_A$           | Screw tightening torque [Nm]                                        |
| B2/B3           | Length of clamping element [mm]                                     |

| Symbol           | Definition resp. explanation                                                  |
|------------------|-------------------------------------------------------------------------------|
| L/L <sub>1</sub> | Hub length [mm]                                                               |
| $P_N$            | Surface pressure generated on the clamping element/hub [N/mm <sup>2</sup> ]   |
| $P_W$            | Surface pressure generated on the clamping element/shaft [N/mm <sup>2</sup> ] |
| CW               | $d_{iW}/d$ -> Ratio of internal diameter of hollow shaft/clamping element     |
| $C_N$            | $D/D_N$ -> Ratio of external diameter of clamping element/hub                 |
| $F_a$            | Axial force generated during operation [kN]                                   |
| $F_{ax}$         | Transmittable axial force [kN]                                                |
| $F_V$            | Preload force [N]                                                             |
| $P_O$            | Setting force for clamping element [N]                                        |
| $P_S$            | Clamping force for clamping element [N]                                       |
| $P_A$            | $P_O + P_S$ = Total force for clamping element [N]                            |

The transmission data are parameters found out by calculations. Subject to the friction coefficient variation which is subjected to physical properties, small deviations with the transmission figures may arise.

#### 1. Fatigue strength and shape stability of components subjected to torsion and bending load

The stress concentration figures  $\beta_k$  for the clamping elements press fits are worked out similarly to those of pressure oil fits. Stress concentration factors on request.

#### 2. Transmittable torque T

The transmittable torque T always has to be above the biggest torque peak  $T_S$ , which may arise on the joints. The torque peaks occurring with acceleration of electric motors as well as additional axial forces  $F_a$  have to be considered.

$$T \geq \sqrt{T_S [Nm]^2 + (F_a [kN] \cdot \frac{d [mm]}{2})^2}$$

#### 3. Transmittable axial force $F_{ax}$

The maximum transmittable axial force  $F_{ax}$  specified in the tables has to be reduced accordingly with additional torque transmission.

$$F_{ax} [kN] = 2 \cdot \frac{T [Nm]}{d [mm]}$$

#### 4. Calculation of external diameter of hub $D_N$

The required external diameter of hub  $D_N$  depends on the hub geometry, the yield point of the hub material and the surface pressure between clamping element and hub. In order to simplify the calculation, the table on page 323 specifies correction values which allow to calculate  $D_N$ .

$$D_N [mm] \geq D \cdot \text{correction value } x$$

Those external diameters of hubs which cannot be calculated based on the table are calculated via the following formula:

$$D_N \geq D \cdot \sqrt{\frac{\sigma_{N0.2} + P_N \cdot C}{\sigma_{N0.2} - P_N \cdot C}}$$

Tangential stress on the internal diameter of hub

$$\sigma_{tiN} \approx P_N \cdot \frac{(1 + C_N^2)}{(1 - C_N^2)} \cdot C$$

For clamping connections with hollow shafts the required internal diameter of the hollow shaft  $d_{iW}$  is calculated based on the following formula:

$$d_{iW} \leq d \cdot \sqrt{\frac{\sigma_{W0.2} - 2 \cdot P_W \cdot 0.8}{\sigma_{W0.2}}}$$

Tangential stress on the internal diameter of shaft

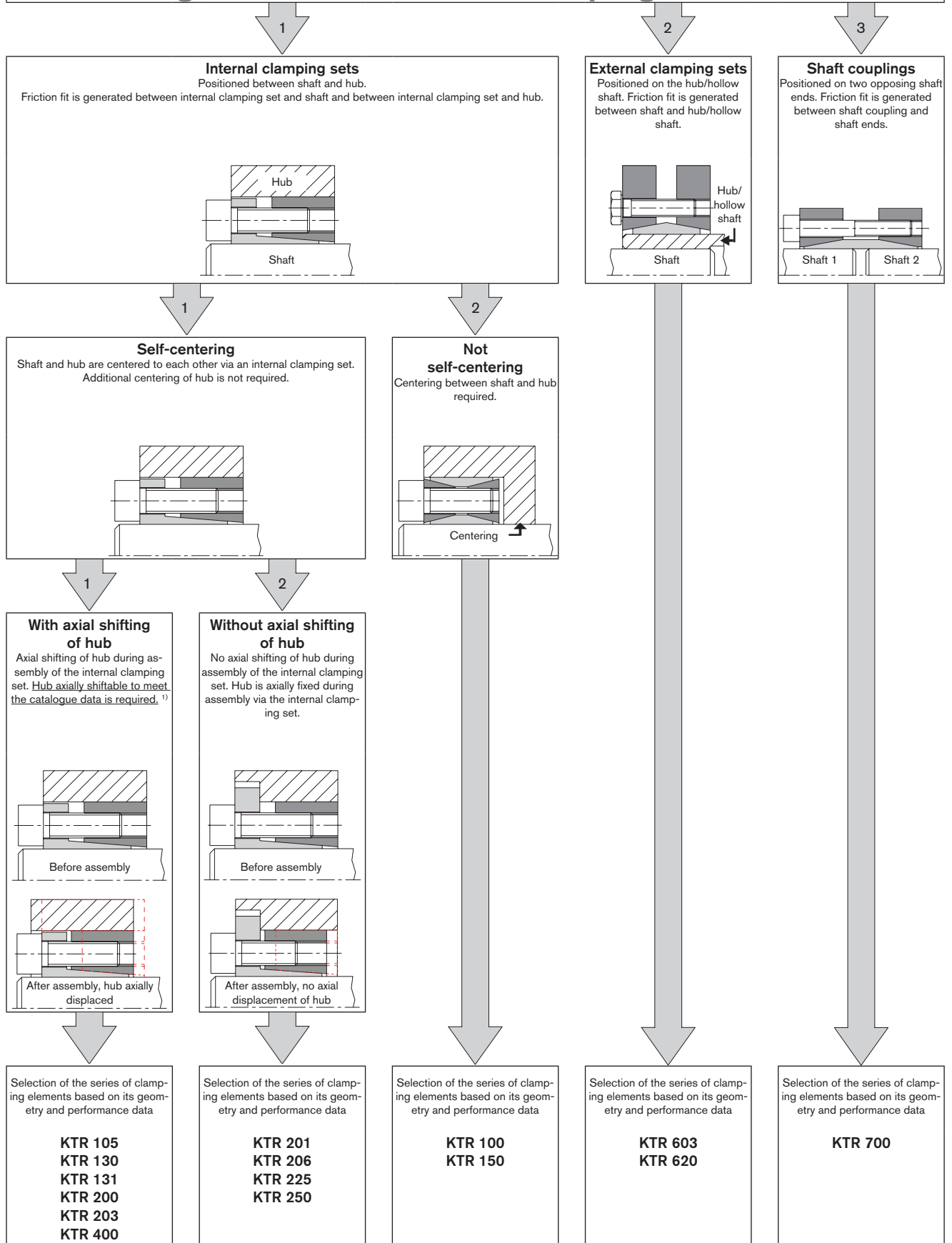
$$\sigma_{tiW} \approx \frac{2 \cdot P_W}{(C_W^2 - 1)}$$

#### Selection of hub material with external clamping sets KTR 603 and KTR 620

The hub material should have a yield strength  $R_e$  of  $\geq 350$  N/mm<sup>2</sup>. For applications with additional bending load, Q + T steel such as 42CrMo4 should be used.

### Selection guide

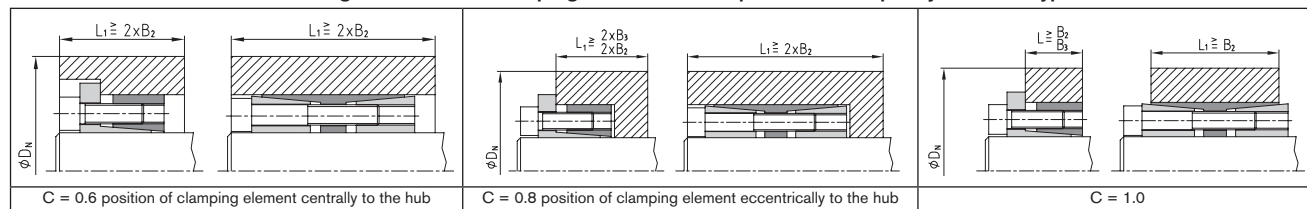
### Selection guide for CLAMPEX® clamping elements



<sup>1)</sup> Does not apply for KTR 400

### Calculation of hubs

Mounting conditions of clamping elements with specific heat capacity C of hub type

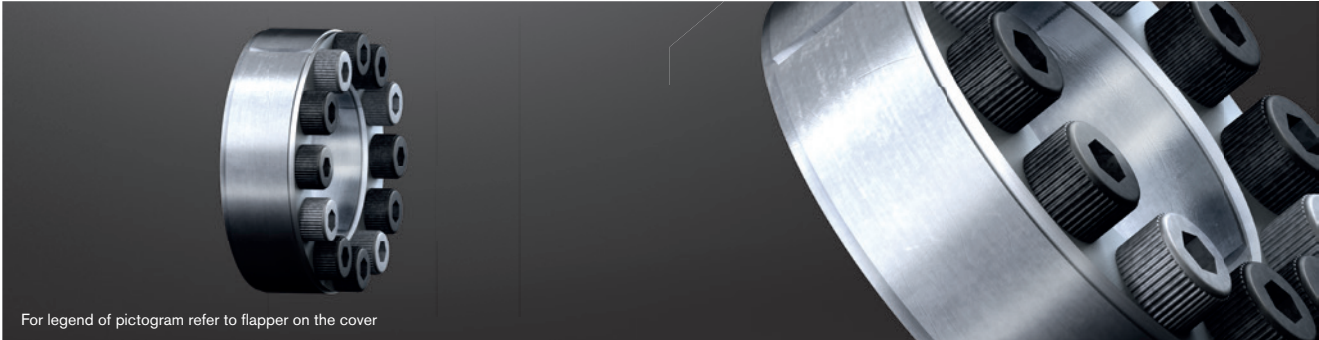


| Selection table for the calculation of the external diameter of hub $D_H$ required (correction value x) |                                      |                                                                                                                                                            |                |                  |        |                           |           |                         |                |                |             |             |
|---------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|--------|---------------------------|-----------|-------------------------|----------------|----------------|-------------|-------------|
| Surface pressure between clamping element and hub                                                       |                                      | Average yield point of material $\sigma$ 0.2 in N/mm <sup>2</sup> (more accurate stiffness figures depending on diameter as specified by the manufacturer) |                |                  |        |                           |           |                         |                |                |             |             |
|                                                                                                         |                                      | 150                                                                                                                                                        | 180            | 200              | 220    | 250                       | 270       | 300                     | 350            | 400            | 450         | 600         |
|                                                                                                         |                                      | Hub materials                                                                                                                                              |                |                  |        |                           |           |                         |                |                |             |             |
| $P_N$ [N/mm <sup>2</sup> ]                                                                              | Specific heat capacity C of hub type | GJL 200                                                                                                                                                    | GJL 250 GE 200 | GJL 300 GJMB-350 | GE 240 | GJS 400-15 GE 260 AW-2007 | E295 C 35 | GJS 500-7 GE 300 S355J2 | GJS 600-3 C 45 | GJS 700-2 C 60 | Q & T steel | Q & T steel |
| 65                                                                                                      | C = 0.6                              | 1.30                                                                                                                                                       | 1.25           | 1.22             | 1.20   | 1.18                      | 1.15      | 1.13                    | 1.11           | 1.10           | 1.09        | 1.07        |
|                                                                                                         | C = 0.8                              | 1.44                                                                                                                                                       | 1.35           | 1.30             | 1.28   | 1.24                      | 1.22      | 1.20                    | 1.16           | 1.14           | 1.12        | 1.09        |
|                                                                                                         | C = 1.0                              | 1.60                                                                                                                                                       | 1.45           | 1.40             | 1.35   | 1.30                      | 1.28      | 1.24                    | 1.20           | 1.18           | 1.16        | 1.12        |
| 70                                                                                                      | C = 0.6                              | 1.34                                                                                                                                                       | 1.26           | 1.24             | 1.22   | 1.18                      | 1.16      | 1.15                    | 1.12           | 1.11           | 1.10        | 1.07        |
|                                                                                                         | C = 0.8                              | 1.48                                                                                                                                                       | 1.38           | 1.34             | 1.30   | 1.25                      | 1.23      | 1.20                    | 1.18           | 1.15           | 1.13        | 1.10        |
|                                                                                                         | C = 1.0                              | 1.65                                                                                                                                                       | 1.50           | 1.45             | 1.40   | 1.34                      | 1.30      | 1.26                    | 1.22           | 1.20           | 1.17        | 1.13        |
| 75                                                                                                      | C = 0.6                              | 1.30                                                                                                                                                       | 1.28           | 1.25             | 1.23   | 1.20                      | 1.18      | 1.16                    | 1.14           | 1.12           | 1.11        | 1.08        |
|                                                                                                         | C = 0.8                              | 1.52                                                                                                                                                       | 1.42           | 1.36             | 1.32   | 1.28                      | 1.25      | 1.22                    | 1.18           | 1.16           | 1.14        | 1.11        |
|                                                                                                         | C = 1.0                              | 1.74                                                                                                                                                       | 1.55           | 1.48             | 1.42   | 1.36                      | 1.33      | 1.30                    | 1.25           | 1.20           | 1.18        | 1.13        |
| 80                                                                                                      | C = 0.6                              | 1.39                                                                                                                                                       | 1.31           | 1.28             | 1.25   | 1.21                      | 1.20      | 1.18                    | 1.15           | 1.13           | 1.11        | 1.08        |
|                                                                                                         | C = 0.8                              | 1.58                                                                                                                                                       | 1.45           | 1.39             | 1.35   | 1.30                      | 1.27      | 1.24                    | 1.20           | 1.18           | 1.15        | 1.11        |
|                                                                                                         | C = 1.0                              | 1.81                                                                                                                                                       | 1.61           | 1.53             | 1.46   | 1.39                      | 1.36      | 1.31                    | 1.26           | 1.22           | 1.20        | 1.14        |
| 85                                                                                                      | C = 0.6                              | 1.42                                                                                                                                                       | 1.34           | 1.30             | 1.27   | 1.23                      | 1.21      | 1.19                    | 1.16           | 1.14           | 1.12        | 1.09        |
|                                                                                                         | C = 0.8                              | 1.63                                                                                                                                                       | 1.49           | 1.42             | 1.38   | 1.32                      | 1.29      | 1.26                    | 1.22           | 1.19           | 1.16        | 1.12        |
|                                                                                                         | C = 1.0                              | 1.90                                                                                                                                                       | 1.67           | 1.57             | 1.50   | 1.42                      | 1.39      | 1.34                    | 1.28           | 1.24           | 1.21        | 1.15        |
| 90                                                                                                      | C = 0.6                              | 1.46                                                                                                                                                       | 1.36           | 1.32             | 1.28   | 1.25                      | 1.22      | 1.20                    | 1.17           | 1.15           | 1.13        | 1.09        |
|                                                                                                         | C = 0.8                              | 1.69                                                                                                                                                       | 1.53           | 1.46             | 1.40   | 1.34                      | 1.31      | 1.28                    | 1.23           | 1.20           | 1.18        | 1.13        |
|                                                                                                         | C = 1.0                              | 2.00                                                                                                                                                       | 1.73           | 1.62             | 1.54   | 1.46                      | 1.41      | 1.36                    | 1.30           | 1.26           | 1.22        | 1.16        |
| 95                                                                                                      | C = 0.6                              | 1.49                                                                                                                                                       | 1.39           | 1.34             | 1.30   | 1.26                      | 1.24      | 1.21                    | 1.18           | 1.15           | 1.14        | 1.10        |
|                                                                                                         | C = 0.8                              | 1.75                                                                                                                                                       | 1.57           | 1.49             | 1.43   | 1.37                      | 1.34      | 1.30                    | 1.25           | 1.21           | 1.19        | 1.14        |
|                                                                                                         | C = 1.0                              | 2.11                                                                                                                                                       | 1.80           | 1.68             | 1.59   | 1.49                      | 1.44      | 1.39                    | 1.32           | 1.27           | 1.24        | 1.17        |
| 100                                                                                                     | C = 0.6                              | 1.53                                                                                                                                                       | 1.41           | 1.36             | 1.32   | 1.28                      | 1.25      | 1.22                    | 1.19           | 1.16           | 1.14        | 1.11        |
|                                                                                                         | C = 0.8                              | 1.81                                                                                                                                                       | 1.61           | 1.53             | 1.46   | 1.39                      | 1.36      | 1.31                    | 1.26           | 1.22           | 1.20        | 1.14        |
|                                                                                                         | C = 1.0                              | 2.24                                                                                                                                                       | 1.87           | 1.73             | 1.63   | 1.53                      | 1.48      | 1.41                    | 1.34           | 1.29           | 1.25        | 1.18        |
| 105                                                                                                     | C = 0.6                              | 1.56                                                                                                                                                       | 1.44           | 1.39             | 1.34   | 1.29                      | 1.27      | 1.24                    | 1.20           | 1.17           | 1.15        | 1.11        |
|                                                                                                         | C = 0.8                              | 1.88                                                                                                                                                       | 1.66           | 1.56             | 1.50   | 1.42                      | 1.38      | 1.33                    | 1.28           | 1.24           | 1.21        | 1.15        |
|                                                                                                         | C = 1.0                              | 2.38                                                                                                                                                       | 1.95           | 1.79             | 1.68   | 1.56                      | 1.51      | 1.44                    | 1.36           | 1.31           | 1.27        | 1.19        |
| 110                                                                                                     | C = 0.6                              | 1.60                                                                                                                                                       | 1.47           | 1.41             | 1.36   | 1.31                      | 1.28      | 1.25                    | 1.21           | 1.18           | 1.16        | 1.12        |
|                                                                                                         | C = 0.8                              | 1.96                                                                                                                                                       | 1.71           | 1.60             | 1.53   | 1.44                      | 1.40      | 1.35                    | 1.29           | 1.25           | 1.22        | 1.16        |
|                                                                                                         | C = 1.0                              | 2.55                                                                                                                                                       | 2.04           | 1.86             | 1.73   | 1.60                      | 1.54      | 1.47                    | 1.38           | 1.33           | 1.28        | 1.20        |
| 115                                                                                                     | C = 0.6                              | 1.64                                                                                                                                                       | 1.50           | 1.43             | 1.36   | 1.33                      | 1.30      | 1.26                    | 1.22           | 1.19           | 1.17        | 1.12        |
|                                                                                                         | C = 0.8                              | 2.04                                                                                                                                                       | 1.76           | 1.64             | 1.56   | 1.47                      | 1.43      | 1.37                    | 1.31           | 1.26           | 1.23        | 1.17        |
|                                                                                                         | C = 1.0                              | 2.75                                                                                                                                                       | 2.13           | 1.93             | 1.79   | 1.64                      | 1.58      | 1.50                    | 1.41           | 1.34           | 1.30        | 1.21        |
| 120                                                                                                     | C = 0.6                              | 1.69                                                                                                                                                       | 1.53           | 1.46             | 1.40   | 1.34                      | 1.31      | 1.28                    | 1.23           | 1.20           | 1.18        | 1.13        |
|                                                                                                         | C = 0.8                              | 2.13                                                                                                                                                       | 1.81           | 1.69             | 1.60   | 1.50                      | 1.45      | 1.39                    | 1.33           | 1.28           | 1.24        | 1.18        |
|                                                                                                         | C = 1.0                              | 3.00                                                                                                                                                       | 2.24           | 2.00             | 1.84   | 1.69                      | 1.61      | 1.53                    | 1.43           | 1.36           | 1.31        | 1.22        |
| 125                                                                                                     | C = 0.6                              | 1.73                                                                                                                                                       | 1.56           | 1.48             | 1.43   | 1.36                      | 1.33      | 1.29                    | 1.24           | 1.21           | 1.18        | 1.13        |
|                                                                                                         | C = 0.8                              | 2.24                                                                                                                                                       | 1.87           | 1.73             | 1.63   | 1.53                      | 1.48      | 1.41                    | 1.34           | 1.29           | 1.25        | 1.18        |
|                                                                                                         | C = 1.0                              | 3.32                                                                                                                                                       | 2.35           | 2.08             | 1.91   | 1.73                      | 1.65      | 1.56                    | 1.45           | 1.38           | 1.33        | 1.24        |
| 130                                                                                                     | C = 0.6                              | 1.78                                                                                                                                                       | 1.59           | 1.51             | 1.45   | 1.38                      | 1.35      | 1.30                    | 1.25           | 1.22           | 1.19        | 1.14        |
|                                                                                                         | C = 0.8                              | 2.35                                                                                                                                                       | 1.93           | 1.78             | 1.67   | 1.56                      | 1.50      | 1.44                    | 1.36           | 1.30           | 1.27        | 1.19        |
|                                                                                                         | C = 1.0                              | 3.74                                                                                                                                                       | 2.49           | 2.17             | 1.97   | 1.78                      | 1.69      | 1.59                    | 1.48           | 1.40           | 1.35        | 1.25        |
| 135                                                                                                     | C = 0.6                              | 1.83                                                                                                                                                       | 1.62           | 1.54             | 1.47   | 1.40                      | 1.36      | 1.32                    | 1.27           | 1.23           | 1.20        | 1.15        |
|                                                                                                         | C = 0.8                              | 2.48                                                                                                                                                       | 2.00           | 1.83             | 1.71   | 1.59                      | 1.53      | 1.46                    | 1.38           | 1.32           | 1.28        | 1.20        |
|                                                                                                         | C = 1.0                              | 4.36                                                                                                                                                       | 2.65           | 2.27             | 2.04   | 1.83                      | 1.73      | 1.62                    | 1.50           | 1.42           | 1.36        | 1.26        |
| 140                                                                                                     | C = 0.6                              | 1.88                                                                                                                                                       | 1.66           | 1.56             | 1.50   | 1.42                      | 1.38      | 1.33                    | 1.28           | 1.24           | 1.21        | 1.15        |
|                                                                                                         | C = 0.8                              | 2.63                                                                                                                                                       | 2.07           | 1.88             | 1.75   | 1.62                      | 1.55      | 1.48                    | 1.39           | 1.33           | 1.29        | 1.21        |
|                                                                                                         | C = 1.0                              | 5.39                                                                                                                                                       | 2.83           | 2.38             | 2.12   | 1.88                      | 1.78      | 1.66                    | 1.53           | 1.44           | 1.38        | 1.27        |
| 145                                                                                                     | C = 0.6                              | 1.94                                                                                                                                                       | 1.69           | 1.59             | 1.52   | 1.44                      | 1.40      | 1.35                    | 1.29           | 1.25           | 1.22        | 1.16        |
|                                                                                                         | C = 0.8                              | 2.80                                                                                                                                                       | 2.15           | 1.94             | 1.80   | 1.65                      | 1.58      | 1.50                    | 1.41           | 1.35           | 1.30        | 1.22        |
|                                                                                                         | C = 1.0                              | 7.68                                                                                                                                                       | 3.05           | 2.50             | 2.21   | 1.94                      | 1.82      | 1.69                    | 1.55           | 1.46           | 1.40        | 1.28        |
| 150                                                                                                     | C = 0.6                              | 2.00                                                                                                                                                       | 1.73           | 1.62             | 1.54   | 1.46                      | 1.41      | 1.36                    | 1.30           | 1.26           | 1.23        | 1.16        |
|                                                                                                         | C = 0.8                              | 3.00                                                                                                                                                       | 2.24           | 2.0              | 1.84   | 1.69                      | 1.61      | 1.53                    | 1.43           | 1.36           | 1.31        | 1.23        |
|                                                                                                         | C = 1.0                              | –                                                                                                                                                          | 3.32           | 2.65             | 2.30   | 2.00                      | 1.87      | 1.73                    | 1.58           | 1.48           | 1.41        | 1.29        |
| 155                                                                                                     | C = 0.6                              | 2.06                                                                                                                                                       | 1.77           | 1.65             | 1.57   | 1.48                      | 1.43      | 1.38                    | 1.31           | 1.27           | 1.24        | 1.17        |
|                                                                                                         | C = 0.8                              | 3.25                                                                                                                                                       | 2.33           | 2.06             | 1.89   | 1.72                      | 1.65      | 1.55                    | 1.45           | 1.38           | 1.33        | 1.23        |
|                                                                                                         | C = 1.0                              | –                                                                                                                                                          | 3.66           | 2.80             | 2.40   | 2.06                      | 1.92      | 1.77                    | 1.61           | 1.51           | 1.43        | 1.30        |
| 160                                                                                                     | C = 0.6                              | 2.13                                                                                                                                                       | 1.81           | 1.69             | 1.60   | 1.50                      | 1.45      | 1.39                    | 1.33           | 1.28           | 1.24        | 1.18        |
|                                                                                                         | C = 0.8                              | 3.55                                                                                                                                                       | 2.43           | 2.13             | 1.94   | 1.76                      | 1.67      | 1.58                    | 1.47           | 1.39           | 1.34        | 1.24        |
|                                                                                                         | C = 1.0                              | –                                                                                                                                                          | 4.12           | 3.00             | 2.52   | 2.13                      | 1.98      | 1.81                    | 1.64           | 1.53           | 1.45        | 1.31        |
| 165                                                                                                     | C = 0.6                              | 2.21                                                                                                                                                       | 1.86           | 1.72             | 1.62   | 1.52                      | 1.47      | 1.41                    | 1.34           | 1.29           | 1.25        | 1.18        |
|                                                                                                         | C = 0.8                              | 3.96                                                                                                                                                       | 2.55           | 2.21             | 2.00   | 1.80                      | 1.71      | 1.60                    | 1.49           | 1.41           | 1.35        | 1.25        |
|                                                                                                         | C = 1.0                              | –                                                                                                                                                          | 4.80           | 3.23             | 2.65   | 2.21                      | 2.04      | 1.86                    | 1.67           | 1.55           | 1.47        | 1.33        |

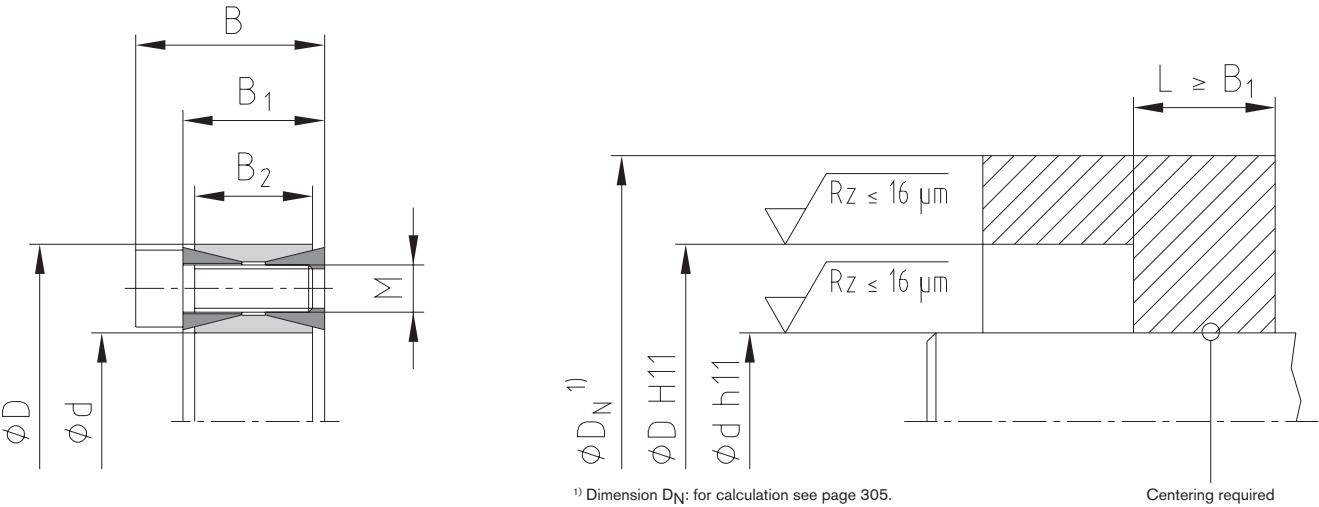
# CLAMPEX® KTR 100

## Clamping elements

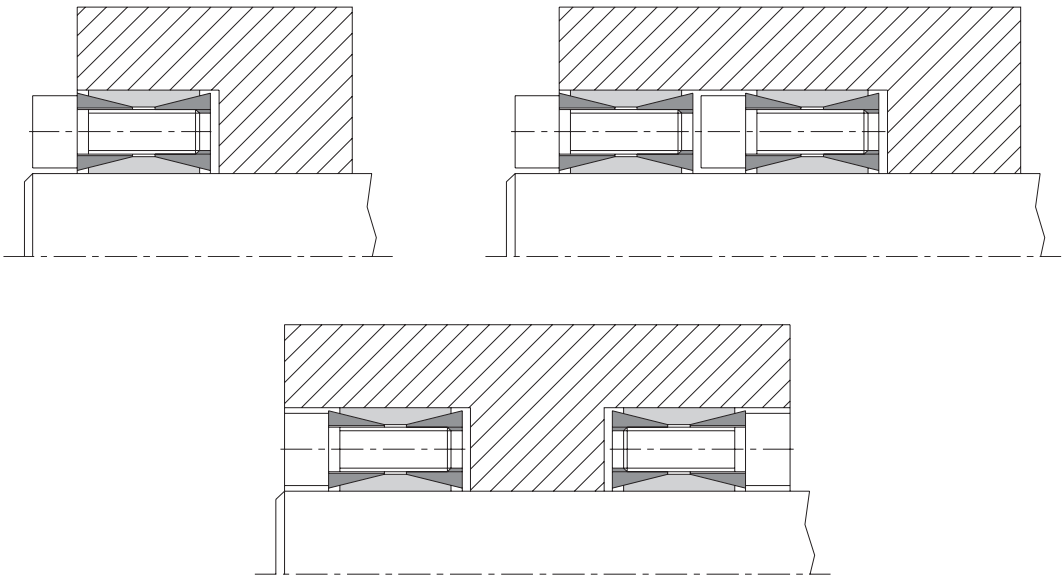
Not self-centering, suitable for large shaft and hub tolerances



For legend of pictogram refer to flapper on the cover



Example of application of hub type



● Sizes of clamping elements available from stock.  
<sup>1)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with  $T$ ,  $F_{ax}$ ,  $P_W$  and  $P_N$  decreasing proportionately.

|                   |         |                             |   |                             |
|-------------------|---------|-----------------------------|---|-----------------------------|
| Ordering example: | KTR 100 | 50                          | x | 80                          |
|                   | Series  | Size of internal diameter d |   | Size of external diameter D |

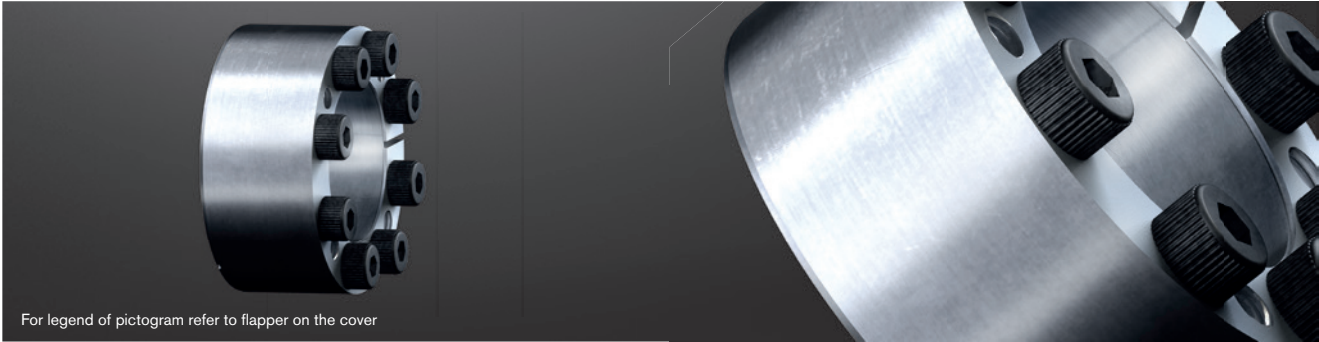
| CLAMPEX® – KTR 100 |                 |                |                |                                                                     |        |            |                                   |                                        |                      |                                              |                                            |                 |                      |
|--------------------|-----------------|----------------|----------------|---------------------------------------------------------------------|--------|------------|-----------------------------------|----------------------------------------|----------------------|----------------------------------------------|--------------------------------------------|-----------------|----------------------|
| d x D [mm]         | Dimensions [mm] |                |                | Clamping screws DIN EN ISO 4762 - 12.9<br>$\mu_{\text{total}}=0.14$ |        |            |                                   | Transmittable torque or<br>axial force |                      | Surface pressure between<br>clamping element |                                            | Weight<br>[~kg] | Stock pro-<br>gramme |
|                    | B               | B <sub>1</sub> | B <sub>2</sub> | M                                                                   | Length | z = number | T <sub>A</sub> [Nm] <sup>1)</sup> | T [Nm]                                 | F <sub>ax</sub> [kN] | Shaft P <sub>W</sub><br>[N/mm <sup>2</sup> ] | Hub P <sub>N</sub><br>[N/mm <sup>2</sup> ] |                 |                      |
| 17 x 47            | 26              | 20             | 17             | M6                                                                  | 18     | 8          | 16                                | 260                                    | 31                   | 281                                          | 102                                        | 0.2             |                      |
| 18 x 47            | 26              | 20             | 17             | M6                                                                  | 18     | 8          | 16                                | 280                                    | 31                   | 270                                          | 103                                        | 0.2             |                      |
| 19 x 47            | 26              | 20             | 17             | M6                                                                  | 18     | 8          | 16                                | 290                                    | 31                   | 251                                          | 101                                        | 0.2             | ●                    |
| 20 x 47            | 26              | 20             | 17             | M6                                                                  | 18     | 8          | 16                                | 310                                    | 31                   | 242                                          | 103                                        | 0.2             | ●                    |
| 22 x 47            | 26              | 20             | 17             | M6                                                                  | 18     | 8          | 16                                | 340                                    | 31                   | 219                                          | 103                                        | 0.2             | ●                    |
| 24 x 50            | 26              | 20             | 17             | M6                                                                  | 18     | 8          | 16                                | 370                                    | 31                   | 200                                          | 96                                         | 0.3             | ●                    |
| 25 x 50            | 26              | 20             | 17             | M6                                                                  | 18     | 8          | 16                                | 390                                    | 31                   | 195                                          | 97                                         | 0.3             | ●                    |
| 28 x 55            | 26              | 20             | 17             | M6                                                                  | 18     | 12         | 16                                | 650                                    | 46                   | 259                                          | 132                                        | 0.3             | ●                    |
| 30 x 55            | 26              | 20             | 17             | M6                                                                  | 18     | 12         | 16                                | 700                                    | 47                   | 243                                          | 132                                        | 0.3             | ●                    |
| 32 x 60            | 26              | 20             | 17             | M6                                                                  | 18     | 12         | 16                                | 750                                    | 47                   | 229                                          | 122                                        | 0.3             | ●                    |
| 35 x 60            | 26              | 20             | 17             | M6                                                                  | 18     | 12         | 16                                | 820                                    | 47                   | 209                                          | 122                                        | 0.3             | ●                    |
| 38 x 65            | 26              | 20             | 17             | M6                                                                  | 18     | 15         | 16                                | 1100                                   | 58                   | 238                                          | 139                                        | 0.4             | ●                    |
| 40 x 65            | 26              | 20             | 17             | M6                                                                  | 18     | 15         | 16                                | 1170                                   | 59                   | 228                                          | 140                                        | 0.3             | ●                    |
| 42 x 75            | 32              | 24             | 20             | M8                                                                  | 22     | 12         | 40                                | 1670                                   | 80                   | 251                                          | 141                                        | 0.6             | ●                    |
| 45 x 75            | 32              | 24             | 20             | M8                                                                  | 22     | 12         | 40                                | 1790                                   | 80                   | 234                                          | 141                                        | 0.5             | ●                    |
| 48 x 80            | 32              | 24             | 20             | M8                                                                  | 22     | 12         | 40                                | 1900                                   | 79                   | 219                                          | 131                                        | 0.6             | ●                    |
| 50 x 80            | 32              | 24             | 20             | M8                                                                  | 22     | 12         | 40                                | 1990                                   | 80                   | 211                                          | 132                                        | 0.6             | ●                    |
| 55 x 85            | 32              | 24             | 20             | M8                                                                  | 22     | 15         | 40                                | 2740                                   | 100                  | 240                                          | 155                                        | 0.6             | ●                    |
| 60 x 90            | 32              | 24             | 20             | M8                                                                  | 22     | 15         | 40                                | 2990                                   | 100                  | 220                                          | 147                                        | 0.7             | ●                    |
| 65 x 95            | 32              | 24             | 20             | M8                                                                  | 22     | 15         | 40                                | 3240                                   | 100                  | 203                                          | 139                                        | 0.8             | ●                    |
| 70 x 110           | 38              | 28             | 24             | M10                                                                 | 25     | 15         | 78                                | 5550                                   | 159                  | 250                                          | 159                                        | 1.3             | ●                    |
| 75 x 115           | 38              | 28             | 24             | M10                                                                 | 25     | 15         | 78                                | 5950                                   | 159                  | 234                                          | 152                                        | 1.2             | ●                    |
| 80 x 120           | 38              | 28             | 24             | M10                                                                 | 25     | 15         | 78                                | 6350                                   | 159                  | 219                                          | 146                                        | 1.4             | ●                    |
| 85 x 125           | 38              | 28             | 24             | M10                                                                 | 25     | 15         | 78                                | 6740                                   | 159                  | 206                                          | 140                                        | 1.4             | ●                    |
| 90 x 130           | 38              | 28             | 24             | M10                                                                 | 25     | 15         | 78                                | 7140                                   | 159                  | 195                                          | 135                                        | 1.5             | ●                    |
| 95 x 135           | 38              | 28             | 24             | M10                                                                 | 25     | 18         | 78                                | 9000                                   | 189                  | 220                                          | 155                                        | 1.6             | ●                    |
| 100 x 145          | 44              | 32             | 26             | M12                                                                 | 30     | 15         | 135                               | 11600                                  | 232                  | 237                                          | 163                                        | 2.2             | ●                    |
| 110 x 155          | 44              | 32             | 26             | M12                                                                 | 30     | 15         | 135                               | 12750                                  | 232                  | 215                                          | 153                                        | 2.3             | ●                    |
| 120 x 165          | 44              | 32             | 26             | M12                                                                 | 30     | 16         | 135                               | 14800                                  | 247                  | 210                                          | 153                                        | 2.4             | ●                    |
| 130 x 180          | 50              | 38             | 34             | M12                                                                 | 30     | 20         | 135                               | 20150                                  | 310                  | 186                                          | 134                                        | 3.5             | ●                    |
| 140 x 190          | 50              | 38             | 34             | M12                                                                 | 30     | 22         | 135                               | 23850                                  | 341                  | 190                                          | 140                                        | 3.8             | ●                    |
| 150 x 200          | 50              | 38             | 34             | M12                                                                 | 30     | 24         | 135                               | 27850                                  | 371                  | 193                                          | 145                                        | 4.0             | ●                    |
| 160 x 210          | 50              | 38             | 34             | M12                                                                 | 30     | 26         | 135                               | 32200                                  | 403                  | 196                                          | 150                                        | 4.4             | ●                    |
| 170 x 225          | 58              | 44             | 38             | M14                                                                 | 45     | 22         | 215                               | 40300                                  | 474                  | 195                                          | 147                                        | 5.7             | ●                    |
| 180 x 235          | 58              | 44             | 38             | M14                                                                 | 45     | 24         | 215                               | 46600                                  | 518                  | 201                                          | 154                                        | 6.0             | ●                    |
| 190 x 250          | 66              | 52             | 46             | M14                                                                 | 45     | 28         | 215                               | 57300                                  | 603                  | 183                                          | 139                                        | 8.0             | ●                    |
| 200 x 260          | 66              | 52             | 46             | M14                                                                 | 45     | 30         | 215                               | 71000                                  | 710                  | 205                                          | 157                                        | 8.2             | ●                    |
| 220 x 285          | 72              | 56             | 50             | M16                                                                 | 50     | 26         | 335                               | 93200                                  | 847                  | 204                                          | 158                                        | 11.0            | ●                    |
| 240 x 305          | 72              | 56             | 50             | M16                                                                 | 50     | 30         | 335                               | 117300                                 | 978                  | 216                                          | 170                                        | 12.2            |                      |
| 260 x 325          | 72              | 56             | 50             | M16                                                                 | 50     | 34         | 335                               | 144000                                 | 1108                 | 226                                          | 181                                        | 13.2            |                      |
| 280 x 355          | 84              | 66             | 60             | M18                                                                 | 60     | 32         | 465                               | 177700                                 | 1269                 | 200                                          | 158                                        | 19.2            |                      |
| 300 x 375          | 84              | 66             | 60             | M18                                                                 | 60     | 36         | 465                               | 214100                                 | 1427                 | 210                                          | 168                                        | 20.5            |                      |
| 320 x 405          | 98              | 78             | 72             | M20                                                                 | 70     | 36         | 660                               | 295800                                 | 1849                 | 213                                          | 168                                        | 29.6            |                      |
| 340 x 425          | 98              | 78             | 72             | M20                                                                 | 70     | 36         | 660                               | 314300                                 | 1849                 | 200                                          | 160                                        | 31.1            |                      |
| 360 x 455          | 112             | 90             | 84             | M22                                                                 | 80     | 36         | 900                               | 413300                                 | 2296                 | 201                                          | 159                                        | 42.2            |                      |
| 380 x 475          | 112             | 90             | 84             | M22                                                                 | 80     | 36         | 900                               | 436300                                 | 2296                 | 191                                          | 153                                        | 44.0            |                      |
| 400 x 495          | 112             | 90             | 84             | M22                                                                 | 80     | 36         | 900                               | 459300                                 | 2297                 | 181                                          | 147                                        | 46.0            |                      |
| 420 x 515          | 112             | 90             | 84             | M22                                                                 | 80     | 40         | 900                               | 535800                                 | 2551                 | 192                                          | 156                                        | 50.0            |                      |
| 440 x 545          | 130             | 102            | 96             | M24                                                                 | 90     | 40         | 1130                              | 647600                                 | 2944                 | 185                                          | 149                                        | 64.6            |                      |
| 460 x 565          | 130             | 102            | 96             | M24                                                                 | 90     | 40         | 1130                              | 677000                                 | 2943                 | 177                                          | 144                                        | 67.4            |                      |
| 480 x 585          | 130             | 102            | 96             | M24                                                                 | 90     | 42         | 1130                              | 741800                                 | 3091                 | 178                                          | 146                                        | 71.0            |                      |
| 500 x 605          | 130             | 102            | 96             | M24                                                                 | 90     | 44         | 1130                              | 809500                                 | 3238                 | 179                                          | 148                                        | 72.6            |                      |
| 520 x 630          | 130             | 102            | 96             | M24                                                                 | 90     | 45         | 1130                              | 861000                                 | 3312                 | 176                                          | 145                                        | 80              |                      |
| 540 x 650          | 130             | 102            | 96             | M24                                                                 | 90     | 45         | 1130                              | 894000                                 | 3311                 | 169                                          | 141                                        | 82              |                      |
| 560 x 670          | 130             | 102            | 96             | M24                                                                 | 90     | 48         | 1130                              | 989000                                 | 3532                 | 174                                          | 146                                        | 85              |                      |
| 580 x 690          | 130             | 102            | 96             | M24                                                                 | 90     | 50         | 1130                              | 1067000                                | 3679                 | 175                                          | 147                                        | 88              |                      |
| 600 x 710          | 130             | 102            | 96             | M24                                                                 | 90     | 50         | 1130                              | 1103800                                | 3679                 | 169                                          | 143                                        | 91              |                      |
| 620 x 730          | 130             | 102            | 96             | M24                                                                 | 90     | 52         | 1130                              | 1186200                                | 3826                 | 171                                          | 145                                        | 93              |                      |
| 640 x 750          | 130             | 102            | 96             | M24                                                                 | 90     | 54         | 1130                              | 1271600                                | 3974                 | 172                                          | 146                                        | 96              |                      |
| 660 x 770          | 130             | 102            | 96             | M24                                                                 | 90     | 56         | 1130                              | 1359900                                | 4121                 | 173                                          | 148                                        | 99              |                      |
| 680 x 790          | 130             | 102            | 96             | M24                                                                 | 90     | 56         | 1130                              | 1401100                                | 4121                 | 167                                          | 144                                        | 102             |                      |
| 700 x 810          | 130             | 102            | 96             | M24                                                                 | 90     | 60         | 1130                              | 1545400                                | 4415                 | 174                                          | 151                                        | 104             |                      |
| 720 x 830          | 130             | 102            | 96             | M24                                                                 | 90     | 60         | 1130                              | 1589500                                | 4415                 | 169                                          | 147                                        | 107             |                      |
| 740 x 850          | 130             | 102            | 96             | M24                                                                 | 90     | 62         | 1130                              | 1688100                                | 4562                 | 170                                          | 148                                        | 110             |                      |
| 760 x 870          | 130             | 102            | 96             | M24                                                                 | 90     | 64         | 1130                              | 1789700                                | 4710                 | 171                                          | 150                                        | 113             |                      |
| 780 x 890          | 130             | 102            | 96             | M24                                                                 | 90     | 65         | 1130                              | 1865500                                | 4783                 | 169                                          | 149                                        | 116             |                      |
| 800 x 910          | 130             | 102            | 96             | M24                                                                 | 90     | 66         | 1130                              | 1942700                                | 4857                 | 168                                          | 147                                        | 118             |                      |
| 820 x 930          | 130             | 102            | 96             | M24                                                                 | 90     | 68         | 1130                              | 2051600                                | 5004                 | 169                                          | 149                                        | 121             |                      |
| 840 x 950          | 130             | 102            | 96             | M24                                                                 | 90     | 70         | 1130                              | 2163500                                | 5151                 | 169                                          | 150                                        | 124             |                      |
| 860 x 970          | 130             | 102            | 96             | M24                                                                 | 90     | 72         | 1130                              | 2278300                                | 5298                 | 170                                          | 151                                        | 127             |                      |
| 880 x 990          | 130             | 102            | 96             | M24                                                                 | 90     | 74         | 1130                              | 2396000                                | 5445                 | 171                                          | 152                                        | 129             |                      |
| 900 x 1010         | 130             | 102            | 96             | M24                                                                 | 90     | 75         | 1130                              | 2483600                                | 5519                 | 169                                          | 151                                        | 132             |                      |
| 920 x 1030         | 130             | 102            | 96             | M24                                                                 | 90     | 76         | 1130                              | 2572600                                | 5593                 | 168                                          | 150                                        | 135             |                      |
| 940 x 1050         | 130             | 102            | 96             | M24                                                                 | 90     | 78         | 1130                              | 2697700                                | 5740                 | 169                                          | 151                                        | 138             |                      |
| 960 x 1070         | 130             | 102            | 96             | M24                                                                 | 90     | 80         | 1130                              | 2825800                                | 5887                 | 169                                          | 152                                        | 140             |                      |
| 980 x 1090         | 130             | 102            | 96             | M24                                                                 | 90     | 81         | 1130                              | 2920700                                | 5961                 | 168                                          | 151                                        | 143             |                      |
| 1000 x 1110        | 130             | 102            | 96             | M24                                                                 | 90     | 82         | 1130                              | 3017100                                | 6034                 | 167                                          | 150                                        | 146             |                      |



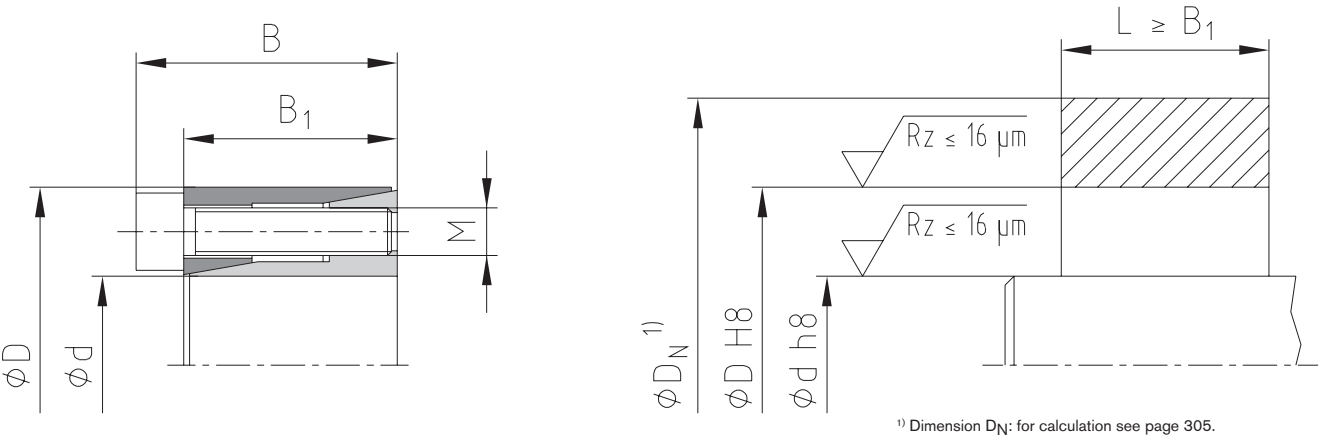
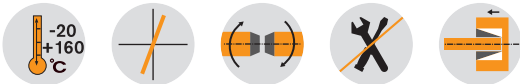
# CLAMPEX® KTR 105

## Clamping elements

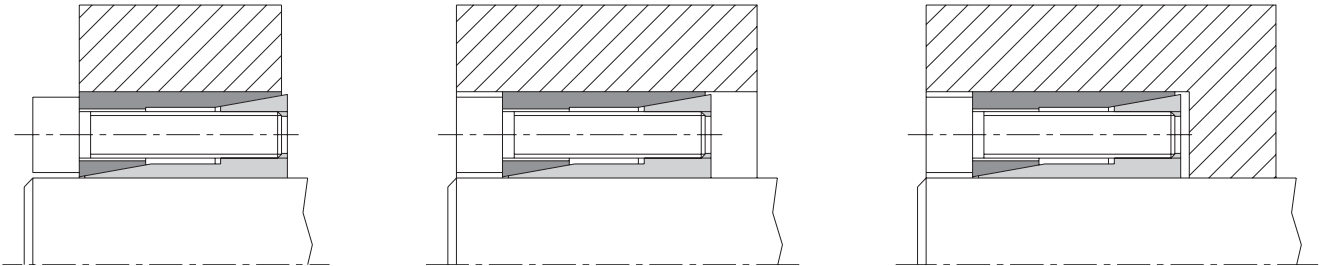
### Self-centering clamping element in a compact design



For legend of pictogram refer to flapper on the cover



Example of application of hub type



|                   |         |                             |   |                             |
|-------------------|---------|-----------------------------|---|-----------------------------|
| Ordering example: | KTR 105 | 8                           | x | 18                          |
|                   | Series  | Size of internal diameter d |   | Size of external diameter D |

| CLAMPEX® – KTR 105 |                 |    |                                                                  |        |            |                                   |                                     |                      |                                           |                                         |              |                 |
|--------------------|-----------------|----|------------------------------------------------------------------|--------|------------|-----------------------------------|-------------------------------------|----------------------|-------------------------------------------|-----------------------------------------|--------------|-----------------|
| d x D [mm]         | Dimensions [mm] |    | Clamping screws DIN EN ISO 4762 - 12.9 $\mu_{\text{total}}=0.14$ |        |            |                                   | Transmittable torque or axial force |                      | Surface pressure between clamping element |                                         | Weight [~kg] | Stock programme |
|                    | B               | B1 | M                                                                | Length | z = number | T <sub>A</sub> [Nm] <sup>1)</sup> | T [Nm]                              | F <sub>ax</sub> [kN] | Shaft P <sub>W</sub> [N/mm <sup>2</sup> ] | Hub P <sub>N</sub> [N/mm <sup>2</sup> ] |              |                 |
| 5 x 16             | 13.5            | 11 | M2.5                                                             | 10     | 3          | 1.2                               | 5                                   | 2                    | 177                                       | 55                                      | 0.01         | ●               |
| 6 x 16             | 13.5            | 11 | M2.5                                                             | 10     | 3          | 1.2                               | 6                                   | 2                    | 147                                       | 55                                      | 0.01         | ●               |
| 6.35 x 16          | 13.5            | 11 | M2.5                                                             | 10     | 3          | 1.2                               | 6                                   | 2                    | 132                                       | 52                                      | 0.01         | ●               |
| 7 x 17             | 13.5            | 11 | M2.5                                                             | 10     | 3          | 1.2                               | 8                                   | 2                    | 144                                       | 59                                      | 0.01         | ●               |
| 8 x 18             | 13.5            | 11 | M2.5                                                             | 10     | 3          | 1.2                               | 10                                  | 3                    | 138                                       | 61                                      | 0.02         | ●               |
| 9 x 20             | 15.5            | 13 | M2.5                                                             | 12     | 4          | 1.2                               | 15                                  | 3                    | 140                                       | 63                                      | 0.02         | ●               |
| 9.53 x 20          | 15.5            | 13 | M2.5                                                             | 12     | 4          | 1.2                               | 15                                  | 3                    | 125                                       | 60                                      | 0.02         | ●               |
| 10 x 20            | 15.5            | 13 | M2.5                                                             | 12     | 4          | 1.2                               | 15                                  | 3                    | 114                                       | 57                                      | 0.02         | ●               |
| 11 x 22            | 15.5            | 13 | M2.5                                                             | 12     | 4          | 1.2                               | 18                                  | 3                    | 113                                       | 56                                      | 0.02         | ●               |
| 12 x 22            | 15.5            | 13 | M2.5                                                             | 12     | 4          | 1.2                               | 20                                  | 3                    | 105                                       | 57                                      | 0.02         | ●               |
| 14 x 26            | 20              | 17 | M3                                                               | 16     | 4          | 2.1                               | 35                                  | 5                    | 105                                       | 57                                      | 0.04         | ●               |
| 15 x 28            | 20              | 17 | M3                                                               | 16     | 4          | 2.1                               | 40                                  | 5                    | 94                                        | 51                                      | 0.04         | ●               |
| 16 x 32            | 21              | 17 | M4                                                               | 16     | 4          | 4.9                               | 70                                  | 9                    | 132                                       | 66                                      | 0.07         | ●               |
| 17 x 35            | 25              | 21 | M4                                                               | 20     | 4          | 4.9                               | 75                                  | 9                    | 125                                       | 61                                      | 0.09         | ●               |
| 18 x 35            | 25              | 21 | M4                                                               | 20     | 4          | 4.9                               | 80                                  | 9                    | 119                                       | 61                                      | 0.09         | ●               |
| 19 x 35            | 25              | 21 | M4                                                               | 20     | 4          | 4.9                               | 85                                  | 9                    | 114                                       | 62                                      | 0.08         | ●               |
| 20 x 38            | 26              | 21 | M5                                                               | 20     | 4          | 9.7                               | 150                                 | 15                   | 153                                       | 81                                      | 0.1          | ●               |
| 22 x 40            | 26              | 21 | M5                                                               | 20     | 4          | 9.7                               | 160                                 | 15                   | 135                                       | 74                                      | 0.1          | ●               |
| 24 x 47            | 32              | 26 | M6                                                               | 25     | 4          | 16.5                              | 250                                 | 21                   | 154                                       | 78                                      | 0.2          | ●               |
| 25 x 47            | 32              | 26 | M6                                                               | 25     | 4          | 16.5                              | 260                                 | 21                   | 147                                       | 78                                      | 0.2          | ●               |
| 28 x 50            | 32              | 26 | M6                                                               | 25     | 6          | 16.5                              | 440                                 | 31                   | 198                                       | 111                                     | 0.2          | ●               |
| 30 x 55            | 32              | 26 | M6                                                               | 25     | 6          | 16.5                              | 470                                 | 31                   | 185                                       | 101                                     | 0.3          | ●               |
| 32 x 55            | 32              | 26 | M6                                                               | 25     | 6          | 16.5                              | 500                                 | 31                   | 173                                       | 100                                     | 0.25         | ●               |
| 35 x 60            | 37              | 31 | M6                                                               | 30     | 8          | 16.5                              | 730                                 | 42                   | 166                                       | 97                                      | 0.35         | ●               |
| 38 x 65            | 37              | 31 | M6                                                               | 30     | 8          | 16.5                              | 800                                 | 42                   | 155                                       | 90                                      | 0.4          | ●               |
| 40 x 65            | 37              | 31 | M6                                                               | 30     | 8          | 16.5                              | 840                                 | 42                   | 147                                       | 90                                      | 0.4          | ●               |
| 42 x 75            | 44              | 36 | M8                                                               | 35     | 6          | 40                                | 911                                 | 43                   | 125                                       | 70                                      | 0.7          | ●               |
| 45 x 75            | 44              | 36 | M8                                                               | 35     | 8          | 40                                | 1300                                | 58                   | 155                                       | 93                                      | 0.6          | ●               |
| 48 x 80            | 44              | 36 | M8                                                               | 35     | 8          | 40                                | 1824                                | 76                   | 191                                       | 115                                     | 0.7          | ●               |
| 50 x 80            | 44              | 36 | M8                                                               | 35     | 8          | 40                                | 1900                                | 76                   | 183                                       | 115                                     | 0.7          | ●               |

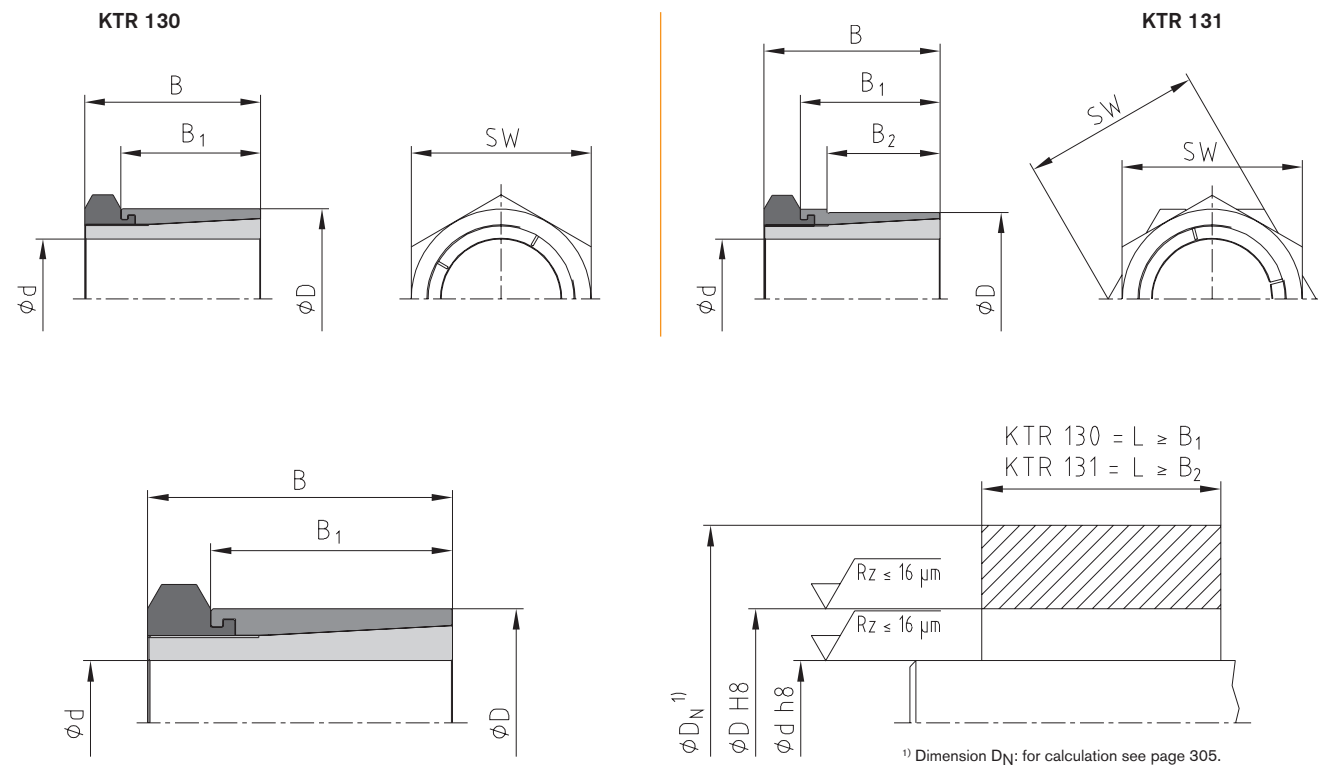
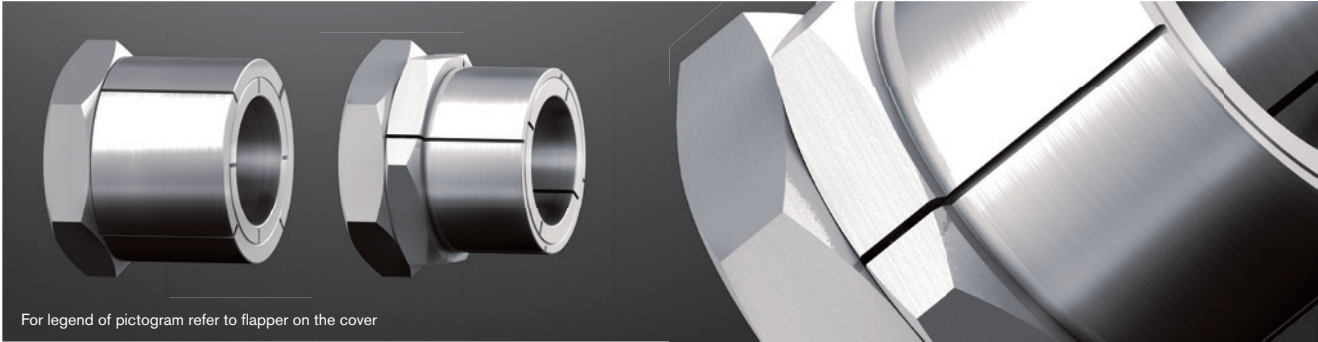
● Sizes of clamping elements available from stock.

<sup>1)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with T, F<sub>ax</sub>, P<sub>W</sub> and P<sub>N</sub> decreasing proportionately.

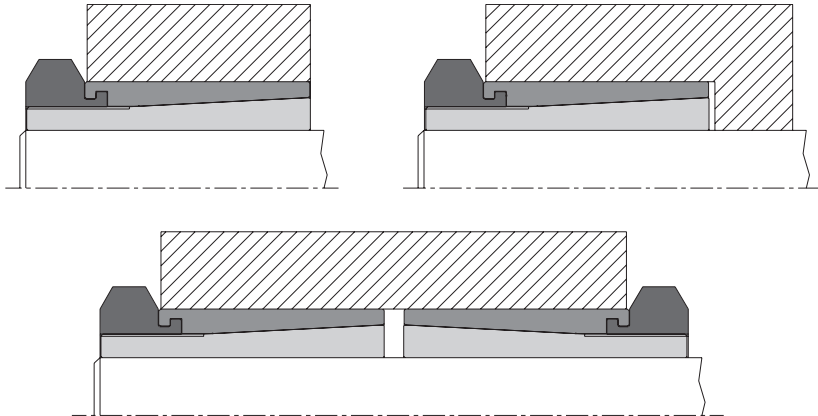
# CLAMPEX® KTR 130 and KTR 131

## Clamping elements

Self-centering clamping elements with a central clamping nut for easy assembly/disassembly



Example of application of hub type



|                   |         |                             |   |                             |
|-------------------|---------|-----------------------------|---|-----------------------------|
| Ordering example: | KTR 130 | 18                          | x | 35                          |
|                   | Series  | Size of internal diameter d |   | Size of external diameter D |

## CLAMPEX® – KTR 130

| d x D [mm] | Dimensions [mm] |                | Hexagon nut           |                                   | Transmittable torque or axial force |                      | Surface pressure between clamping element |                                         | Weight [~kg] | Stock programme |
|------------|-----------------|----------------|-----------------------|-----------------------------------|-------------------------------------|----------------------|-------------------------------------------|-----------------------------------------|--------------|-----------------|
|            | B               | B <sub>1</sub> | Width across flats SW | T <sub>A</sub> [Nm] <sup>1)</sup> | T [Nm]                              | F <sub>ax</sub> [kN] | Shaft P <sub>W</sub> [N/mm <sup>2</sup> ] | Hub P <sub>N</sub> [N/mm <sup>2</sup> ] |              |                 |
| 5 x 14     | 19              | 15             | 14                    | 10                                | 10.1                                | 4.0                  | 264                                       | 96                                      | 0.02         | ●               |
| 6 x 14     | 19              | 15             | 14                    | 10                                | 12.1                                | 4.0                  | 220                                       | 96                                      | 0.02         | ●               |
| 8 x 16     | 22              | 17             | 17                    | 17                                | 23.4                                | 5.8                  | 179                                       | 91                                      | 0.02         | ●               |
| 9 x 20     | 24              | 19             | 22                    | 35                                | 43.2                                | 9.7                  | 248                                       | 112                                     | 0.04         | ●               |
| 10 x 20    | 24              | 19             | 22                    | 35                                | 48.6                                | 9.7                  | 223                                       | 112                                     | 0.05         | ●               |
| 12 x 22    | 24              | 19             | 22                    | 44                                | 65.3                                | 10.9                 | 206                                       | 117                                     | 0.05         | ●               |
| 14 x 26    | 28              | 22             | 27                    | 65                                | 93.0                                | 13.3                 | 178                                       | 99                                      | 0.08         | ●               |
| 15 x 26    | 28              | 22             | 27                    | 65                                | 99.0                                | 13.3                 | 166                                       | 99                                      | 0.08         | ●               |
| 16 x 26    | 28              | 22             | 27                    | 65                                | 106                                 | 13.3                 | 156                                       | 99                                      | 0.07         | ●               |
| 18 x 35    | 36              | 27             | 36                    | 161                               | 223                                 | 24.8                 | 224                                       | 125                                     | 0.2          | ●               |
| 19 x 35    | 36              | 27             | 36                    | 161                               | 235                                 | 24.8                 | 212                                       | 125                                     | 0.2          | ●               |
| 20 x 35    | 36              | 27             | 36                    | 161                               | 248                                 | 24.8                 | 201                                       | 125                                     | 0.2          | ●               |
| 22 x 42    | 41              | 30             | 46                    | 250                               | 349                                 | 31.8                 | 197                                       | 110                                     | 0.3          | ●               |
| 24 x 42    | 41              | 30             | 46                    | 250                               | 381                                 | 31.8                 | 180                                       | 110                                     | 0.3          | ●               |
| 25 x 42    | 41              | 30             | 46                    | 250                               | 397                                 | 31.8                 | 173                                       | 110                                     | 0.3          | ●               |
| 30 x 47    | 44              | 33             | 50                    | 355                               | 605                                 | 40.4                 | 162                                       | 110                                     | 0.4          | ●               |
| 32 x 55    | 51              | 38             | 55                    | 490                               | 764                                 | 47.8                 | 166                                       | 102                                     | 0.6          | ●               |
| 35 x 55    | 51              | 38             | 55                    | 490                               | 836                                 | 47.8                 | 151                                       | 102                                     | 0.6          | ●               |
| 40 x 62    | 58              | 43             | 65                    | 800                               | 1329                                | 66.5                 | 152                                       | 98                                      | 0.8          | ●               |
| 45 x 65    | 63              | 48             | 65                    | 900                               | 1605                                | 71.0                 | 142                                       | 98                                      | 0.9          | ●               |
| 48 x 75    | 73              | 58             | 75                    | 1290                              | 2227                                | 92.0                 | 121                                       | 77                                      | 1.5          | ●               |
| 50 x 75    | 73              | 58             | 75                    | 1290                              | 2320                                | 92.0                 | 116                                       | 77                                      | 1.4          | ●               |

● Sizes of clamping elements available from stock.

<sup>1)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with T, F<sub>ax</sub>, P<sub>W</sub> and P<sub>N</sub> decreasing proportionately.

## CLAMPEX® – KTR 131

| d x D [mm] | Dimensions [mm] |                |                | Hexagon nut/ counter hexagon nut |                                   | Transmittable torque or axial force |                      | Surface pressure between clamping element |                                         | Weight [~kg] | Stock programme |
|------------|-----------------|----------------|----------------|----------------------------------|-----------------------------------|-------------------------------------|----------------------|-------------------------------------------|-----------------------------------------|--------------|-----------------|
|            | B               | B <sub>1</sub> | B <sub>2</sub> | Width across flats SW            | T <sub>A</sub> [Nm] <sup>1)</sup> | T [Nm]                              | F <sub>ax</sub> [kN] | Shaft P <sub>W</sub> [N/mm <sup>2</sup> ] | Hub P <sub>N</sub> [N/mm <sup>2</sup> ] |              |                 |
| 5 x 12     | 19              | 15             | 9              | 14                               | 10                                | 10.1                                | 4.0                  | 264                                       | 119                                     | 0.02         | ●               |
| 6 x 12     | 19              | 15             | 9              | 14                               | 10                                | 12.1                                | 4.0                  | 220                                       | 119                                     | 0.02         | ●               |
| 8 x 14     | 22              | 17             | 11             | 17                               | 17                                | 23.4                                | 5.8                  | 179                                       | 121                                     | 0.02         | ●               |
| 10 x 18    | 24              | 19             | 12             | 22                               | 35                                | 48.6                                | 9.7                  | 221                                       | 127                                     | 0.04         | ●               |
| 12 x 20    | 24              | 19             | 12             | 22                               | 44                                | 65.3                                | 10.9                 | 206                                       | 128                                     | 0.04         | ●               |
| 14 x 24    | 28              | 22             | 15             | 27                               | 65                                | 93.0                                | 13.3                 | 178                                       | 107                                     | 0.08         | ●               |
| 15 x 24    | 28              | 22             | 15             | 27                               | 65                                | 99.0                                | 13.3                 | 166                                       | 107                                     | 0.07         | ●               |
| 16 x 24    | 28              | 22             | 15             | 27                               | 65                                | 106                                 | 13.3                 | 156                                       | 107                                     | 0.07         | ●               |
| 18 x 30    | 36              | 27             | 17             | 36                               | 161                               | 223                                 | 24.8                 | 224                                       | 145                                     | 0.2          | ●               |
| 19 x 30    | 36              | 27             | 17             | 36                               | 161                               | 235                                 | 24.8                 | 212                                       | 145                                     | 0.2          | ●               |
| 20 x 30    | 36              | 27             | 17             | 36                               | 161                               | 248                                 | 24.8                 | 201                                       | 145                                     | 0.15         | ●               |
| 22 x 38    | 41              | 30             | 20             | 46                               | 250                               | 349                                 | 31.8                 | 197                                       | 122                                     | 0.35         | ●               |
| 24 x 38    | 41              | 30             | 20             | 46                               | 250                               | 381                                 | 31.8                 | 180                                       | 122                                     | 0.3          | ●               |
| 25 x 38    | 41              | 30             | 20             | 46                               | 250                               | 397                                 | 31.8                 | 173                                       | 122                                     | 0.3          | ●               |
| 30 x 42    | 44              | 33             | 23             | 50                               | 355                               | 605                                 | 40.4                 | 162                                       | 123                                     | 0.35         | ●               |
| 32 x 50    | 51              | 38             | 28             | 55                               | 490                               | 764                                 | 47.8                 | 166                                       | 112                                     | 0.55         | ●               |
| 35 x 50    | 51              | 38             | 28             | 55                               | 490                               | 836                                 | 47.8                 | 151                                       | 112                                     | 0.5          | ●               |

● Sizes of clamping elements available from stock.

<sup>1)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with T, F<sub>ax</sub>, P<sub>W</sub> and P<sub>N</sub> decreasing proportionately.

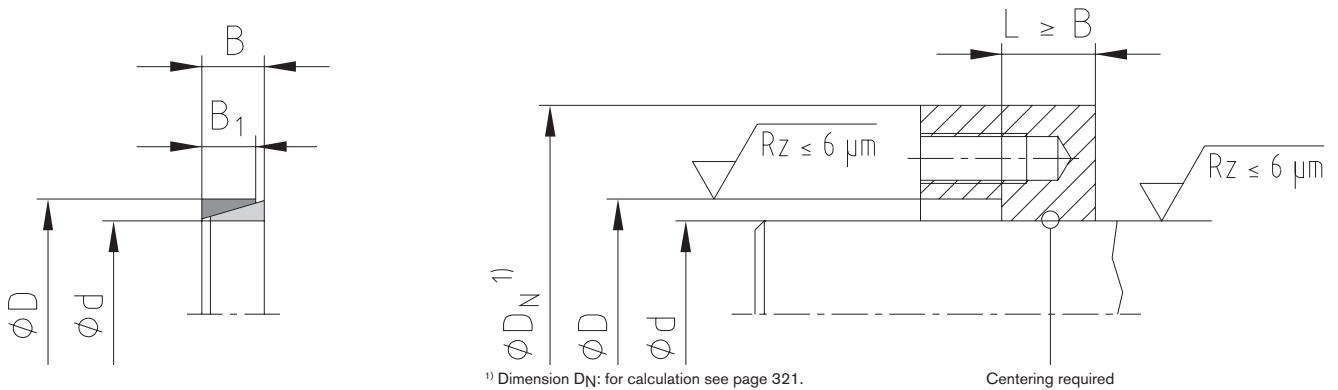
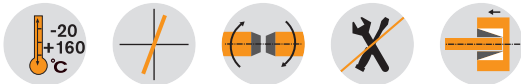
# CLAMPEX® KTR 150

## Clamping elements

Not self-centering clamping element with minimum dimensions



For legend of pictogram refer to flapper on the cover

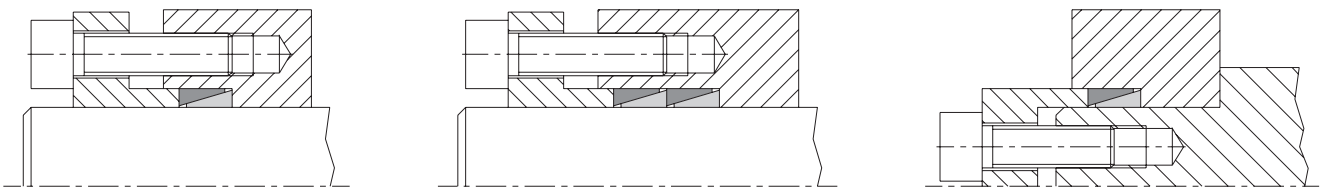


### Tolerances for d and D

$d \leq 38 \text{ mm} = d \text{ h6/D H7}$

$d > 38 \text{ mm} = d \text{ h8/D H8}$

### Example of application of hub type

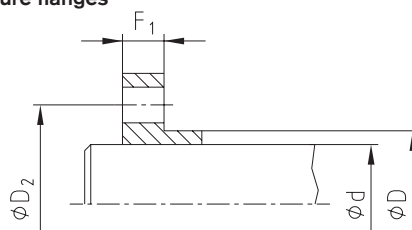
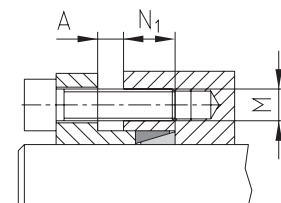


Up to four clamping elements can be installed one after another.

The torques rise as follows:

|                     |                                        |
|---------------------|----------------------------------------|
| 1 clamping element  | $T = T_{\text{catalogue}} \times 1.00$ |
| 2 clamping elements | $T = T_{\text{catalogue}} \times 1.55$ |
| 3 clamping elements | $T = T_{\text{catalogue}} \times 1.85$ |
| 4 clamping elements | $T = T_{\text{catalogue}} \times 2.02$ |

### Pressure flanges



### Recommended dimensions of pressure flanges:

|                                                         |
|---------------------------------------------------------|
| $N_1 [\text{mm}] \geq 1.5 \cdot B$                      |
| $D_2 [\text{mm}] = D + 12 + M$                          |
| $F_1 [\text{mm}] = M \cdot 1.3$ (with screws 8.8)       |
| $F_1 [\text{mm}] = M \cdot 1.8$ (with screws 10.9/12.9) |

Ordering  
example:

|         |                             |   |                             |
|---------|-----------------------------|---|-----------------------------|
| KTR 150 | 60                          | x | 68                          |
| Series  | Size of internal diameter d |   | Size of external diameter D |

| CLAMPEX® – KTR 150 |                 |                |                           |    |    |    |                                                                   |                     |                                                         |                                        |                      |                                                |                               |                 |                         |
|--------------------|-----------------|----------------|---------------------------|----|----|----|-------------------------------------------------------------------|---------------------|---------------------------------------------------------|----------------------------------------|----------------------|------------------------------------------------|-------------------------------|-----------------|-------------------------|
| d x D [mm]         | Dimensions [mm] |                | Distance dimension A [mm] |    |    |    | Clamping force required for<br>clamping screws $\mu_{total}=0.14$ |                     |                                                         | Transmittable torque or<br>axial force |                      | Surface pressure be-<br>tween clamping element |                               | Weight<br>[~kg] | Stock<br>pro-<br>gramme |
|                    | B               | B <sub>1</sub> | Clamping elements         |    |    |    | P <sub>O</sub> [kN]                                               | P <sub>S</sub> [kN] | P <sub>A</sub> =<br>P <sub>O</sub> +P <sub>S</sub> [kN] | T [Nm]                                 | F <sub>ax</sub> [kN] | Shaft P <sub>W</sub><br>[N/mm²]                | Hub P <sub>N</sub><br>[N/mm²] |                 |                         |
|                    |                 |                | 1                         | 2  | 3  | 4  |                                                                   |                     |                                                         |                                        |                      |                                                |                               |                 |                         |
| 6 x 9              | 4.5             | 3.7            | 3                         | 3  | 3  | 4  | 0                                                                 | 3                   | 3                                                       | 2                                      | 0.6                  | 80                                             | 53                            | 0.0015          | ●                       |
| 7 x 10             | 4.5             | 3.7            | 3                         | 3  | 3  | 4  | 0                                                                 | 5                   | 5                                                       | 4                                      | 1                    | 117                                            | 82                            | 0.0014          | ●                       |
| 8 x 11             | 4.5             | 3.7            | 3                         | 3  | 3  | 4  | 0                                                                 | 6                   | 6                                                       | 5                                      | 1                    | 112                                            | 81                            | 0.0015          | ●                       |
| 9 x 12             | 4.5             | 3.7            | 3                         | 3  | 3  | 4  | 8                                                                 | 8                   | 16                                                      | 8                                      | 1                    | 142                                            | 106                           | 0.0017          | ●                       |
| 10 x 13            | 4.5             | 3.7            | 3                         | 3  | 3  | 4  | 7                                                                 | 9                   | 16                                                      | 10                                     | 2                    | 143                                            | 110                           | 0.0018          | ●                       |
| 12 x 15            | 4.5             | 3.7            | 3                         | 3  | 3  | 4  | 7                                                                 | 8                   | 15                                                      | 11                                     | 1                    | 110                                            | 88                            | 0.0022          | ●                       |
| 13 x 16            | 4.5             | 3.7            | 3                         | 3  | 3  | 4  | 6                                                                 | 10                  | 16                                                      | 13                                     | 2                    | 110                                            | 90                            | 0.0023          | ●                       |
| 14 x 18            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 11                                                                | 15                  | 26                                                      | 22                                     | 3                    | 112                                            | 87                            | 0.0049          | ●                       |
| 15 x 19            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 11                                                                | 15                  | 26                                                      | 25                                     | 3                    | 111                                            | 88                            | 0.0053          | ●                       |
| 16 x 20            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 10                                                                | 15                  | 25                                                      | 26                                     | 3                    | 102                                            | 81                            | 0.0055          | ●                       |
| 17 x 21            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 10                                                                | 16                  | 26                                                      | 30                                     | 3                    | 104                                            | 84                            | 0.0058          | ●                       |
| 18 x 22            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 9                                                                 | 17                  | 26                                                      | 33                                     | 3                    | 102                                            | 83                            | 0.0061          | ●                       |
| 19 x 24            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 13                                                                | 19                  | 32                                                      | 40                                     | 4                    | 111                                            | 88                            | 0.0078          | ●                       |
| 20 x 25            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 12                                                                | 20                  | 32                                                      | 44                                     | 4                    | 110                                            | 88                            | 0.0082          | ●                       |
| 22 x 26            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 9                                                                 | 21                  | 30                                                      | 50                                     | 4                    | 103                                            | 87                            | 0.0072          | ●                       |
| 24 x 28            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 8                                                                 | 26                  | 34                                                      | 68                                     | 5                    | 118                                            | 101                           | 0.0079          | ●                       |
| 25 x 30            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 10                                                                | 27                  | 37                                                      | 75                                     | 6                    | 120                                            | 100                           | 0.01            | ●                       |
| 28 x 32            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 7                                                                 | 30                  | 37                                                      | 90                                     | 6                    | 115                                            | 101                           | 0.009           | ●                       |
| 30 x 35            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 8                                                                 | 31                  | 39                                                      | 100                                    | 6                    | 111                                            | 95                            | 0.012           | ●                       |
| 32 x 36            | 6.3             | 5.3            | 3                         | 4  | 4  | 5  | 8                                                                 | 34                  | 42                                                      | 120                                    | 7                    | 117                                            | 104                           | 0.01            | ●                       |
| 35 x 40            | 7               | 6.0            | 3                         | 4  | 4  | 5  | 13                                                                | 42                  | 55                                                      | 160                                    | 9                    | 115                                            | 101                           | 0.02            | ●                       |
| 36 x 42            | 7               | 6.0            | 4                         | 5  | 5  | 6  | 15                                                                | 43                  | 58                                                      | 170                                    | 9                    | 116                                            | 99                            | 0.02            | ●                       |
| 38 x 44            | 7               | 6.0            | 4                         | 5  | 5  | 6  | 14                                                                | 46                  | 60                                                      | 190                                    | 10                   | 116                                            | 100                           | 0.02            | ●                       |
| 40 x 45            | 8               | 6.6            | 4                         | 5  | 5  | 6  | 14                                                                | 53                  | 67                                                      | 230                                    | 11                   | 116                                            | 103                           | 0.02            | ●                       |
| 42 x 48            | 8               | 6.6            | 4                         | 5  | 5  | 6  | 16                                                                | 57                  | 73                                                      | 260                                    | 12                   | 118                                            | 104                           | 0.03            | ●                       |
| 45 x 52            | 10              | 8.6            | 4                         | 5  | 5  | 6  | 26                                                                | 80                  | 106                                                     | 390                                    | 17                   | 119                                            | 103                           | 0.05            | ●                       |
| 48 x 55            | 10              | 8.6            | 4                         | 5  | 5  | 6  | 25                                                                | 82                  | 107                                                     | 430                                    | 17                   | 115                                            | 100                           | 0.05            | ●                       |
| 50 x 57            | 10              | 8.6            | 4                         | 5  | 5  | 6  | 24                                                                | 86                  | 110                                                     | 470                                    | 18                   | 116                                            | 102                           | 0.05            | ●                       |
| 55 x 62            | 10              | 8.6            | 4                         | 5  | 5  | 6  | 22                                                                | 97                  | 119                                                     | 580                                    | 21                   | 118                                            | 105                           | 0.05            | ●                       |
| 56 x 64            | 12              | 10.4           | 4                         | 5  | 5  | 6  | 29                                                                | 122                 | 151                                                     | 740                                    | 26                   | 120                                            | 105                           | 0.07            |                         |
| 60 x 68            | 12              | 10.4           | 4                         | 5  | 6  | 7  | 27                                                                | 129                 | 156                                                     | 840                                    | 28                   | 119                                            | 105                           | 0.07            | ●                       |
| 63 x 71            | 12              | 10.4           | 4                         | 5  | 6  | 7  | 26                                                                | 134                 | 160                                                     | 920                                    | 29                   | 118                                            | 105                           | 0.08            | ●                       |
| 65 x 73            | 12              | 10.4           | 4                         | 5  | 6  | 7  | 25                                                                | 142                 | 167                                                     | 1000                                   | 30                   | 121                                            | 108                           | 0.08            | ●                       |
| 70 x 79            | 14              | 12.2           | 4                         | 5  | 6  | 7  | 31                                                                | 171                 | 202                                                     | 1300                                   | 37                   | 115                                            | 102                           | 0.11            | ●                       |
| 71 x 80            | 14              | 12.2           | 4                         | 5  | 6  | 7  | 31                                                                | 181                 | 212                                                     | 1400                                   | 39                   | 121                                            | 107                           | 0.11            |                         |
| 75 x 84            | 14              | 12.2           | 4                         | 5  | 6  | 7  | 34                                                                | 184                 | 218                                                     | 1500                                   | 40                   | 116                                            | 104                           | 0.12            | ●                       |
| 80 x 91            | 17              | 15.0           | 5                         | 6  | 7  | 8  | 48                                                                | 241                 | 289                                                     | 2100                                   | 52                   | 116                                            | 102                           | 0.12            | ●                       |
| 85 x 96            | 17              | 15.0           | 5                         | 6  | 7  | 8  | 45                                                                | 260                 | 305                                                     | 2400                                   | 56                   | 117                                            | 104                           | 0.2             | ●                       |
| 90 x 101           | 17              | 15.0           | 5                         | 6  | 7  | 8  | 43                                                                | 276                 | 319                                                     | 2700                                   | 60                   | 118                                            | 105                           | 0.2             | ●                       |
| 95 x 106           | 17              | 15.0           | 5                         | 6  | 8  | 9  | 41                                                                | 290                 | 331                                                     | 3000                                   | 63                   | 118                                            | 105                           | 0.22            | ●                       |
| 100 x 114          | 21              | 18.7           | 5                         | 6  | 8  | 9  | 61                                                                | 386                 | 447                                                     | 4200                                   | 84                   | 119                                            | 105                           | 0.4             | ●                       |
| 110 x 124          | 21              | 18.7           | 5                         | 6  | 8  | 9  | 65                                                                | 393                 | 458                                                     | 4700                                   | 85                   | 110                                            | 98                            | 0.4             | ●                       |
| 120 x 134          | 21              | 18.7           | 5                         | 6  | 8  | 9  | 60                                                                | 391                 | 451                                                     | 5100                                   | 85                   | 100                                            | 90                            | 0.5             | ●                       |
| 130 x 148          | 28              | 25.3           | 6                         | 7  | 9  | 11 | 96                                                                | 573                 | 669                                                     | 8100                                   | 124                  | 101                                            | 88                            | 0.85            | ●                       |
| 140 x 158          | 28              | 25.3           | 6                         | 7  | 9  | 11 | 89                                                                | 618                 | 707                                                     | 9400                                   | 134                  | 101                                            | 89                            | 0.91            | ●                       |
| 150 x 168          | 28              | 25.3           | 6                         | 7  | 9  | 11 | 84                                                                | 674                 | 758                                                     | 11000                                  | 146                  | 103                                            | 92                            | 0.97            |                         |
| 160 x 178          | 28              | 25.3           | 6                         | 7  | 9  | 11 | 79                                                                | 833                 | 912                                                     | 14500                                  | 181                  | 119                                            | 107                           | 1.02            |                         |
| 170 x 191          | 33              | 30.0           | 7                         | 8  | 10 | 12 | 118                                                               | 1054                | 1172                                                    | 19500                                  | 229                  | 119                                            | 106                           | 1.5             |                         |
| 180 x 201          | 33              | 30.0           | 7                         | 8  | 10 | 12 | 112                                                               | 1082                | 1194                                                    | 21200                                  | 235                  | 116                                            | 104                           | 1.6             |                         |
| 190 x 211          | 33              | 30.0           | 7                         | 9  | 10 | 12 | 106                                                               | 1166                | 1272                                                    | 24100                                  | 253                  | 118                                            | 106                           | 1.7             |                         |
| 200 x 224          | 38              | 34.5           | 7                         | 9  | 11 | 13 | 133                                                               | 1425                | 1558                                                    | 31000                                  | 310                  | 119                                            | 106                           | 2.3             |                         |
| 210 x 234          | 38              | 34.5           | 7                         | 9  | 11 | 13 | 127                                                               | 1532                | 1659                                                    | 35000                                  | 333                  | 122                                            | 110                           | 2.5             |                         |
| 220 x 244          | 38              | 34.5           | 7                         | 9  | 11 | 13 | 122                                                               | 1587                | 1709                                                    | 38000                                  | 345                  | 121                                            | 109                           | 2.5             |                         |
| 230 x 257          | 43              | 39.5           | 7                         | 9  | 12 | 14 | 165                                                               | 1579                | 1744                                                    | 39500                                  | 343                  | 100                                            | 90                            | 3.4             |                         |
| 240 x 267          | 43              | 39.5           | 7                         | 9  | 12 | 14 | 158                                                               | 1801                | 1959                                                    | 47000                                  | 391                  | 110                                            | 99                            | 3.5             |                         |
| 250 x 280          | 48              | 44.0           | 8                         | 10 | 13 | 16 | 188                                                               | 1912                | 2100                                                    | 52000                                  | 416                  | 100                                            | 90                            | 4.7             |                         |
| 260 x 290          | 48              | 44.0           | 8                         | 10 | 13 | 16 | 181                                                               | 1997                | 2178                                                    | 56500                                  | 434                  | 101                                            | 90                            | 4.8             |                         |
| 270 x 300          | 48              | 44.0           | 8                         | 10 | 13 | 16 | 174                                                               | 2077                | 2251                                                    | 61000                                  | 451                  | 101                                            | 91                            | 4.9             |                         |
| 280 x 313          | 53              | 49.0           | 9                         | 11 | 14 | 17 | 205                                                               | 2381                | 2586                                                    | 72500                                  | 517                  | 100                                            | 90                            | 6.3             |                         |
| 290 x 323          | 53              | 49.0           | 9                         | 11 | 14 | 17 | 221                                                               | 2457                | 2678                                                    | 77500                                  | 534                  | 100                                            | 90                            | 6.5             |                         |
| 300 x 333          | 53              | 49.0           | 9                         | 11 | 14 | 17 | 214                                                               | 2544                | 2758                                                    | 83000                                  | 553                  | 100                                            | 90                            | 6.7             |                         |
| 320 x 360          | 65              | 59.0           | 10                        | 15 | 20 | 25 | 291                                                               | 3275                | 3566                                                    | 114000                                 | 712                  | 100                                            | 89                            | 10.9            |                         |
| 340 x 380          | 65              | 59.0           | 10                        | 15 | 20 | 25 | 275                                                               | 3474                | 3749                                                    | 128500                                 | 755                  | 100                                            | 89                            | 11.5            |                         |
| 360 x 400          | 65              | 59.0           | 10                        | 15 | 20 | 25 | 261                                                               | 3677                | 3938                                                    | 144000                                 | 800                  | 100                                            | 90                            | 12.2            |                         |
| 380 x 420          | 65              | 59.0           | 10                        | 15 | 20 | 25 | 269                                                               | 3870                | 4139                                                    | 160000                                 | 842                  | 100                                            | 90                            | 12.8            |                         |
| 400 x 440          | 65              | 59.0           | 10                        | 15 | 20 | 25 | 256                                                               | 4091                | 4347                                                    | 178000                                 | 890                  | 100                                            | 91                            | 13.5            |                         |
| 420 x 460          | 65              | 59.0           | 10                        | 15 | 20 | 25 | 244                                                               | 4290                | 4534                                                    | 196000                                 | 933                  | 100                                            | 91                            | 14.1            |                         |
| 440 x 480          | 65              | 59.0           | 10                        | 15 | 20 | 25 | 234                                                               | 4492                | 4726                                                    | 215000                                 | 977                  | 100                                            | 92                            | 14.7            |                         |

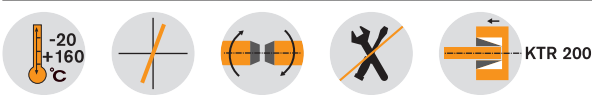
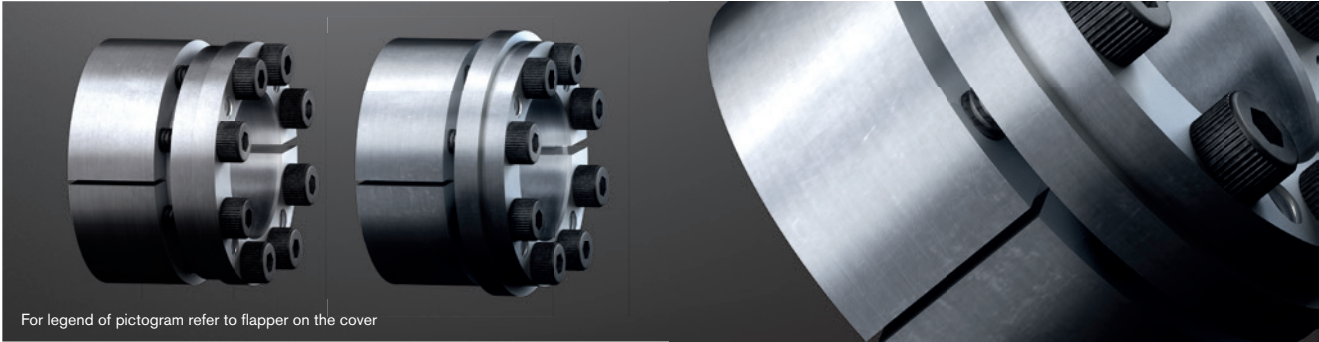
● Sizes of clamping elements available from stock.  
Other sizes on request.

P<sub>A</sub> = Total force  
P<sub>O</sub> = Setting force  
P<sub>S</sub> = Clamping force

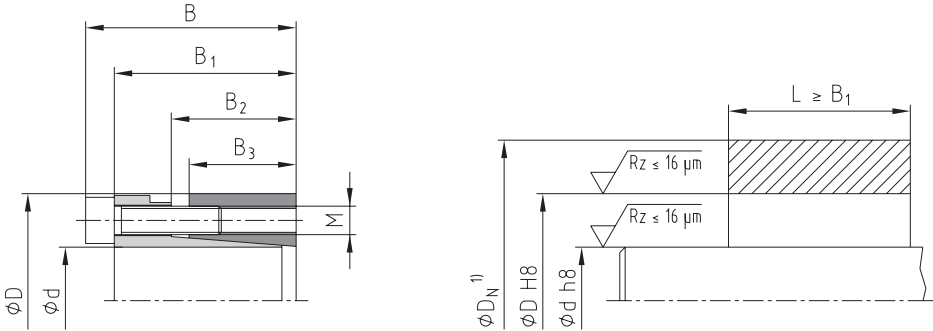
# CLAMPEX® KTR 200 and KTR 201

## Clamping elements

Self-centering clamping elements with a wide range of applications

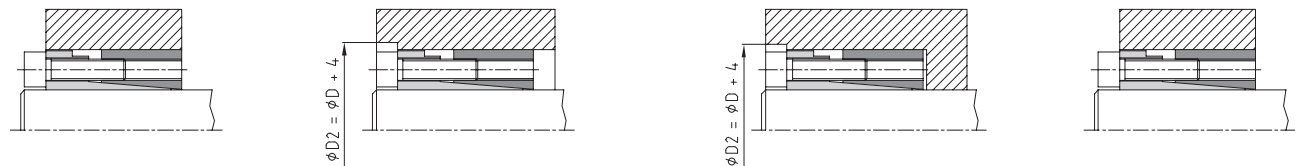


KTR 200

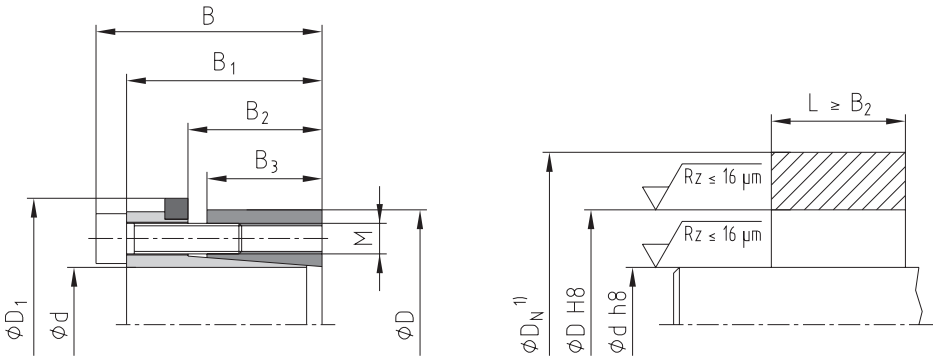


<sup>1)</sup> Dimension  $D_N$ : for calculation see page 305.

Example of application of hub type

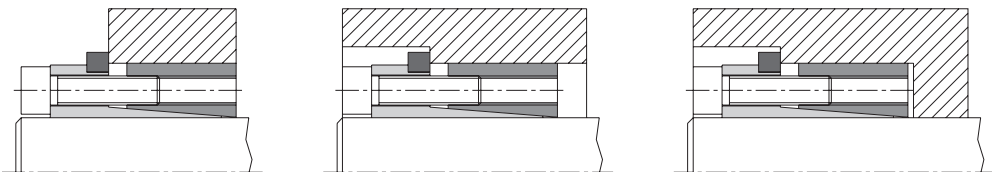


KTR 201



<sup>1)</sup> Dimension  $D_N$ : for calculation see page 305.

Example of application of hub type



|                          |         |                             |   |                             |
|--------------------------|---------|-----------------------------|---|-----------------------------|
| <b>Ordering example:</b> | KTR 200 | 40                          | x | 65                          |
|                          | Series  | Size of internal diameter d |   | Size of external diameter D |

## CLAMPEX® – KTR 200 and KTR 201

| KTR 200       |                 |                |                |                |                |                                                              |        |               |                                                     |           | KTR 201                                   |                                                 |                                                 |                                               |              |                 |                                           |                                                 |                                                 |                                               |              |                 |
|---------------|-----------------|----------------|----------------|----------------|----------------|--------------------------------------------------------------|--------|---------------|-----------------------------------------------------|-----------|-------------------------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------------------|--------------|-----------------|-------------------------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------------------|--------------|-----------------|
| d x D<br>[mm] | Dimensions [mm] |                |                |                |                | Clamping screws<br>DIN EN ISO 4762 - 12.9 $\mu_{total}=0.14$ |        |               |                                                     |           | Transmittable<br>torque or axial<br>force |                                                 | Surface pressure<br>between clamping<br>element |                                               | Weight [~kg] | Stock programme | Transmittable<br>torque or axial<br>force |                                                 | Surface pressure<br>between clamping<br>element |                                               | Weight [~kg] | Stock programme |
|               |                 |                |                |                |                |                                                              |        |               |                                                     |           | T<br>[Nm]                                 | F <sub>ax</sub><br>[kN]                         | Shaft<br>P <sub>W</sub><br>[N/mm <sup>2</sup> ] | Hub<br>P <sub>N</sub><br>[N/mm <sup>2</sup> ] |              |                 | T<br>[Nm]                                 | F <sub>ax</sub><br>[kN]                         | Shaft<br>P <sub>W</sub><br>[N/mm <sup>2</sup> ] | Hub<br>P <sub>N</sub><br>[N/mm <sup>2</sup> ] |              |                 |
|               | B               | B <sub>1</sub> | B <sub>2</sub> | B <sub>3</sub> | D <sub>1</sub> | M                                                            | Length | z =<br>number | T <sub>A</sub> [Nm] <sup>1)</sup><br>KTR 200KTR 201 | T<br>[Nm] | F <sub>ax</sub><br>[kN]                   | Shaft<br>P <sub>W</sub><br>[N/mm <sup>2</sup> ] | Hub<br>P <sub>N</sub><br>[N/mm <sup>2</sup> ]   | T<br>[Nm]                                     |              |                 | F <sub>ax</sub><br>[kN]                   | Shaft<br>P <sub>W</sub><br>[N/mm <sup>2</sup> ] | Hub<br>P <sub>N</sub><br>[N/mm <sup>2</sup> ]   |                                               |              |                 |
| 20 x 47       | 48              | 42             | 31             | 26             | 53             | M6                                                           | 25     | 6             | 17                                                  | 17        | 530                                       | 53                                              | 270                                             | 115                                           | 0.4          | ●               | 320                                       | 32                                              | 163                                             | 69                                            | 0.4          | ●               |
| 22 x 47       | 48              | 42             | 31             | 26             | 53             | M6                                                           | 25     | 6             | 17                                                  | 17        | 580                                       | 53                                              | 245                                             | 114                                           | 0.4          | ●               | 360                                       | 33                                              | 152                                             | 71                                            | 0.4          | ●               |
| 24 x 50       | 48              | 42             | 31             | 26             | 56             | M6                                                           | 25     | 6             | 17                                                  | 17        | 630                                       | 53                                              | 223                                             | 107                                           | 0.4          | ●               | 390                                       | 33                                              | 138                                             | 66                                            | 0.4          | ●               |
| 25 x 50       | 48              | 42             | 31             | 26             | 56             | M6                                                           | 25     | 6             | 17                                                  | 17        | 660                                       | 53                                              | 215                                             | 108                                           | 0.4          | ●               | 400                                       | 32                                              | 131                                             | 65                                            | 0.4          | ●               |
| 28 x 55       | 48              | 42             | 31             | 26             | 61             | M6                                                           | 25     | 6             | 17                                                  | 17        | 740                                       | 53                                              | 193                                             | 98                                            | 0.5          | ●               | 450                                       | 32                                              | 117                                             | 60                                            | 0.5          | ●               |
| 30 x 55       | 48              | 42             | 31             | 26             | 61             | M6                                                           | 25     | 6             | 17                                                  | 17        | 790                                       | 53                                              | 179                                             | 98                                            | 0.5          | ●               | 490                                       | 33                                              | 111                                             | 61                                            | 0.5          | ●               |
| 32 x 60       | 48              | 42             | 31             | 26             | 66             | M6                                                           | 25     | 8             | 17                                                  | 17        | 1150                                      | 72                                              | 229                                             | 122                                           | 0.6          | ●               | 690                                       | 43                                              | 137                                             | 73                                            | 0.6          | ●               |
| 35 x 60       | 48              | 42             | 31             | 26             | 66             | M6                                                           | 25     | 8             | 17                                                  | 17        | 1300                                      | 74                                              | 217                                             | 126                                           | 0.5          | ●               | 750                                       | 43                                              | 125                                             | 73                                            | 0.5          | ●               |
| 38 x 65       | 48              | 42             | 31             | 26             | 71             | M6                                                           | 25     | 8             | 17                                                  | 17        | 1300                                      | 68                                              | 184                                             | 107                                           | 0.6          | ●               | 820                                       | 43                                              | 116                                             | 68                                            | 0.6          | ●               |
| 40 x 65       | 48              | 42             | 31             | 26             | 71             | M6                                                           | 25     | 8             | 17                                                  | 17        | 1400                                      | 70                                              | 179                                             | 110                                           | 0.6          | ●               | 860                                       | 43                                              | 110                                             | 67                                            | 0.6          | ●               |
| 42 x 75       | 59              | 51             | 35             | 30             | 81             | M8                                                           | 30     | 6             | 41                                                  | 41        | 2000                                      | 95                                              | 200                                             | 112                                           | 1.0          | ●               | 1300                                      | 62                                              | 130                                             | 73                                            | 1.0          | ●               |
| 45 x 75       | 59              | 51             | 35             | 30             | 81             | M8                                                           | 30     | 6             | 41                                                  | 41        | 2200                                      | 98                                              | 192                                             | 115                                           | 1.0          | ●               | 1400                                      | 62                                              | 122                                             | 73                                            | 1.0          | ●               |
| 48 x 80       | 59              | 51             | 35             | 30             | 86             | M8                                                           | 30     | 8             | 41                                                  | 41        | 3200                                      | 133                                             | 246                                             | 147                                           | 1.1          | ●               | 1900                                      | 79                                              | 146                                             | 87                                            | 1.1          | ●               |
| 50 x 80       | 59              | 51             | 35             | 30             | 86             | M8                                                           | 30     | 8             | 41                                                  | 41        | 3300                                      | 132                                             | 233                                             | 146                                           | 1.1          | ●               | 2000                                      | 80                                              | 141                                             | 88                                            | 1.1          | ●               |
| 55 x 85       | 59              | 51             | 35             | 30             | 91             | M8                                                           | 30     | 8             | 41                                                  | 41        | 3600                                      | 131                                             | 210                                             | 136                                           | 1.2          | ●               | 2200                                      | 80                                              | 129                                             | 83                                            | 1.2          | ●               |
| 60 x 90       | 59              | 51             | 35             | 30             | 96             | M8                                                           | 30     | 8             | 41                                                  | 41        | 3900                                      | 130                                             | 192                                             | 128                                           | 1.2          | ●               | 2400                                      | 80                                              | 118                                             | 79                                            | 1.2          | ●               |
| 65 x 95       | 59              | 51             | 35             | 30             | 101            | M8                                                           | 30     | 8             | 41                                                  | 41        | 4300                                      | 132                                             | 180                                             | 123                                           | 1.3          | ●               | 2600                                      | 80                                              | 109                                             | 74                                            | 1.3          | ●               |
| 70 x 110      | 71              | 61             | 46             | 40             | 119            | M10                                                          | 30     | 8             | 83                                                  | 83        | 7500                                      | 214                                             | 203                                             | 129                                           | 2.2          | ●               | 4600                                      | 131                                             | 125                                             | 79                                            | 2.3          | ●               |
| 75 x 115      | 71              | 61             | 46             | 40             | 124            | M10                                                          | 30     | 8             | 83                                                  | 83        | 8000                                      | 213                                             | 189                                             | 123                                           | 2.3          | ●               | 5000                                      | 133                                             | 118                                             | 77                                            | 2.4          | ●               |
| 80 x 120      | 71              | 61             | 46             | 40             | 129            | M10                                                          | 30     | 8             | 83                                                  | 83        | 8500                                      | 213                                             | 176                                             | 117                                           | 2.4          | ●               | 5200                                      | 130                                             | 108                                             | 72                                            | 2.6          | ●               |
| 85 x 125      | 71              | 61             | 46             | 40             | 134            | M10                                                          | 30     | 10            | 83                                                  | 83        | 11400                                     | 268                                             | 209                                             | 142                                           | 2.6          | ●               | 7000                                      | 165                                             | 128                                             | 87                                            | 2.7          | ●               |
| 90 x 130      | 71              | 61             | 46             | 40             | 139            | M10                                                          | 30     | 10            | 83                                                  | 83        | 12000                                     | 267                                             | 196                                             | 136                                           | 2.7          | ●               | 7400                                      | 164                                             | 121                                             | 84                                            | 2.8          | ●               |
| 95 x 135      | 71              | 61             | 46             | 40             | 144            | M10                                                          | 30     | 10            | 83                                                  | 83        | 12600                                     | 265                                             | 185                                             | 130                                           | 2.8          | ●               | 7800                                      | 164                                             | 115                                             | 81                                            | 2.9          | ●               |
| 100 x 145     | 80              | 68             | 52             | 45             | 155            | M12                                                          | 35     | 8             | 145                                                 | 145       | 15000                                     | 300                                             | 177                                             | 122                                           | 3.9          | ●               | 9800                                      | 196                                             | 116                                             | 80                                            | 4.1          | ●               |
| 110 x 155     | 80              | 68             | 52             | 45             | 165            | M12                                                          | 35     | 8             | 145                                                 | 145       | 16500                                     | 300                                             | 161                                             | 114                                           | 4.2          | ●               | 10700                                     | 195                                             | 104                                             | 74                                            | 4.4          | ●               |
| 120 x 165     | 80              | 68             | 52             | 45             | 175            | M12                                                          | 35     | 10            | 145                                                 | 145       | 22500                                     | 375                                             | 184                                             | 134                                           | 4.5          | ●               | 14600                                     | 243                                             | 120                                             | 87                                            | 4.7          | ●               |
| 130 x 180     | 80              | 68             | 52             | 45             | 188            | M12                                                          | 35     | 12            | 145                                                 | 145       | 29000                                     | 446                                             | 202                                             | 146                                           | 5.5          | ●               | 19000                                     | 292                                             | 133                                             | 96                                            | 5.7          | ●               |
| 140 x 190     | 90              | 76             | 58             | 50             | 199            | M14                                                          | 40     | 10            | 210                                                 | 230       | 32000                                     | 457                                             | 173                                             | 128                                           | 6.6          | ●               | 23000                                     | 329                                             | 125                                             | 92                                            | 6.9          | ●               |
| 150 x 200     | 90              | 76             | 58             | 50             | 209            | M14                                                          | 40     | 12            | 210                                                 | 230       | 41000                                     | 547                                             | 193                                             | 145                                           | 6.9          | ●               | 30000                                     | 400                                             | 141                                             | 106                                           | 7.2          | ●               |
| 160 x 210     | 90              | 76             | 58             | 50             | 219            | M14                                                          | 40     | 12            | 210                                                 | 230       | 44000                                     | 550                                             | 182                                             | 139                                           | 7.4          | ●               | 32000                                     | 400                                             | 133                                             | 101                                           | 7.8          | ●               |
| 170 x 225     | 90              | 76             | 58             | 50             | 234            | M14                                                          | 40     | 14            | 210                                                 | 230       | 54500                                     | 641                                             | 200                                             | 151                                           | 8.6          | ●               | 39000                                     | 459                                             | 143                                             | 108                                           | 9.0          | ●               |
| 180 x 235     | 90              | 76             | 58             | 50             | 244            | M14                                                          | 40     | 14            | 210                                                 | 230       | 57500                                     | 639                                             | 188                                             | 144                                           | 9.1          | ●               | 41000                                     | 456                                             | 134                                             | 103                                           | 9.5          | ●               |
| 190 x 250     | 90              | 76             | 58             | 50             | 259            | M14                                                          | 40     | 15            | 210                                                 | 230       | 65000                                     | 684                                             | 191                                             | 145                                           | 10.6         | ●               | 46400                                     | 488                                             | 136                                             | 104                                           | 11.1         | ●               |
| 200 x 260     | 90              | 76             | 58             | 50             | 269            | M14                                                          | 40     | 15            | 210                                                 | 230       | 68000                                     | 680                                             | 180                                             | 139                                           | 11.2         | ●               | 48800                                     | 488                                             | 129                                             | 100                                           | 11.7         | ●               |

● Sizes of clamping elements available from stock.

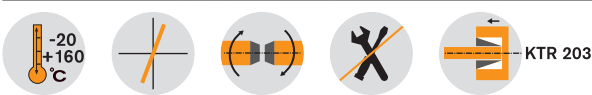
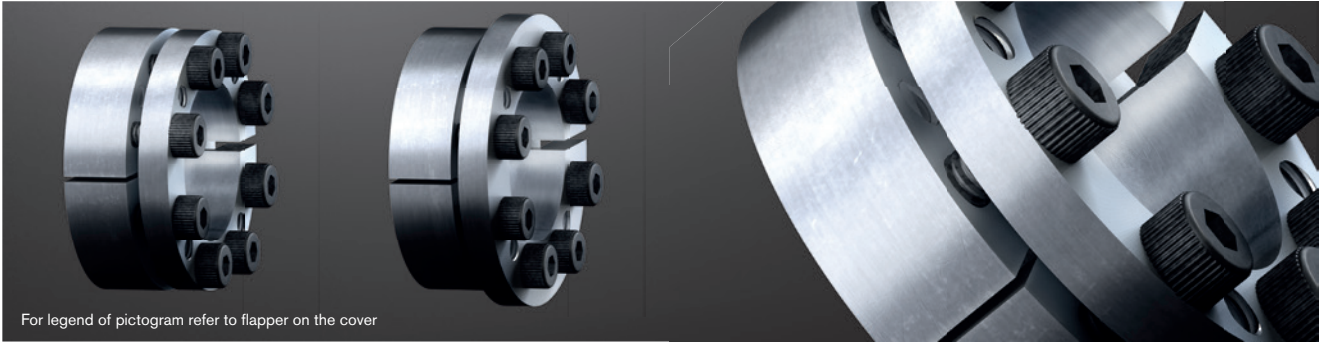
<sup>1)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with T, F<sub>ax</sub>, P<sub>W</sub> and P<sub>N</sub> decreasing proportionately.



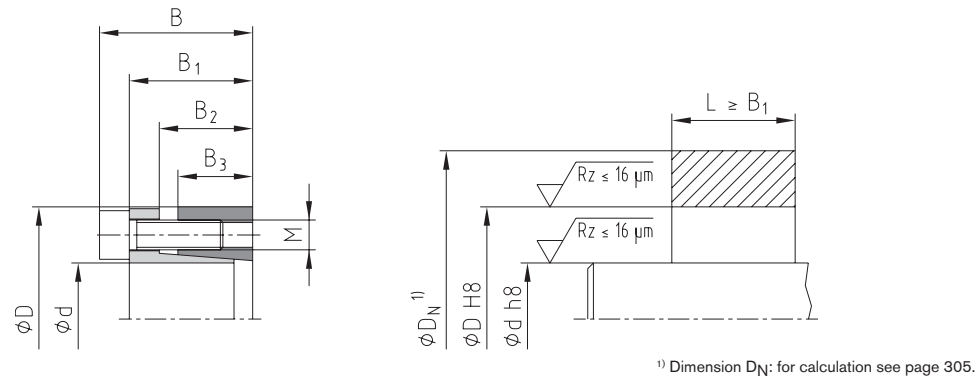
# CLAMPEX® KTR 203 and KTR 206

## Clamping elements

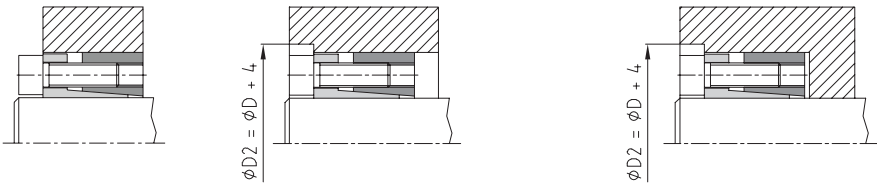
Self-centering clamping elements as a compact alternative to KTR 200/201



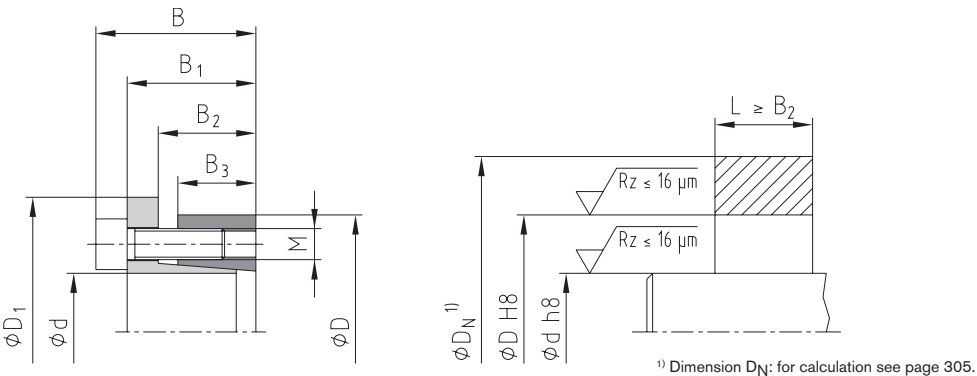
KTR 203



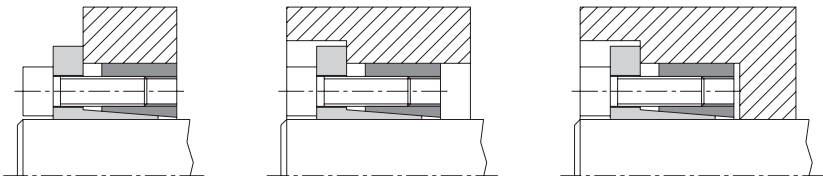
Example of application of hub type



KTR 206



Example of application of hub type



|                   |         |                             |   |                             |
|-------------------|---------|-----------------------------|---|-----------------------------|
| Ordering example: | KTR 203 | 40                          | x | 65                          |
|                   | Series  | Size of internal diameter d |   | Size of external diameter D |

## CLAMPEX® – KTR 203 and KTR 206

| d x D<br>[mm] | Dimensions [mm] |                         |                                    |                                  |                | Clamping screws<br>DIN EN ISO 4762 - 12.9<br>μtotal=0.14 |                                    |                                  |                                   |     | KTR 203                                   |                         |                                                 |                                  |              |                         | KTR 206                                   |                                  |                                                 |     |              |                 |
|---------------|-----------------|-------------------------|------------------------------------|----------------------------------|----------------|----------------------------------------------------------|------------------------------------|----------------------------------|-----------------------------------|-----|-------------------------------------------|-------------------------|-------------------------------------------------|----------------------------------|--------------|-------------------------|-------------------------------------------|----------------------------------|-------------------------------------------------|-----|--------------|-----------------|
|               |                 |                         |                                    |                                  |                |                                                          |                                    |                                  |                                   |     | Transmittable<br>torque or axial<br>force |                         | Surface pressure<br>between clamping<br>element |                                  | Weight [-kg] | Stock programme         | Transmittable<br>torque or axial<br>force |                                  | Surface pressure<br>between clamping<br>element |     | Weight [-kg] | Stock programme |
|               | T<br>[Nm]       | F <sub>ax</sub><br>[kN] | Shaft<br>P <sub>W</sub><br>[N/mm²] | Hub<br>P <sub>N</sub><br>[N/mm²] | T<br>[Nm]      | F <sub>ax</sub><br>[kN]                                  | Shaft<br>P <sub>W</sub><br>[N/mm²] | Hub<br>P <sub>N</sub><br>[N/mm²] |                                   |     |                                           |                         |                                                 |                                  |              |                         |                                           |                                  |                                                 |     |              |                 |
|               | B               | B <sub>1</sub>          | B <sub>2</sub>                     | B <sub>3</sub>                   | D <sub>1</sub> | M                                                        | Length                             | z =<br>num-<br>ber               | T <sub>A</sub> [Nm] <sup>1)</sup> |     | T<br>[Nm]                                 | F <sub>ax</sub><br>[kN] | Shaft<br>P <sub>W</sub><br>[N/mm²]              | Hub<br>P <sub>N</sub><br>[N/mm²] | T<br>[Nm]    | F <sub>ax</sub><br>[kN] | Shaft<br>P <sub>W</sub><br>[N/mm²]        | Hub<br>P <sub>N</sub><br>[N/mm²] |                                                 |     |              |                 |
| 18 x 47       | 34              | 28                      | 22                                 | 17                               | 53             | M6                                                       | 20                                 | 6                                | 14                                | 17  | 370                                       | 41                      | 356                                             | 136                              | 0.3          |                         | 290                                       | 32                               | 279                                             | 107 | 0.3          |                 |
| 19 x 47       | 34              | 28                      | 22                                 | 17                               | 53             | M6                                                       | 20                                 | 6                                | 14                                | 17  | 390                                       | 41                      | 337                                             | 136                              | 0.3          |                         | 300                                       | 32                               | 259                                             | 105 | 0.3          |                 |
| 20 x 47       | 34              | 28                      | 22                                 | 17                               | 53             | M6                                                       | 20                                 | 6                                | 14                                | 17  | 410                                       | 41                      | 320                                             | 136                              | 0.3          | ●                       | 320                                       | 32                               | 250                                             | 106 | 0.3          | ●               |
| 22 x 47       | 34              | 28                      | 22                                 | 17                               | 53             | M6                                                       | 20                                 | 6                                | 14                                | 17  | 450                                       | 41                      | 290                                             | 136                              | 0.3          | ●                       | 350                                       | 32                               | 226                                             | 106 | 0.3          | ●               |
| 24 x 50       | 34              | 28                      | 22                                 | 17                               | 56             | M6                                                       | 20                                 | 6                                | 14                                | 17  | 490                                       | 41                      | 265                                             | 127                              | 0.3          | ●                       | 390                                       | 33                               | 211                                             | 101 | 0.3          | ●               |
| 25 x 50       | 34              | 28                      | 22                                 | 17                               | 56             | M6                                                       | 20                                 | 6                                | 14                                | 17  | 510                                       | 41                      | 255                                             | 127                              | 0.3          | ●                       | 400                                       | 32                               | 200                                             | 100 | 0.3          | ●               |
| 28 x 55       | 34              | 28                      | 22                                 | 17                               | 61.4           | M6                                                       | 20                                 | 6                                | 14                                | 17  | 570                                       | 41                      | 227                                             | 116                              | 0.3          | ●                       | 450                                       | 32                               | 179                                             | 91  | 0.4          | ●               |
| 30 x 55       | 34              | 28                      | 22                                 | 17                               | 61.4           | M6                                                       | 20                                 | 6                                | 14                                | 17  | 610                                       | 41                      | 212                                             | 115                              | 0.3          | ●                       | 490                                       | 33                               | 170                                             | 93  | 0.3          | ●               |
| 32 x 60       | 34              | 28                      | 22                                 | 17.5                             | 67             | M6                                                       | 20                                 | 8                                | 14                                | 17  | 880                                       | 55                      | 261                                             | 139                              | 0.4          | ●                       | 700                                       | 44                               | 207                                             | 111 | 0.3          | ●               |
| 35 x 60       | 34              | 28                      | 22                                 | 17.5                             | 67             | M6                                                       | 20                                 | 8                                | 14                                | 17  | 960                                       | 55                      | 238                                             | 139                              | 0.3          | ●                       | 760                                       | 43                               | 188                                             | 110 | 0.4          | ●               |
| 38 x 65       | 34              | 28                      | 22                                 | 17.5                             | 72             | M6                                                       | 20                                 | 8                                | 14                                | 17  | 1000                                      | 53                      | 210                                             | 123                              | 0.4          | ●                       | 820                                       | 43                               | 172                                             | 101 | 0.5          | ●               |
| 40 x 65       | 34              | 28                      | 22                                 | 17.5                             | 72             | M6                                                       | 20                                 | 8                                | 14                                | 17  | 1100                                      | 55                      | 208                                             | 128                              | 0.4          | ●                       | 870                                       | 44                               | 165                                             | 101 | 0.4          | ●               |
| 42 x 75       | 41              | 33                      | 25                                 | 20                               | 84             | M8                                                       | 25                                 | 8                                | 35                                | 41  | 2200                                      | 105                     | 331                                             | 185                              | 0.6          | ●                       | 1700                                      | 81                               | 256                                             | 143 | 0.7          | ●               |
| 45 x 75       | 41              | 33                      | 25                                 | 20                               | 84             | M8                                                       | 25                                 | 8                                | 35                                | 41  | 2400                                      | 107                     | 314                                             | 189                              | 0.6          | ●                       | 1800                                      | 80                               | 236                                             | 141 | 0.7          | ●               |
| 48 x 80       | 41              | 33.5                    | 24                                 | 20                               | 89             | M8                                                       | 25                                 | 8                                | 35                                | 41  | 2500                                      | 104                     | 288                                             | 173                              | 0.7          | ●                       | 1900                                      | 79                               | 219                                             | 131 | 0.8          | ●               |
| 50 x 80       | 41              | 33.5                    | 24                                 | 20                               | 89             | M8                                                       | 25                                 | 8                                | 35                                | 41  | 2600                                      | 104                     | 276                                             | 172                              | 0.7          | ●                       | 2000                                      | 80                               | 212                                             | 133 | 0.8          | ●               |
| 55 x 85       | 41              | 33.5                    | 24                                 | 20                               | 94             | M8                                                       | 25                                 | 8                                | 35                                | 41  | 2900                                      | 105                     | 254                                             | 165                              | 0.7          | ●                       | 2200                                      | 80                               | 193                                             | 125 | 0.9          | ●               |
| 60 x 90       | 41              | 33.5                    | 24                                 | 20                               | 99             | M8                                                       | 25                                 | 8                                | 35                                | 41  | 3100                                      | 103                     | 228                                             | 152                              | 0.8          | ●                       | 2400                                      | 80                               | 177                                             | 118 | 0.9          | ●               |
| 65 x 95       | 41              | 33.5                    | 24                                 | 20                               | 104            | M8                                                       | 25                                 | 8                                | 35                                | 41  | 3400                                      | 105                     | 213                                             | 146                              | 0.8          | ●                       | 2600                                      | 80                               | 163                                             | 112 | 0.9          | ●               |
| 70 x 110      | 50              | 40                      | 29                                 | 24                               | 119            | M10                                                      | 30                                 | 8                                | 70                                | 83  | 6000                                      | 171                     | 271                                             | 172                              | 1.5          | ●                       | 4600                                      | 131                              | 208                                             | 132 | 1.6          | ●               |
| 75 x 115      | 50              | 40                      | 29                                 | 24                               | 124            | M10                                                      | 30                                 | 8                                | 70                                | 83  | 6400                                      | 171                     | 252                                             | 164                              | 1.6          | ●                       | 5000                                      | 133                              | 196                                             | 128 | 1.7          | ●               |
| 80 x 120      | 50              | 40                      | 29                                 | 24                               | 129            | M10                                                      | 30                                 | 8                                | 70                                | 83  | 6800                                      | 170                     | 235                                             | 157                              | 1.7          | ●                       | 5300                                      | 133                              | 183                                             | 122 | 1.9          | ●               |
| 85 x 125      | 50              | 40                      | 29                                 | 24                               | 134            | M10                                                      | 30                                 | 10                               | 70                                | 83  | 9000                                      | 212                     | 275                                             | 187                              | 1.8          | ●                       | 7000                                      | 165                              | 214                                             | 146 | 2.0          | ●               |
| 90 x 130      | 50              | 40                      | 29                                 | 24                               | 139            | M10                                                      | 30                                 | 10                               | 70                                | 83  | 9600                                      | 213                     | 262                                             | 181                              | 1.9          | ●                       | 7400                                      | 164                              | 202                                             | 140 | 2.0          | ●               |
| 95 x 135      | 50              | 40                      | 29                                 | 24                               | 144            | M10                                                      | 30                                 | 10                               | 70                                | 83  | 10200                                     | 215                     | 250                                             | 176                              | 2.0          | ●                       | 7800                                      | 164                              | 191                                             | 134 | 2.3          | ●               |
| 100 x 145     | 56              | 44                      | 31                                 | 25.5                             | 154            | M12                                                      | 30                                 | 8                                | 115                               | 145 | 12000                                     | 240                     | 250                                             | 172                              | 2.6          | ●                       | 9700                                      | 194                              | 202                                             | 139 | 2.8          | ●               |
| 110 x 155     | 56              | 44                      | 31                                 | 25.5                             | 164            | M12                                                      | 30                                 | 8                                | 115                               | 145 | 13000                                     | 236                     | 224                                             | 159                              | 2.8          | ●                       | 10700                                     | 195                              | 184                                             | 131 | 3.1          | ●               |
| 120 x 165     | 56              | 44                      | 31                                 | 26                               | 174            | M12                                                      | 30                                 | 9                                | 115                               | 145 | 16000                                     | 267                     | 227                                             | 165                              | 3.6          | ●                       | 13100                                     | 218                              | 186                                             | 135 | 3.2          | ●               |
| 130 x 180     | 64              | 52                      | 39                                 | 34                               | 189            | M12                                                      | 30                                 | 12                               | 115                               | 145 | 23000                                     | 354                     | 212                                             | 153                              | 4.4          | ●                       | 19000                                     | 292                              | 175                                             | 127 | 4.6          | ●               |
| 140 x 190     | 68              | 54                      | 39                                 | 34                               | 199            | M14                                                      | 40                                 | 9                                | 185                               | 230 | 25000                                     | 357                     | 199                                             | 147                              | 4.9          | ●                       | 20500                                     | 293                              | 163                                             | 120 | 5.0          | ●               |
| 150 x 200     | 68              | 54                      | 39                                 | 34                               | 209            | M14                                                      | 40                                 | 10                               | 185                               | 230 | 30000                                     | 400                     | 208                                             | 156                              | 5.2          | ●                       | 24500                                     | 327                              | 170                                             | 127 | 5.2          | ●               |
| 160 x 210     | 68              | 54                      | 39                                 | 34                               | 219            | M14                                                      | 40                                 | 12                               | 185                               | 230 | 38800                                     | 485                     | 236                                             | 180                              | 5.6          | ●                       | 31300                                     | 391                              | 191                                             | 145 | 5.6          | ●               |
| 170 x 225     | 78              | 64                      | 49                                 | 44                               | 234            | M14                                                      | 40                                 | 12                               | 185                               | 230 | 41300                                     | 486                     | 172                                             | 130                              | 6.9          | ●                       | 33200                                     | 391                              | 139                                             | 105 | 6.5          | ●               |
| 180 x 235     | 78              | 64                      | 49                                 | 44                               | 244            | M14                                                      | 40                                 | 12                               | 185                               | 230 | 43700                                     | 486                     | 163                                             | 125                              | 8.5          | ●                       | 35000                                     | 389                              | 130                                             | 100 | 8.5          | ●               |
| 190 x 250     | 78              | 64                      | 49                                 | 43.5                             | 259            | M14                                                      | 40                                 | 15                               | 185                               | 230 | 57700                                     | 607                     | 195                                             | 148                              | 9.0          | ●                       | 46500                                     | 489                              | 157                                             | 119 | 9.0          | ●               |
| 200 x 260     | 78              | 64                      | 49                                 | 43.5                             | 269            | M14                                                      | 40                                 | 15                               | 185                               | 230 | 60700                                     | 607                     | 185                                             | 142                              | 9.6          | ●                       | 49000                                     | 490                              | 149                                             | 115 | 9.6          | ●               |
| 220 x 285     | 88              | 72                      | 57                                 | 50                               | 294            | M16                                                      | 40                                 | 12                               | 290                               | 360 | 77300                                     | 703                     | 169                                             | 131                              | 13.4         | ●                       | 57100                                     | 519                              | 125                                             | 97  | 14.0         | ●               |
| 240 x 305     | 88              | 72                      | 57                                 | 50                               | 314            | M16                                                      | 40                                 | 15                               | 290                               | 360 | 105400                                    | 878                     | 194                                             | 153                              | 14.5         | ●                       | 77800                                     | 648                              | 143                                             | 113 | 15.1         | ●               |
| 260 x 325     | 88              | 72                      | 57                                 | 50                               | 334            | M16                                                      | 40                                 | 18                               | 290                               | 360 | 137000                                    | 1054                    | 215                                             | 172                              | 16.1         | ●                       | 101200                                    | 778                              | 159                                             | 127 | 16.2         | ●               |
| 280 x 355     | 102             | 84                      | 66                                 | 60                               | 364            | M18                                                      | 50                                 | 16                               | 400                               | 480 | 160300                                    | 1145                    | 181                                             | 143                              | 23.4         | ●                       | 113300                                    | 809                              | 128                                             | 101 | 25.6         | ●               |
| 300 x 375     | 102             | 84                      | 66                                 | 60                               | 384            | M18                                                      | 50                                 | 18                               | 400                               | 480 | 193200                                    | 1288                    | 190                                             | 152                              | 25.3         | ●                       | 136500                                    | 910                              | 134                                             | 107 | 25.5         | ●               |
| 320 x 405     | 121             | 101                     | 81                                 | 74                               | 414            | M20                                                      | 50                                 | 18                               | 580                               | 690 | 269300                                    | 1683                    | 189                                             | 149                              | 36.9         | ●                       | 191000                                    | 1194                             | 134                                             | 106 | 37.9         | ●               |
| 340 x 425     | 121             | 101                     | 81                                 | 74                               | 434            | M20                                                      | 50                                 | 21                               | 580                               | 690 | 333800                                    | 1964                    | 207                                             | 166                              | 39.0         | ●                       | 237000                                    | 1394                             | 147                                             | 118 | 38.3         | ●               |
| 360 x 455     | 138             | 116                     | 93                                 | 86                               | 464            | M22                                                      | 60                                 | 18                               | 780                               | 930 | 375700                                    | 2087                    | 179                                             | 141                              | 54.0         | ●                       | 264000                                    | 1467                             | 126                                             | 99  | 53.3         | ●               |
| 380 x 475     | 138             | 116                     | 93                                 | 86                               | 484            | M22                                                      | 60                                 | 21                               | 780                               | 930 | 462700                                    | 2435                    | 198                                             | 158                              | 56.2         | ●                       | 325000                                    | 1711                             | 139                                             | 111 | 57.6         | ●               |
| 400 x 495     | 138             | 116                     | 93                                 | 86                               | 504            | M22                                                      | 60                                 | 21                               | 780                               | 930 | 487000                                    | 2435                    | 188                                             | 152                              | 58.9         | ●                       | 342000                                    | 1710                             | 132                                             | 107 | 60.3         | ●               |

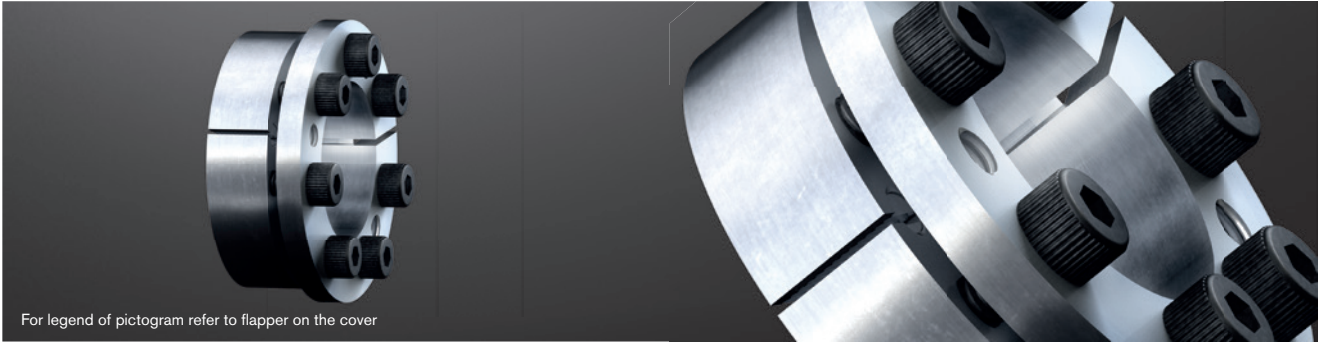
● Sizes of clamping elements available from stock.

<sup>1)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with T, F<sub>ax</sub>, P<sub>W</sub> and P<sub>N</sub> decreasing proportionately.

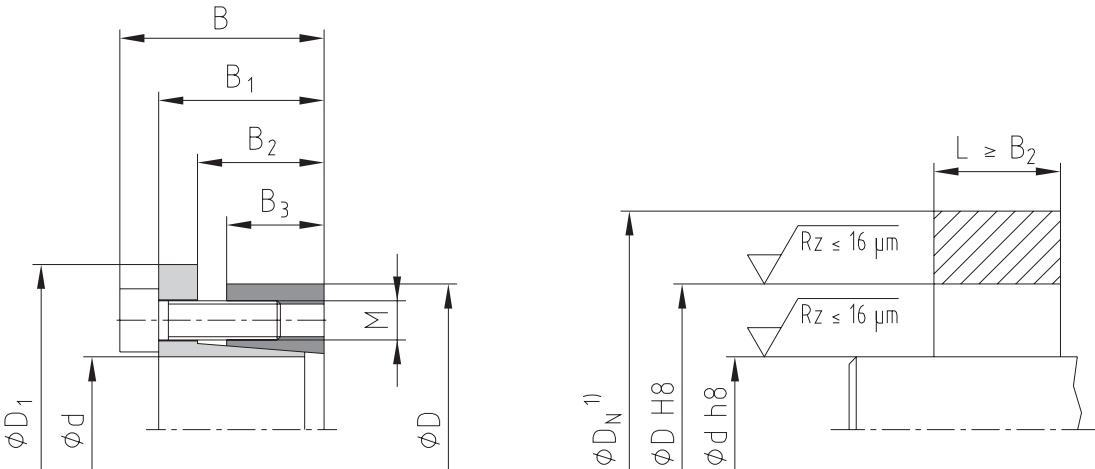
# CLAMPEX® KTR 225

## Clamping elements

Self-centering, combination of a hub Ø with various shaft Ø

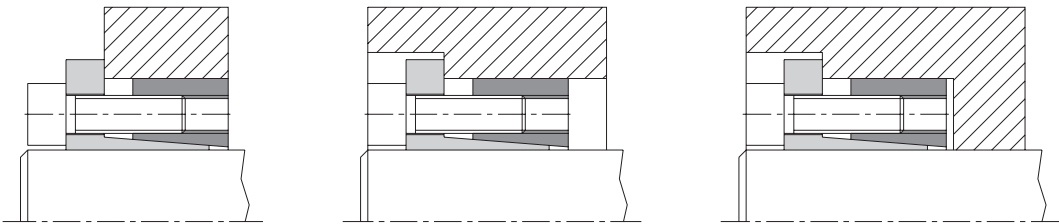


For legend of pictogram refer to flapper on the cover

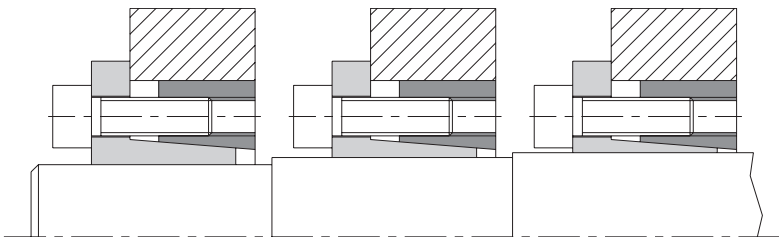


<sup>1)</sup> Dimension DN: for calculation see page 305.

Example of application of hub type



To fasten one size of hubs on different shaft diameters



|                          |         |                             |   |                             |
|--------------------------|---------|-----------------------------|---|-----------------------------|
| <b>Ordering example:</b> | KTR 225 | 28                          | x | 65                          |
|                          | Series  | Size of internal diameter d |   | Size of external diameter D |

| CLAMPEX® – KTR 225 |                 |                |                |                |                |                                                              |        |               |                                   |                                        |                      |                                                |                                             |                 |                      |
|--------------------|-----------------|----------------|----------------|----------------|----------------|--------------------------------------------------------------|--------|---------------|-----------------------------------|----------------------------------------|----------------------|------------------------------------------------|---------------------------------------------|-----------------|----------------------|
| d x D [mm]         | Dimensions [mm] |                |                |                |                | Clamping screws DIN EN ISO 4762 - 12.9<br>$\mu_{total}=0.14$ |        |               |                                   | Transmittable torque or<br>axial force |                      | Surface pressure be-<br>tween clamping element |                                             | Weight<br>[~kg] | Stock pro-<br>gramme |
|                    | B               | B <sub>1</sub> | B <sub>2</sub> | B <sub>3</sub> | D <sub>1</sub> | M                                                            | Length | z =<br>number | T <sub>A</sub> <sup>1)</sup> [Nm] | T [Nm]                                 | F <sub>ax</sub> [kN] | Shaft P <sub>W</sub><br>[N/mm <sup>2</sup> ]   | Hub P <sub>N</sub> [N/<br>mm <sup>2</sup> ] |                 |                      |
| 14 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 287                                    | 41                   | 457                                            | 116                                         | 0.5             | ●                    |
| 16 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 329                                    | 41                   | 401                                            | 117                                         | 0.5             | ●                    |
| 18 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 370                                    | 41                   | 356                                            | 117                                         | 0.5             | ●                    |
| 19 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 390                                    | 41                   | 337                                            | 116                                         | 0.5             | ●                    |
| 20 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 410                                    | 41                   | 320                                            | 116                                         | 0.5             | ●                    |
| 22 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 451                                    | 41                   | 291                                            | 116                                         | 0.5             | ●                    |
| 24 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 492                                    | 41                   | 267                                            | 116                                         | 0.4             | ●                    |
| 25 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 513                                    | 41                   | 256                                            | 116                                         | 0.4             | ●                    |
| 28 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 575                                    | 41                   | 229                                            | 117                                         | 0.4             | ●                    |
| 30 x 55            | 38              | 30             | 22             | 17             | 62             | M8                                                           | 25     | 4             | 41                                | 616                                    | 41                   | 214                                            | 117                                         | 0.4             | ●                    |
| 24 x 65            | 38              | 30             | 22             | 17             | 72             | M8                                                           | 25     | 5             | 41                                | 616                                    | 51                   | 334                                            | 123                                         | 0.7             | ●                    |
| 25 x 65            | 38              | 30             | 22             | 17             | 72             | M8                                                           | 25     | 5             | 41                                | 641                                    | 51                   | 320                                            | 123                                         | 0.7             | ●                    |
| 28 x 65            | 38              | 30             | 22             | 17             | 72             | M8                                                           | 25     | 5             | 41                                | 718                                    | 51                   | 286                                            | 123                                         | 0.6             | ●                    |
| 30 x 65            | 38              | 30             | 22             | 17             | 72             | M8                                                           | 25     | 5             | 41                                | 770                                    | 51                   | 267                                            | 123                                         | 0.6             | ●                    |
| 32 x 65            | 38              | 30             | 22             | 17             | 72             | M8                                                           | 25     | 5             | 41                                | 821                                    | 51                   | 250                                            | 123                                         | 0.6             | ●                    |
| 35 x 65            | 38              | 30             | 22             | 17             | 72             | M8                                                           | 25     | 5             | 41                                | 898                                    | 51                   | 229                                            | 123                                         | 0.5             | ●                    |
| 38 x 65            | 38              | 30             | 22             | 17             | 72             | M8                                                           | 25     | 5             | 41                                | 975                                    | 51                   | 211                                            | 123                                         | 0.5             | ●                    |
| 40 x 65            | 38              | 30             | 22             | 17             | 72             | M8                                                           | 25     | 5             | 41                                | 1026                                   | 51                   | 200                                            | 123                                         | 0.5             | ●                    |
| 30 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1077                                   | 72                   | 317                                            | 119                                         | 1.1             |                      |
| 32 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1150                                   | 72                   | 298                                            | 119                                         | 1.1             |                      |
| 35 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1257                                   | 72                   | 272                                            | 119                                         | 1.0             |                      |
| 38 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1364                                   | 72                   | 251                                            | 119                                         | 1.0             |                      |
| 40 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1436                                   | 72                   | 238                                            | 119                                         | 0.9             | ●                    |
| 42 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1509                                   | 72                   | 227                                            | 119                                         | 0.9             |                      |
| 45 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1616                                   | 72                   | 212                                            | 119                                         | 0.9             |                      |
| 48 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1723                                   | 72                   | 198                                            | 119                                         | 0.8             |                      |
| 50 x 80            | 41              | 33             | 25             | 20             | 88             | M8                                                           | 25     | 7             | 41                                | 1796                                   | 72                   | 191                                            | 119                                         | 0.8             | ●                    |

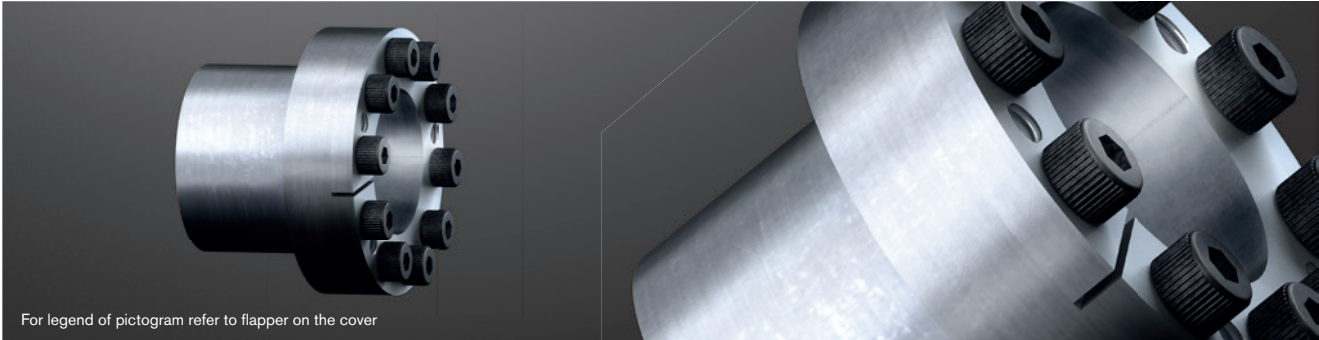
● Sizes of clamping elements available from stock.

<sup>1)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with T, F<sub>ax</sub>, P<sub>W</sub> and P<sub>N</sub> decreasing proportionately.

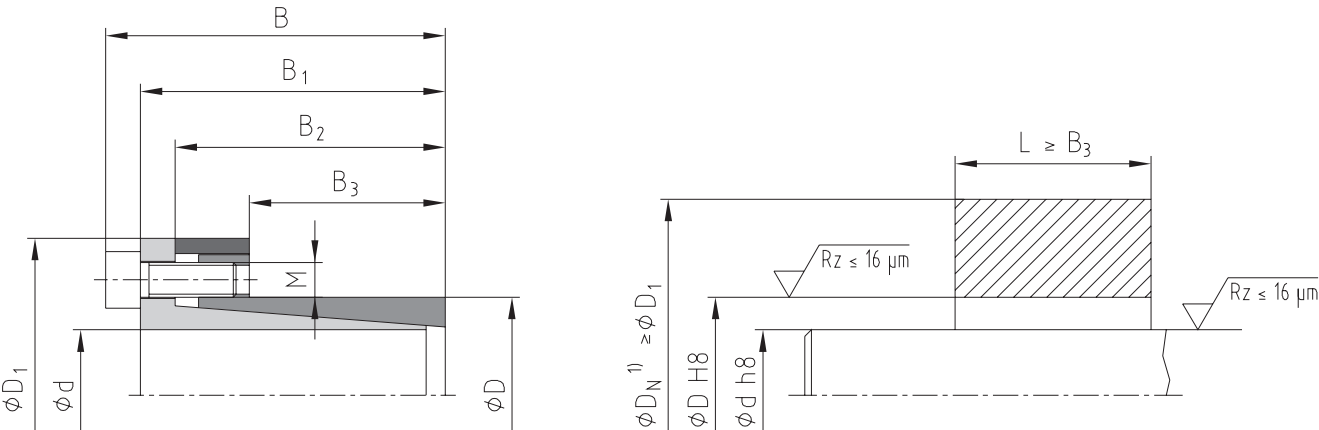
# CLAMPEX® KTR 250

## Clamping elements

Self-centering clamping element, particularly suitable for thin-walled hubs

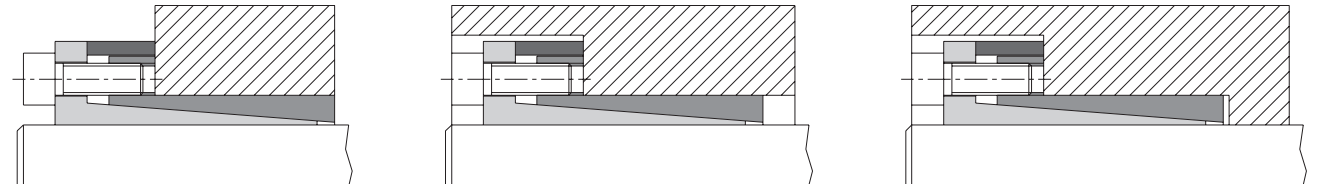


For legend of pictogram refer to flapper on the cover



<sup>1)</sup> Dimension  $D_N$ : for calculation see page 305.

Example of application of hub type



|                   |         |                             |   |                             |
|-------------------|---------|-----------------------------|---|-----------------------------|
| Ordering example: | KTR 250 | 28                          | x | 39                          |
|                   | Series  | Size of internal diameter d |   | Size of external diameter D |

| CLAMPEX® – KTR 250 |                 |                |                |                |                |                                                                     |        |            |                                   |                                        |                      |                                                |                                             |                 |                      |
|--------------------|-----------------|----------------|----------------|----------------|----------------|---------------------------------------------------------------------|--------|------------|-----------------------------------|----------------------------------------|----------------------|------------------------------------------------|---------------------------------------------|-----------------|----------------------|
| d x D<br>[mm]      | Dimensions [mm] |                |                |                |                | Clamping screws DIN EN ISO 4762 - 12.9<br>$\mu_{\text{total}}=0.14$ |        |            |                                   | Transmittable torque or<br>axial force |                      | Surface pressure be-<br>tween clamping element |                                             | Weight<br>[~kg] | Stock pro-<br>gramme |
|                    | B               | B <sub>1</sub> | B <sub>2</sub> | B <sub>3</sub> | D <sub>1</sub> | M                                                                   | Length | z = number | T <sub>A</sub> [Nm] <sup>1)</sup> | T [Nm]                                 | F <sub>ax</sub> [kN] | Shaft P <sub>W</sub><br>[N/mm <sup>2</sup> ]   | Hub P <sub>N</sub> [N/<br>mm <sup>2</sup> ] |                 |                      |
| 6 x 14             | 24.5            | 21.5           | 18.5           | 10             | 25             | M3                                                                  | 10     | 4          | 2.6                               | 11                                     | 4                    | 162                                            | 69                                          | 0.05            | ●                    |
| 8 x 15             | 29              | 25             | 21.5           | 11.5           | 27             | M4                                                                  | 10     | 3          | 5.6                               | 26                                     | 7                    | 187                                            | 100                                         | 0.05            | ●                    |
| 9 x 16             | 30              | 26             | 22.5           | 14             | 28             | M4                                                                  | 10     | 4          | 5.6                               | 37                                     | 8                    | 173                                            | 97                                          | 0.06            | ●                    |
| 10 x 16            | 30              | 26             | 22.5           | 14             | 29             | M4                                                                  | 10     | 4          | 5.6                               | 42                                     | 8                    | 159                                            | 99                                          | 0.16            | ●                    |
| 11 x 18            | 30              | 26             | 22.5           | 13.5           | 32             | M4                                                                  | 10     | 4          | 5.6                               | 50                                     | 9                    | 162                                            | 99                                          | 0.18            | ●                    |
| 12 x 18            | 30              | 26             | 22.5           | 13.5           | 32             | M4                                                                  | 10     | 4          | 5.6                               | 55                                     | 9                    | 150                                            | 100                                         | 0.18            | ●                    |
| 14 x 23            | 30              | 26             | 22.5           | 14             | 38             | M4                                                                  | 10     | 6          | 5.6                               | 100                                    | 14                   | 193                                            | 118                                         | 0.20            | ●                    |
| 15 x 24            | 42              | 36             | 28.5           | 16             | 44             | M6                                                                  | 18     | 4          | 15                                | 145                                    | 19                   | 214                                            | 134                                         | 0.2             | ●                    |
| 16 x 24            | 42              | 36             | 28.5           | 16             | 44             | M6                                                                  | 18     | 4          | 15                                | 155                                    | 19                   | 201                                            | 134                                         | 0.3             | ●                    |
| 17 x 25            | 42              | 36             | 28.5           | 16             | 45             | M6                                                                  | 18     | 4          | 15                                | 162                                    | 19                   | 186                                            | 126                                         | 0.2             | ●                    |
| 17 x 26            | 44              | 38             | 31             | 18             | 47             | M6                                                                  | 18     | 4          | 17                                | 180                                    | 21                   | 184                                            | 120                                         | 0.2             | ●                    |
| 18 x 26            | 44              | 38             | 31             | 18             | 47             | M6                                                                  | 18     | 4          | 17                                | 200                                    | 22                   | 182                                            | 126                                         | 0.2             | ●                    |
| 19 x 27            | 44              | 38             | 31             | 18             | 48             | M6                                                                  | 18     | 4          | 17                                | 210                                    | 22                   | 171                                            | 121                                         | 0.3             | ●                    |
| 20 x 28            | 44              | 38             | 31             | 18             | 49             | M6                                                                  | 18     | 4          | 17                                | 220                                    | 22                   | 162                                            | 116                                         | 0.2             | ●                    |
| 22 x 32            | 51              | 45             | 38             | 25             | 54             | M6                                                                  | 18     | 4          | 17                                | 250                                    | 23                   | 110                                            | 75                                          | 0.3             | ●                    |
| 24 x 34            | 51              | 45             | 38             | 25             | 56             | M6                                                                  | 18     | 4          | 17                                | 270                                    | 23                   | 99                                             | 70                                          | 0.3             | ●                    |
| 25 x 34            | 51              | 45             | 38             | 25             | 56             | M6                                                                  | 18     | 4          | 17                                | 280                                    | 22                   | 95                                             | 70                                          | 0.3             | ●                    |
| 28 x 39            | 51              | 45             | 38             | 25             | 61             | M6                                                                  | 18     | 6          | 17                                | 480                                    | 34                   | 130                                            | 93                                          | 0.4             | ●                    |
| 30 x 41            | 51              | 45             | 38             | 25             | 62             | M6                                                                  | 18     | 6          | 17                                | 510                                    | 34                   | 120                                            | 88                                          | 0.4             | ●                    |
| 32 x 43            | 51              | 45             | 38             | 25             | 65             | M6                                                                  | 18     | 8          | 17                                | 730                                    | 46                   | 151                                            | 113                                         | 0.5             | ●                    |
| 35 x 47            | 56              | 50             | 43             | 30             | 69             | M6                                                                  | 18     | 8          | 17                                | 800                                    | 46                   | 115                                            | 86                                          | 0.5             | ●                    |
| 38 x 50            | 56              | 50             | 43             | 30             | 72             | M6                                                                  | 18     | 8          | 17                                | 860                                    | 45                   | 105                                            | 80                                          | 0.6             | ●                    |
| 40 x 53            | 56              | 50             | 43             | 30             | 75             | M6                                                                  | 18     | 8          | 17                                | 900                                    | 45                   | 99                                             | 75                                          | 0.6             | ●                    |
| 42 x 55            | 65              | 57             | 49             | 32             | 78             | M8                                                                  | 22     | 8          | 41                                | 1800                                   | 86                   | 169                                            | 129                                         | 0.9             | ●                    |
| 45 x 59            | 73              | 65             | 57             | 40             | 85             | M8                                                                  | 22     | 8          | 41                                | 1900                                   | 84                   | 124                                            | 95                                          | 1.0             | ●                    |
| 48 x 62            | 78              | 70             | 62             | 45             | 87             | M8                                                                  | 22     | 8          | 41                                | 2000                                   | 83                   | 102                                            | 79                                          | 1.0             | ●                    |
| 50 x 65            | 78              | 70             | 62             | 45             | 92             | M8                                                                  | 22     | 10         | 41                                | 2600                                   | 104                  | 123                                            | 94                                          | 1.3             | ●                    |
| 55 x 71            | 83              | 75             | 67             | 50             | 98             | M8                                                                  | 22     | 10         | 41                                | 2900                                   | 105                  | 102                                            | 79                                          | 1.5             | ●                    |
| 60 x 77            | 83              | 75             | 67             | 50             | 104            | M8                                                                  | 22     | 10         | 41                                | 3100                                   | 103                  | 91                                             | 71                                          | 1.7             | ●                    |
| 65 x 84            | 83              | 75             | 67             | 50             | 111            | M8                                                                  | 22     | 10         | 41                                | 3400                                   | 105                  | 85                                             | 66                                          | 1.9             | ●                    |
| 70 x 90            | 101             | 91             | 80             | 60             | 119            | M10                                                                 | 25     | 10         | 83                                | 5800                                   | 166                  | 105                                            | 81                                          | 2.9             | ●                    |
| 75 x 95            | 101             | 91             | 80             | 60             | 126            | M10                                                                 | 25     | 10         | 83                                | 6200                                   | 165                  | 97                                             | 77                                          | 2.3             | ●                    |
| 80 x 100           | 106             | 96             | 85             | 65             | 131            | M10                                                                 | 25     | 12         | 83                                | 8000                                   | 200                  | 102                                            | 82                                          | 3.3             | ●                    |
| 85 x 106           | 106             | 96             | 85             | 65             | 137            | M10                                                                 | 25     | 12         | 83                                | 8500                                   | 200                  | 96                                             | 77                                          | 3.6             | ●                    |
| 90 x 112           | 106             | 96             | 85             | 65             | 143            | M10                                                                 | 25     | 15         | 83                                | 11200                                  | 249                  | 113                                            | 91                                          | 3.9             | ●                    |
| 95 x 120           | 106             | 96             | 85             | 65             | 153            | M10                                                                 | 25     | 15         | 83                                | 11800                                  | 248                  | 107                                            | 84                                          | 4.5             | ●                    |
| 100 x 125          | 114             | 102            | 89             | 65             | 162            | M12                                                                 | 30     | 12         | 145                               | 14600                                  | 292                  | 119                                            | 95                                          | 5.5             | ●                    |
| 110 x 140          | 140             | 128            | 114            | 90             | 180            | M12                                                                 | 30     | 12         | 145                               | 16000                                  | 291                  | 78                                             | 61                                          | 8.0             | ●                    |
| 120 x 155          | 140             | 128            | 114            | 90             | 198            | M12                                                                 | 30     | 12         | 145                               | 17400                                  | 290                  | 71                                             | 55                                          | 10.5            | ●                    |
| 130 x 165          | 140             | 128            | 114            | 90             | 208            | M12                                                                 | 30     | 16         | 145                               | 25000                                  | 385                  | 87                                             | 69                                          | 11.9            | ●                    |

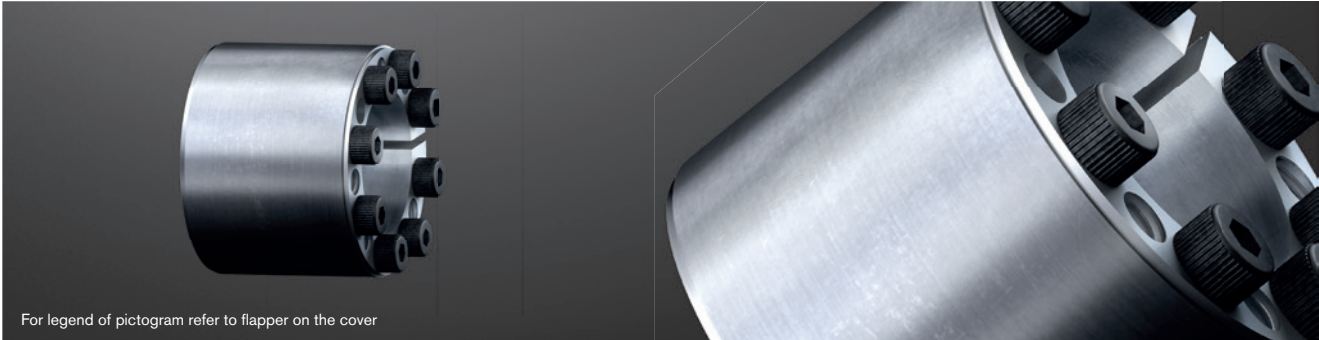
● Sizes of clamping elements available from stock.

<sup>1)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with T, F<sub>ax</sub>, P<sub>W</sub> and P<sub>N</sub> decreasing proportionately.

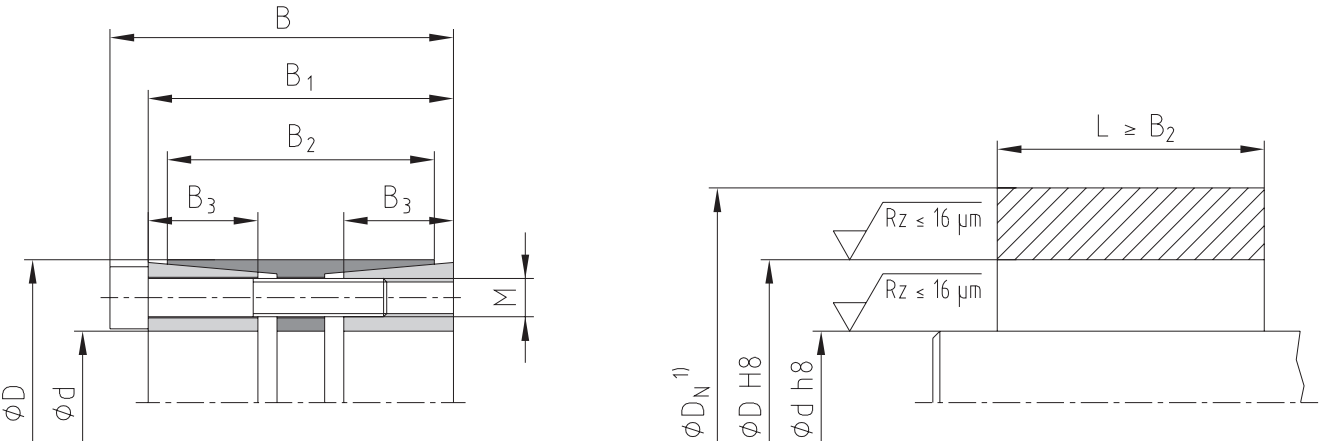
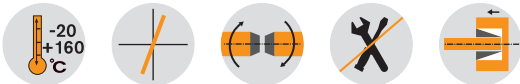
# CLAMPEX® KTR 400

## Clamping elements

Self-centering clamping element with highest transmission performance

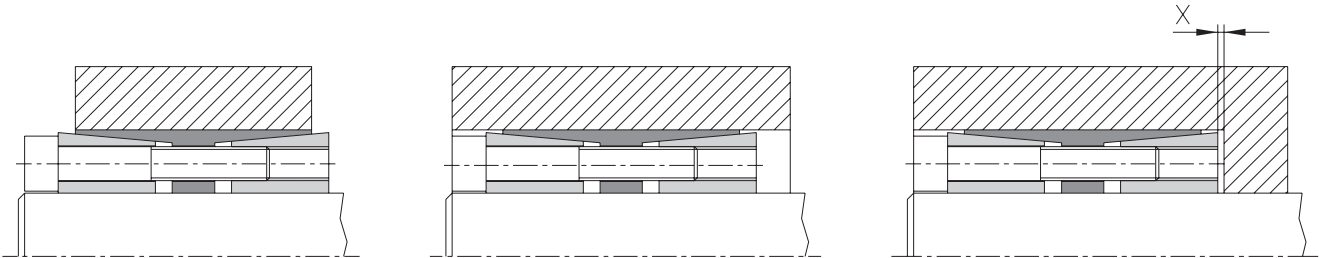


For legend of pictogram refer to flapper on the cover



<sup>1)</sup> Dimension DN: for calculation see page 305.

### Example of application of hub type



Formula to calculate space x for disassembly:

$$x = \frac{B_1 - B_2}{2}$$

|                          |         |                             |   |                             |
|--------------------------|---------|-----------------------------|---|-----------------------------|
| <b>Ordering example:</b> | KTR 400 | 100                         | x | 145                         |
|                          | Series  | Size of internal diameter d |   | Size of external diameter D |



# CLAMPEX® – KTR 400

| d x D <sup>1)</sup><br>[mm] |     |     |     |    | Standard applications in industry                                     |                    |        |                                      |         |                                           |                                                 |                                                   |     |                    | Applications with components subjected to bending and torsion stress  |                        |        |                         |                              |                                                 |                                            |                                         |   |                                                   | Weight [-kg] | Stock programme |  |
|-----------------------------|-----|-----|-----|----|-----------------------------------------------------------------------|--------------------|--------|--------------------------------------|---------|-------------------------------------------|-------------------------------------------------|---------------------------------------------------|-----|--------------------|-----------------------------------------------------------------------|------------------------|--------|-------------------------|------------------------------|-------------------------------------------------|--------------------------------------------|-----------------------------------------|---|---------------------------------------------------|--------------|-----------------|--|
|                             |     |     |     |    | Clamping screws<br>DIN EN ISO 4762 - 12.9<br>μ <sub>total</sub> =0.14 |                    |        |                                      |         | Transmittable<br>torque or axial<br>force |                                                 | Surface pressure<br>between clamp-<br>ing element |     |                    | Clamping screws<br>DIN EN ISO 4762 - 12.9<br>μ <sub>total</sub> =0.14 |                        |        |                         |                              | Transmittable<br>torque or axial<br>force       |                                            | Transmit-<br>table<br>bending<br>moment |   | Surface pressure<br>between clamp-<br>ing element |              |                 |  |
|                             |     |     |     |    | M                                                                     | z =<br>num-<br>ber | Length | T <sub>A</sub> <sup>2)</sup><br>[Nm] | T [Nm]  | F <sub>ax</sub><br>[kN]                   | Shaft<br>P <sub>W</sub><br>[N/mm <sup>2</sup> ] | Hub P <sub>N</sub><br>[N/mm <sup>2</sup> ]        | M   | z =<br>num-<br>ber | Length                                                                | T <sub>A</sub><br>[Nm] | T [Nm] | F <sub>ax</sub><br>[kN] | M <sub>b</sub> perm.<br>[Nm] | Shaft<br>P <sub>W</sub><br>[N/mm <sup>2</sup> ] | Hub P <sub>N</sub><br>[N/mm <sup>2</sup> ] |                                         |   |                                                   |              |                 |  |
| 24 x 50                     | 51  | 45  | 41  | 16 | M6                                                                    | 6                  | 35     | 17                                   | 700     | 58                                        | 202                                             | 92                                                | M6  | 6                  | 35                                                                    | 14                     | 460    | 38                      | 420                          | 230                                             | 93                                         | 0.5                                     | ● |                                                   |              |                 |  |
| 25 x 50                     | 51  | 45  | 41  | 16 | M6                                                                    | 6                  | 35     | 17                                   | 730     | 58                                        | 194                                             | 92                                                | M6  | 6                  | 35                                                                    | 14                     | 470    | 38                      | 430                          | 222                                             | 94                                         | 0.5                                     | ● |                                                   |              |                 |  |
| 28 x 55                     | 51  | 45  | 41  | 16 | M6                                                                    | 8                  | 35     | 17                                   | 1100    | 79                                        | 233                                             | 112                                               | M6  | 8                  | 35                                                                    | 14                     | 740    | 53                      | 490                          | 257                                             | 110                                        | 0.5                                     | ● |                                                   |              |                 |  |
| 30 x 55                     | 51  | 45  | 41  | 16 | M6                                                                    | 8                  | 35     | 17                                   | 1180    | 79                                        | 217                                             | 112                                               | M6  | 8                  | 35                                                                    | 14                     | 790    | 53                      | 520                          | 243                                             | 112                                        | 0.5                                     | ● |                                                   |              |                 |  |
| 32 x 60                     | 51  | 45  | 41  | 16 | M6                                                                    | 8                  | 35     | 17                                   | 1270    | 79                                        | 206                                             | 103                                               | M6  | 8                  | 35                                                                    | 14                     | 830    | 52                      | 560                          | 230                                             | 104                                        | 0.8                                     | ● |                                                   |              |                 |  |
| 35 x 60                     | 51  | 45  | 41  | 16 | M6                                                                    | 8                  | 35     | 17                                   | 1390    | 79                                        | 188                                             | 104                                               | M6  | 8                  | 35                                                                    | 14                     | 890    | 51                      | 610                          | 214                                             | 106                                        | 0.7                                     | ● |                                                   |              |                 |  |
| 38 x 65                     | 51  | 45  | 41  | 16 | M6                                                                    | 10                 | 35     | 17                                   | 1880    | 99                                        | 216                                             | 119                                               | M6  | 10                 | 35                                                                    | 14                     | 1250   | 66                      | 660                          | 240                                             | 119                                        | 1.1                                     | ● |                                                   |              |                 |  |
| 40 x 65                     | 51  | 45  | 41  | 16 | M6                                                                    | 10                 | 35     | 17                                   | 1980    | 99                                        | 205                                             | 119                                               | M6  | 10                 | 35                                                                    | 14                     | 1300   | 65                      | 700                          | 230                                             | 120                                        | 1.1                                     | ● |                                                   |              |                 |  |
| 40 x 75                     | 51  | 45  | 41  | 16 | M8                                                                    | 8                  | 35     | 41                                   | 2850    | 143                                       | 296                                             | 149                                               | M8  | 8                  | 35                                                                    | 35                     | 2030   | 102                     | 700                          | 320                                             | 142                                        | 1.1                                     | ● |                                                   |              |                 |  |
| 42 x 75                     | 51  | 45  | 41  | 16 | M8                                                                    | 8                  | 35     | 41                                   | 3000    | 143                                       | 282                                             | 149                                               | M8  | 8                  | 35                                                                    | 35                     | 2120   | 101                     | 730                          | 307                                             | 142                                        | 1.2                                     | ● |                                                   |              |                 |  |
| 45 x 75                     | 51  | 45  | 41  | 16 | M8                                                                    | 8                  | 35     | 41                                   | 3250    | 144                                       | 266                                             | 151                                               | M8  | 8                  | 35                                                                    | 35                     | 2260   | 100                     | 780                          | 289                                             | 145                                        | 1.1                                     | ● |                                                   |              |                 |  |
| 48 x 80                     | 70  | 62  | 58  | 23 | M8                                                                    | 8                  | 55     | 41                                   | 3450    | 144                                       | 173                                             | 98                                                | M8  | 8                  | 55                                                                    | 35                     | 2160   | 90                      | 1700                         | 202                                             | 101                                        | 1.5                                     | ● |                                                   |              |                 |  |
| 50 x 80                     | 70  | 62  | 58  | 23 | M8                                                                    | 8                  | 55     | 41                                   | 3600    | 144                                       | 166                                             | 98                                                | M8  | 8                  | 55                                                                    | 35                     | 2220   | 89                      | 1770                         | 196                                             | 102                                        | 1.4                                     | ● |                                                   |              |                 |  |
| 55 x 85                     | 70  | 62  | 58  | 23 | M8                                                                    | 8                  | 55     | 41                                   | 3950    | 144                                       | 151                                             | 92                                                | M8  | 8                  | 55                                                                    | 35                     | 2350   | 85                      | 1950                         | 182                                             | 98                                         | 1.5                                     | ● |                                                   |              |                 |  |
| 60 x 90                     | 70  | 62  | 58  | 23 | M8                                                                    | 10                 | 55     | 41                                   | 5400    | 180                                       | 173                                             | 109                                               | M8  | 10                 | 55                                                                    | 35                     | 3380   | 113                     | 2130                         | 202                                             | 113                                        | 1.6                                     | ● |                                                   |              |                 |  |
| 65 x 95                     | 70  | 62  | 58  | 23 | M8                                                                    | 10                 | 55     | 41                                   | 5850    | 180                                       | 160                                             | 103                                               | M8  | 10                 | 55                                                                    | 35                     | 3560   | 110                     | 2310                         | 190                                             | 109                                        | 1.7                                     | ● |                                                   |              |                 |  |
| 70 x 110                    | 86  | 76  | 70  | 28 | M10                                                                   | 10                 | 60     | 83                                   | 10200   | 291                                       | 197                                             | 118                                               | M10 | 10                 | 60                                                                    | 69                     | 6620   | 189                     | 3650                         | 222                                             | 120                                        | 3.1                                     | ● |                                                   |              |                 |  |
| 75 x 115                    | 86  | 76  | 70  | 28 | M10                                                                   | 10                 | 60     | 83                                   | 10950   | 292                                       | 184                                             | 113                                               | M10 | 10                 | 60                                                                    | 69                     | 6970   | 186                     | 3920                         | 210                                             | 117                                        | 3.3                                     | ● |                                                   |              |                 |  |
| 80 x 120                    | 86  | 76  | 70  | 28 | M10                                                                   | 12                 | 60     | 83                                   | 14000   | 350                                       | 207                                             | 130                                               | M10 | 12                 | 60                                                                    | 69                     | 9210   | 230                     | 4180                         | 231                                             | 131                                        | 3.5                                     | ● |                                                   |              |                 |  |
| 85 x 125                    | 86  | 76  | 70  | 28 | M10                                                                   | 12                 | 60     | 83                                   | 15000   | 353                                       | 197                                             | 126                                               | M10 | 12                 | 60                                                                    | 69                     | 9710   | 228                     | 4440                         | 220                                             | 129                                        | 3.6                                     | ● |                                                   |              |                 |  |
| 90 x 130                    | 86  | 76  | 70  | 28 | M10                                                                   | 12                 | 60     | 83                                   | 15800   | 351                                       | 185                                             | 121                                               | M10 | 12                 | 60                                                                    | 69                     | 10000  | 222                     | 4700                         | 210                                             | 124                                        | 3.8                                     | ● |                                                   |              |                 |  |
| 95 x 135                    | 86  | 76  | 70  | 28 | M10                                                                   | 12                 | 60     | 83                                   | 16800   | 354                                       | 176                                             | 117                                               | M10 | 12                 | 60                                                                    | 69                     | 10500  | 221                     | 4960                         | 201                                             | 122                                        | 4.0                                     | ● |                                                   |              |                 |  |
| 100 x 145                   | 110 | 98  | 92  | 35 | M12                                                                   | 12                 | 80     | 145                                  | 26000   | 520                                       | 197                                             | 121                                               | M12 | 12                 | 80                                                                    | 120                    | 16850  | 337                     | 8580                         | 219                                             | 124                                        | 6.1                                     | ● |                                                   |              |                 |  |
| 110 x 155                   | 110 | 98  | 92  | 35 | M12                                                                   | 12                 | 80     | 145                                  | 28600   | 520                                       | 179                                             | 114                                               | M12 | 12                 | 80                                                                    | 120                    | 18000  | 327                     | 9440                         | 203                                             | 118                                        | 6.6                                     | ● |                                                   |              |                 |  |
| 120 x 165                   | 110 | 98  | 92  | 35 | M12                                                                   | 14                 | 80     | 145                                  | 36300   | 605                                       | 191                                             | 124                                               | M12 | 14                 | 80                                                                    | 120                    | 23350  | 389                     | 10300                        | 214                                             | 128                                        | 7.1                                     | ● |                                                   |              |                 |  |
| 130 x 180                   | 128 | 114 | 108 | 41 | M14                                                                   | 12                 | 90     | 230                                  | 46000   | 708                                       | 176                                             | 114                                               | M14 | 12                 | 90                                                                    | 190                    | 29950  | 461                     | 15300                        | 201                                             | 119                                        | 10.0                                    | ● |                                                   |              |                 |  |
| 140 x 190                   | 128 | 114 | 108 | 41 | M14                                                                   | 14                 | 90     | 230                                  | 57800   | 826                                       | 191                                             | 126                                               | M14 | 14                 | 90                                                                    | 190                    | 37200  | 531                     | 16500                        | 214                                             | 129                                        | 10.6                                    | ● |                                                   |              |                 |  |
| 150 x 200                   | 128 | 114 | 108 | 41 | M14                                                                   | 16                 | 90     | 230                                  | 70800   | 944                                       | 204                                             | 136                                               | M14 | 16                 | 90                                                                    | 190                    | 46400  | 619                     | 17700                        | 226                                             | 139                                        | 11.2                                    | ● |                                                   |              |                 |  |
| 160 x 210                   | 128 | 114 | 108 | 41 | M14                                                                   | 16                 | 90     | 230                                  | 75500   | 944                                       | 191                                             | 130                                               | M14 | 16                 | 90                                                                    | 190                    | 48600  | 608                     | 18800                        | 214                                             | 133                                        | 11.9                                    | ● |                                                   |              |                 |  |
| 170 x 225                   | 162 | 146 | 136 | 52 | M16                                                                   | 14                 | 110    | 355                                  | 95900   | 1128                                      | 169                                             | 114                                               | M16 | 14                 | 110                                                                   | 295                    | 59100  | 695                     | 32000                        | 196                                             | 119                                        | 17.6                                    | ● |                                                   |              |                 |  |
| 180 x 235                   | 162 | 146 | 136 | 52 | M16                                                                   | 15                 | 110    | 355                                  | 108800  | 1209                                      | 171                                             | 117                                               | M16 | 15                 | 110                                                                   | 295                    | 67500  | 750                     | 33900                        | 198                                             | 122                                        | 18.5                                    | ● |                                                   |              |                 |  |
| 190 x 250                   | 162 | 146 | 136 | 52 | M16                                                                   | 16                 | 110    | 355                                  | 122500  | 1289                                      | 173                                             | 117                                               | M16 | 16                 | 110                                                                   | 295                    | 76100  | 801                     | 35800                        | 199                                             | 122                                        | 21.4                                    | ● |                                                   |              |                 |  |
| 200 x 260                   | 162 | 146 | 136 | 52 | M16                                                                   | 16                 | 110    | 355                                  | 128900  | 1289                                      | 164                                             | 113                                               | M16 | 16                 | 110                                                                   | 295                    | 78600  | 786                     | 37700                        | 192                                             | 118                                        | 22.4                                    | ● |                                                   |              |                 |  |
| 220 x 285                   | 162 | 146 | 136 | 52 | M16                                                                   | 18                 | 110    | 355                                  | 171800  | 1562                                      | 181                                             | 120                                               | M16 | 18                 | 110                                                                   | 295                    | 105000 | 955                     | 41400                        | 195                                             | 126                                        | 26.6                                    | ● |                                                   |              |                 |  |
| 240 x 305                   | 162 | 146 | 136 | 52 | M16                                                                   | 20                 | 110    | 355                                  | 208000  | 1733                                      | 184                                             | 125                                               | M16 | 20                 | 110                                                                   | 295                    | 128000 | 1067                    | 45200                        | 198                                             | 130                                        | 28.7                                    | ● |                                                   |              |                 |  |
| 260 x 325                   | 166 | 150 | 134 | 55 | M16                                                                   | 21                 | 110    | 355                                  | 237000  | 1823                                      | 169                                             | 117                                               | M16 | 21                 | 110                                                                   | 295                    | 142000 | 1092                    | 51000                        | 187                                             | 123                                        | 31.2                                    |   |                                                   |              |                 |  |
| 280 x 355                   | 197 | 177 | 165 | 66 | M20                                                                   | 18                 | 130    | 690                                  | 340000  | 2429                                      | 174                                             | 119                                               | M20 | 18                 | 130                                                                   | 580                    | 208000 | 1486                    | 81300                        | 192                                             | 125                                        | 46.8                                    |   |                                                   |              |                 |  |
| 300 x 375                   | 197 | 177 | 165 | 66 | M20                                                                   | 20                 | 130    | 690                                  | 405000  | 2700                                      | 181                                             | 125                                               | M20 | 20                 | 130                                                                   | 580                    | 252000 | 1680                    | 87100                        | 198                                             | 130                                        | 69.7                                    |   |                                                   |              |                 |  |
| 320 x 405                   | 197 | 177 | 165 | 66 | M20                                                                   | 21                 | 130    | 690                                  | 453000  | 2831                                      | 178                                             | 121                                               | M20 | 21                 | 130                                                                   | 580                    | 280000 | 1750                    | 92900                        | 196                                             | 127                                        | 60.5                                    |   |                                                   |              |                 |  |
| 340 x 425                   | 197 | 177 | 165 | 66 | M20                                                                   | 22                 | 130    | 690                                  | 504900  | 2970                                      | 176                                             | 121                                               | M20 | 22                 | 130                                                                   | 580                    | 311000 | 1829                    | 98700                        | 193                                             | 127                                        | 63.9                                    |   |                                                   |              |                 |  |
| 360 x 455                   | 224 | 203 | 190 | 76 | M22                                                                   | 21                 | 150    | 930                                  | 626000  | 3478                                      | 169                                             | 115                                               | M22 | 21                 | 150                                                                   | 780                    | 381000 | 2117                    | 138500                       | 189                                             | 121                                        | 86.8                                    |   |                                                   |              |                 |  |
| 380 x 475                   | 224 | 203 | 190 | 76 | M22                                                                   | 22                 | 150    | 930                                  | 692000  | 3642                                      | 167                                             | 115                                               | M22 | 22                 | 150                                                                   | 780                    | 420000 | 2211                    | 146000                       | 188                                             | 122                                        | 91.0                                    |   |                                                   |              |                 |  |
| 400 x 495                   | 224 | 203 | 190 | 76 | M22                                                                   | 24                 | 150    | 930                                  | 795000  | 3975                                      | 173                                             | 121                                               | M22 | 24                 | 150                                                                   | 780                    | 489000 | 2445                    | 154000                       | 194                                             | 127                                        | 95.3                                    |   |                                                   |              |                 |  |
| 420 x 515                   | 224 | 203 | 190 | 76 | M22                                                                   | 24                 | 150    | 930                                  | 835000  | 3976                                      | 165                                             | 116                                               | M22 | 24                 | 150                                                                   | 780                    | 505000 | 2405                    | 161500                       | 186                                             | 123                                        | 100                                     |   |                                                   |              |                 |  |
| 440 x 535                   | 224 | 203 | 190 | 76 | M22                                                                   | 24                 | 150    | 930                                  | 875000  | 3977                                      | 158                                             | 112                                               | M22 | 24                 | 150                                                                   | 780                    | 517000 | 2350                    | 169000                       | 178                                             | 120                                        | 105                                     |   |                                                   |              |                 |  |
| 460 x 555                   | 224 | 203 | 190 | 76 | M22                                                                   | 24                 | 150    | 930                                  | 914000  | 3974                                      | 151                                             | 108                                               | M22 | 24                 | 150                                                                   | 780                    | 530000 | 2304                    | 177000                       | 172                                             | 117                                        | 109                                     |   |                                                   |              |                 |  |
| 480 x 575                   | 224 | 203 | 190 | 76 | M22                                                                   | 28                 | 150    | 930                                  | 1113000 | 4638                                      | 169                                             | 121                                               | M22 | 28                 | 150                                                                   | 780                    | 678000 | 2825                    | 184500                       | 189                                             | 128                                        | 114                                     |   |                                                   |              |                 |  |
| 500 x 595                   | 224 | 203 | 190 | 76 | M22                                                                   | 28                 | 150    | 930                                  | 1160000 | 4640                                      | 162                                             | 117                                               | M22 | 28                 | 150                                                                   | 780                    | 692000 | 2768                    | 192000                       | 182                                             | 125                                        | 119                                     |   |                                                   |              |                 |  |
| 520 x 615                   | 224 | 203 | 190 | 76 | M22                                                                   | 30                 | 150    | 930                                  | 1292000 | 4969                                      | 167                                             | 122                                               | M22 | 30                 | 150                                                                   | 780                    | 780000 | 3000                    | 200000                       | 186                                             | 129                                        | 122.5                                   |   |                                                   |              |                 |  |
| 540 x 635                   | 224 | 203 | 190 | 76 | M22                                                                   | 30                 | 150    | 930                                  | 1342000 | 4970                                      | 161                                             | 118                                               | M22 | 30                 | 150                                                                   | 780                    | 799000 | 2959                    | 207500                       | 180                                             | 126                                        | 128                                     |   |                                                   |              |                 |  |
| 560 x 655                   | 224 | 203 | 190 | 76 | M22                                                                   | 32                 | 150    | 930                                  | 1484000 | 5300                                      | 165                                             | 122                                               | M22 | 32                 | 150                                                                   | 780                    | 893000 | 3189                    | 215500                       | 184                                             | 129                                        | 131                                     |   |                                                   |              |                 |  |
| 580 x 675                   | 224 | 203 | 190 | 76 | M22                                                                   | 32                 | 150    | 930                                  | 1537000 | 5300                                      | 159                                             | 118                                               | M22 | 32                 | 150                                                                   | 780                    | 912000 | 3145                    | 223000                       | 179                                             | 127                                        | 136                                     |   |                                                   |              |                 |  |
| 600 x 695                   | 224 | 203 | 190 | 76 | M22                                                                   | 33                 | 150    | 930                                  | 1640000 | 5467                                      | 159                                             | 118                                               | M22 | 33                 | 150                                                                   | 780                    | 972000 | 3240                    | 231000                       | 179                                             | 127                                        | 139                                     |   |                                                   |              |                 |  |

● Sizes of clamping elements available from stock.

<sup>1)</sup> External ring without slot from size 400 x 495.

<sup>2)</sup> These are the maximum screw tightening torques. They can be reduced by a maximum of 40 % of the above-mentioned figures with T, F<sub>ax</sub>, P<sub>W</sub> and P<sub>N</sub> decreasing proportionately.

CLAMPEX®

Clamping nuts

KTR Precision joints

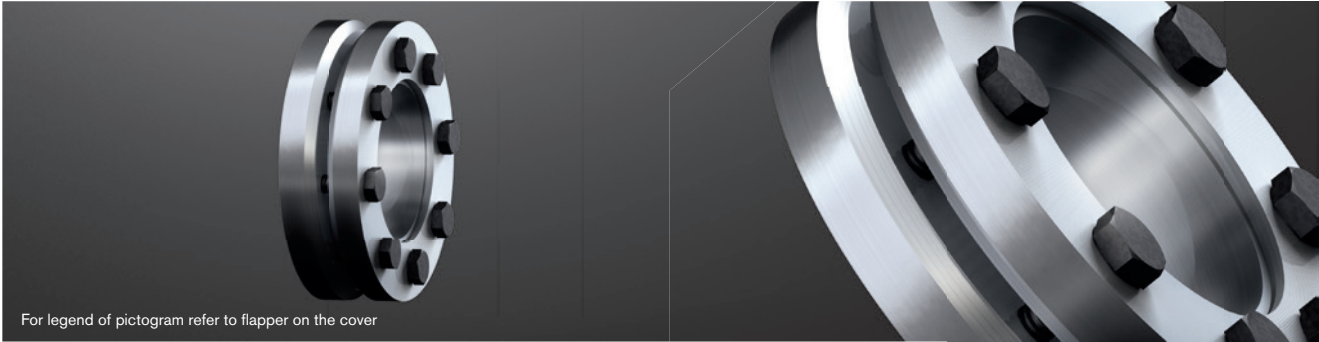
Clamping sets



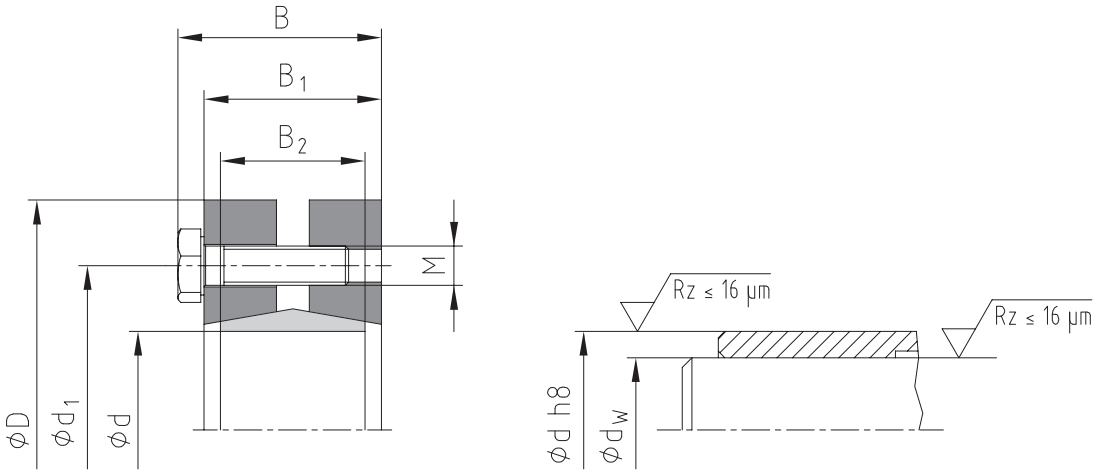
# CLAMPEX® KTR 603

## Clamping elements

### Three-part external clamping set for applications on hollow shafts



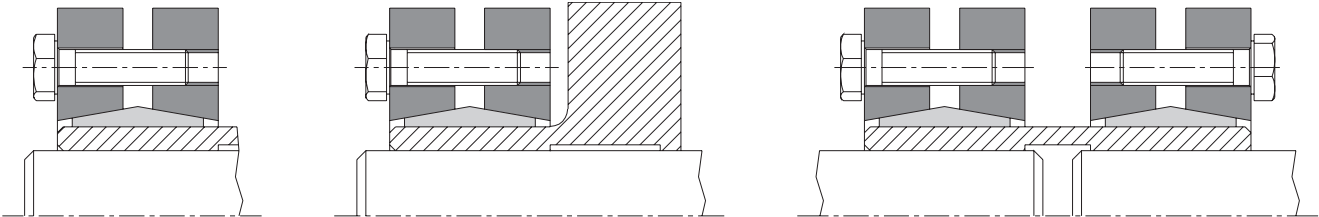
For legend of pictogram refer to flapper on the cover



**Tolerances for  $d_w$**

|                             |                |
|-----------------------------|----------------|
| For $d_w$ from 10 to 30 mm  | <b>H6 / j6</b> |
| For $d_w$ from 31 to 50 mm  | <b>H6 / h6</b> |
| For $d_w$ from 51 to 80 mm  | <b>H6 / g6</b> |
| For $d_w$ from 81 to 500 mm | <b>H7 / g6</b> |

Example of application of hub type



|                          |         |                             |   |                             |
|--------------------------|---------|-----------------------------|---|-----------------------------|
| <b>Ordering example:</b> | KTR 603 | 44                          | x | 80                          |
|                          | Series  | Size of internal diameter d |   | Size of external diameter D |

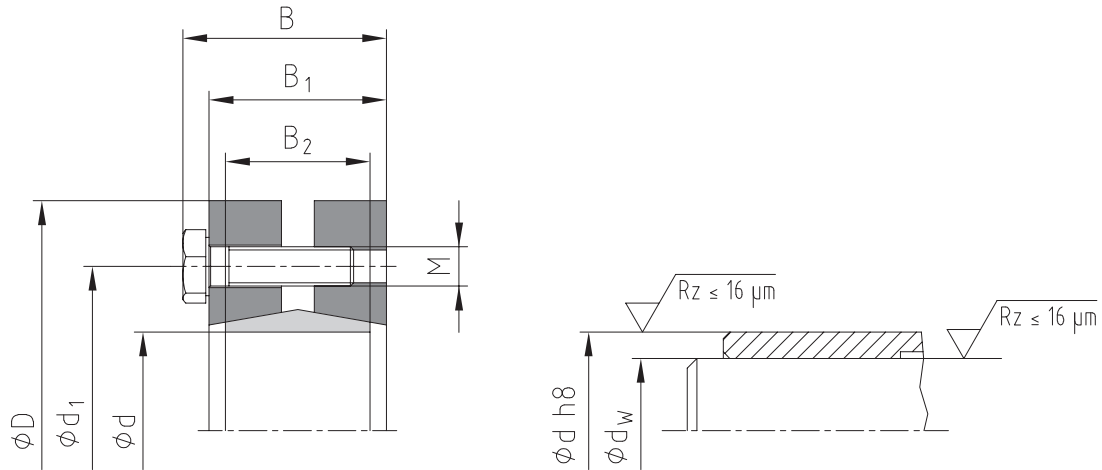
| CLAMPEX® – KTR 603 |                                    |                                     |                      |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|--------------------|------------------------------------|-------------------------------------|----------------------|-----------------|----------------|----------------|----------------|--------------------------------------------------------------------|--------|------------|---------------------|-----------------------------------------------------------------------------|--------------|-----------------|
| d x D [mm]         | Shaft diameter d <sub>w</sub> [mm] | Transmittable torque or axial force |                      | Dimensions [mm] |                |                |                | Clamping screws DIN EN ISO 4014 - 10.9<br>μ <sub>total</sub> =0.10 |        |            |                     | Surface pressure of clamping element/hollow shaft<br>P <sub>H</sub> [N/mm²] | Weight [~kg] | Stock programme |
|                    |                                    | T [Nm]                              | F <sub>ax</sub> [kN] | B               | B <sub>1</sub> | B <sub>2</sub> | d <sub>1</sub> | M                                                                  | Length | z = number | T <sub>A</sub> [Nm] |                                                                             |              |                 |
| 14 x 38            | 10                                 | 28                                  | 6                    |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 11                                 | 38                                  | 7                    | 14.5            | 11             | 9              | 24             | M5                                                                 | 10     | 4          | 3.5                 | 388                                                                         | 0.1          | ●               |
|                    | 12                                 | 50                                  | 8                    |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 16 x 41            | 12                                 | 50                                  | 8                    |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 13                                 | 70                                  | 11                   | 18.5            | 15             | 11             | 26             | M5                                                                 | 14     | 5          | 4                   | 310                                                                         | 0.2          | ●               |
|                    | 14                                 | 90                                  | 13                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 24 x 50            | 19                                 | 180                                 | 19                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 20                                 | 210                                 | 21                   | 22.5            | 19             | 14             | 36             | M5                                                                 | 18     | 6          | 5                   | 286                                                                         | 0.2          | ●               |
|                    | 21                                 | 250                                 | 24                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 30 x 60            | 24                                 | 310                                 | 26                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 25                                 | 340                                 | 27                   | 24.5            | 21             | 16             | 44             | M5                                                                 | 18     | 6          | 6                   | 233                                                                         | 0.3          | ●               |
|                    | 26                                 | 380                                 | 29                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 36 x 72            | 28                                 | 460                                 | 33                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 30                                 | 590                                 | 39                   | 27              | 23             | 18             | 52             | M6                                                                 | 20     | 5          | 12                  | 307                                                                         | 0.4          | ●               |
|                    | 31                                 | 630                                 | 41                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 44 x 80            | 32                                 | 630                                 | 39                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 35                                 | 780                                 | 45                   | 29              | 25             | 20             | 61             | M6                                                                 | 22     | 7          | 12                  | 317                                                                         | 0.6          | ●               |
|                    | 36                                 | 860                                 | 48                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 50 x 90            | 38                                 | 940                                 | 49                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 40                                 | 1100                                | 55                   | 31              | 27             | 22             | 70             | M6                                                                 | 22     | 8          | 12                  | 289                                                                         | 0.8          | ●               |
|                    | 42                                 | 1300                                | 62                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 55 x 100           | 42                                 | 1200                                | 57                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 45                                 | 1500                                | 67                   | 34              | 30             | 23             | 75             | M6                                                                 | 25     | 8          | 12                  | 252                                                                         | 1.1          | ●               |
|                    | 48                                 | 1900                                | 79                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 62 x 110           | 48                                 | 1800                                | 75                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 50                                 | 2200                                | 88                   | 34              | 30             | 23             | 86             | M6                                                                 | 25     | 10         | 12                  | 279                                                                         | 1.3          | ●               |
|                    | 52                                 | 2400                                | 92                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 68 x 115           | 50                                 | 2000                                | 80                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 55                                 | 2500                                | 91                   | 34              | 30             | 23             | 86             | M6                                                                 | 25     | 10         | 12                  | 255                                                                         | 1.4          | ●               |
|                    | 60                                 | 3100                                | 103                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 75 x 138           | 55                                 | 2500                                | 91                   |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 60                                 | 3200                                | 107                  | 37.5            | 32             | 25             | 100            | M8                                                                 | 30     | 7          | 30                  | 273                                                                         | 1.8          | ●               |
|                    | 65                                 | 3900                                | 120                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 80 x 145           | 60                                 | 3200                                | 107                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 65                                 | 3900                                | 120                  | 37.5            | 32             | 25             | 100            | M8                                                                 | 30     | 7          | 30                  | 256                                                                         | 2.6          | ●               |
|                    | 70                                 | 4600                                | 131                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 85 x 155           | 65                                 | 4800                                | 148                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 70                                 | 6100                                | 174                  | 44.5            | 39             | 30             | 114            | M8                                                                 | 35     | 10         | 30                  | 285                                                                         | 3.9          |                 |
|                    | 75                                 | 7400                                | 197                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 90 x 155           | 65                                 | 4700                                | 145                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 70                                 | 6000                                | 171                  | 44.5            | 39             | 30             | 114            | M8                                                                 | 35     | 10         | 30                  | 217                                                                         | 3.8          | ●               |
|                    | 75                                 | 7200                                | 192                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 100 x 170          | 70                                 | 6900                                | 197                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 75                                 | 7500                                | 200                  | 49.5            | 44             | 34             | 124            | M8                                                                 | 35     | 12         | 30                  | 227                                                                         | 4.7          | ●               |
|                    | 80                                 | 9000                                | 225                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 110 x 185          | 75                                 | 7200                                | 192                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 80                                 | 9000                                | 225                  | 56.5            | 50             | 39             | 136            | M10                                                                | 40     | 9          | 59                  | 215                                                                         | 6.0          | ●               |
|                    | 85                                 | 11000                               | 259                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 115 x 188          | 80                                 | 8500                                | 213                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 85                                 | 10000                               | 235                  | 56.5            | 50             | 39             | 141            | M10                                                                | 40     | 9          | 59                  | 209                                                                         | 5.0          |                 |
|                    | 90                                 | 12000                               | 267                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 120 x 215          | 80                                 | 10500                               | 263                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 85                                 | 13200                               | 311                  | 58.5            | 52             | 42             | 160            | M10                                                                | 40     | 12         | 59                  | 271                                                                         | 5.9          |                 |
|                    | 90                                 | 14400                               | 320                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 125 x 215          | 85                                 | 11000                               | 259                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 90                                 | 13000                               | 289                  | 58.5            | 52             | 42             | 160            | M10                                                                | 40     | 12         | 59                  | 222                                                                         | 8.5          | ●               |
|                    | 95                                 | 15000                               | 316                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 130 x 215          | 90                                 | 13700                               | 304                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 95                                 | 15800                               | 333                  | 58.5            | 52             | 42             | 160            | M10                                                                | 40     | 12         | 59                  | 227                                                                         | 9.0          |                 |
|                    | 100                                | 18200                               | 364                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
| 140 x 230          | 95                                 | 15000                               | 316                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |
|                    | 100                                | 17000                               | 340                  | 67.5            | 60             | 46             | 175            | M12                                                                | 45     | 10         | 100                 | 209                                                                         | 11           |                 |
|                    | 105                                | 20000                               | 381                  |                 |                |                |                |                                                                    |        |            |                     |                                                                             |              |                 |

● Sizes of clamping elements available from stock.  
Other sizes on request.

# CLAMPEX® KTR 603

## Clamping elements

Three-part external clamping set for applications on hollow shafts



| CLAMPEX® – KTR 603 |                                    |                                     |                      |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|--------------------|------------------------------------|-------------------------------------|----------------------|-----------------|----------------|----------------|----------------|--------------------------------------------------------------------|--------|------------|---------------------|---------------------------------------------------|--------------|-----------------|
| d x D [mm]         | Shaft diameter d <sub>W</sub> [mm] | Transmittable torque or axial force |                      | Dimensions [mm] |                |                |                | Clamping screws DIN EN ISO 4014 - 10.9<br>μ <sub>total</sub> =0.10 |        |            |                     | Surface pressure of clamping element/hollow shaft | Weight [~kg] | Stock programme |
|                    |                                    | T [Nm]                              | F <sub>ax</sub> [kN] | B               | B <sub>1</sub> | B <sub>2</sub> | d <sub>1</sub> | M                                                                  | Length | z = number | T <sub>A</sub> [Nm] | P <sub>H</sub> [N/mm <sup>2</sup> ]               |              |                 |
| 155 x 265          | 105                                | 20000                               | 381                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 110                                | 23000                               | 418                  | 71.5            | 64             | 50             | 192            | M12                                                                | 50     | 12         | 100                 | 212                                               | 15           |                 |
|                    | 115                                | 26000                               | 452                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 160x 265           | 110                                | 22500                               | 409                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 115                                | 25500                               | 443                  | 71.5            | 64             | 50             | 192            | M12                                                                | 50     | 12         | 100                 | 204                                               | 14           |                 |
|                    | 120                                | 28600                               | 477                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 165 x 290          | 115                                | 36000                               | 626                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 120                                | 39000                               | 650                  | 81              | 71             | 56             | 210            | M16                                                                | 60     | 8          | 250                 | 269                                               | 24           |                 |
|                    | 125                                | 44000                               | 704                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 170 x 290          | 120                                | 31700                               | 528                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 125                                | 35800                               | 573                  | 81              | 71             | 56             | 210            | M16                                                                | 60     | 8          | 250                 | 216                                               | 24           |                 |
|                    | 130                                | 40000                               | 615                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 175 x 300          | 125                                | 40000                               | 640                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 130                                | 44000                               | 677                  | 81              | 71             | 56             | 220            | M16                                                                | 60     | 8          | 250                 | 253                                               | 16           |                 |
|                    | 135                                | 49000                               | 726                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 180 x 300          | 130                                | 36800                               | 566                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 135                                | 42000                               | 622                  | 81              | 71             | 56             | 220            | M16                                                                | 60     | 8          | 250                 | 211                                               | 16           |                 |
|                    | 140                                | 46000                               | 657                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 185 x 330          | 135                                | 55000                               | 815                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 140                                | 60000                               | 857                  | 96              | 86             | 71             | 236            | M16                                                                | 65     | 10         | 250                 | 231                                               | 35           |                 |
|                    | 145                                | 65000                               | 897                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 190 x 330          | 140                                | 53300                               | 761                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 145                                | 58500                               | 807                  | 96              | 86             | 71             | 236            | M16                                                                | 65     | 10         | 250                 | 201                                               | 35           |                 |
|                    | 150                                | 63500                               | 847                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 195 x 350          | 140                                | 66000                               | 943                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 150                                | 76000                               | 1013                 | 96              | 86             | 71             | 246            | M16                                                                | 65     | 12         | 250                 | 259                                               | 38           |                 |
|                    | 155                                | 82000                               | 1058                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 200 x 350          | 150                                | 73700                               | 983                  |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 155                                | 79800                               | 1030                 | 96              | 86             | 71             | 246            | M16                                                                | 65     | 12         | 250                 | 240                                               | 41           |                 |
|                    | 160                                | 85800                               | 1073                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 220 x 370          | 160                                | 95000                               | 1188                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 165                                | 102000                              | 1236                 | 114             | 104            | 88             | 270            | M16                                                                | 80     | 15         | 250                 | 216                                               | 54           |                 |
|                    | 170                                | 110000                              | 1294                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 240 x 405          | 170                                | 120000                              | 1412                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 180                                | 140000                              | 1556                 | 121.5           | 109            | 92             | 295            | M20                                                                | 80     | 12         | 490                 | 239                                               | 67           |                 |
|                    | 190                                | 160000                              | 1684                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 250 x 405          | 180                                | 160000                              | 1778                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 190                                | 180000                              | 1895                 | 120.5           | 108            | 92             | 295            | M20                                                                | 85     | 14         | 490                 | 263                                               | 64           |                 |
|                    | 200                                | 200000                              | 2000                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 260 x 430          | 190                                | 165000                              | 1737                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 200                                | 185000                              | 1850                 | 132.5           | 120            | 103            | 321            | M20                                                                | 90     | 14         | 490                 | 225                                               | 82           |                 |
|                    | 210                                | 204000                              | 1943                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |

● Sizes of clamping elements available from stock.  
Other sizes on request.

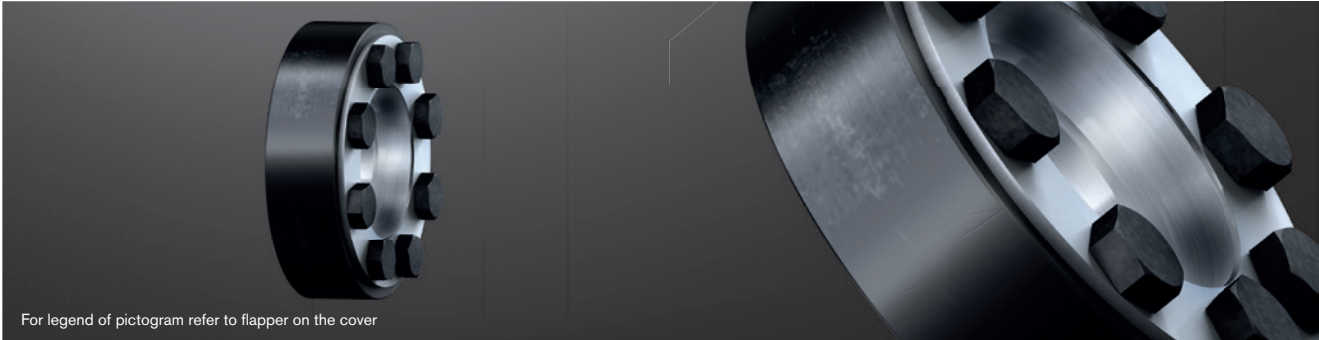
| CLAMPEX® – KTR 603 |                                    |                                     |                      |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|--------------------|------------------------------------|-------------------------------------|----------------------|-----------------|----------------|----------------|----------------|--------------------------------------------------------------------|--------|------------|---------------------|---------------------------------------------------|--------------|-----------------|
| d x D [mm]         | Shaft diameter d <sub>w</sub> [mm] | Transmittable torque or axial force |                      | Dimensions [mm] |                |                |                | Clamping screws DIN EN ISO 4014 - 10.9<br>μ <sub>total</sub> =0.10 |        |            |                     | Surface pressure of clamping element/hollow shaft | Weight [~kg] | Stock programme |
|                    |                                    | T [Nm]                              | F <sub>ax</sub> [kN] | B               | B <sub>1</sub> | B <sub>2</sub> | d <sub>1</sub> | M                                                                  | Length | z = number | T <sub>A</sub> [Nm] | P <sub>H</sub> [N/mm <sup>2</sup> ]               |              |                 |
| 280 x 460          | 210                                | 216000                              | 2057                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 220                                | 245000                              | 2227                 | 146.5           | 134            | 114            | 346            | M20                                                                | 100    | 16         | 490                 | 217                                               | 102          |                 |
|                    | 230                                | 270000                              | 2348                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 300 x 485          | 230                                | 274000                              | 2383                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 240                                | 296000                              | 2467                 | 154.5           | 142            | 122            | 364            | M20                                                                | 100    | 18         | 490                 | 209                                               | 118          |                 |
|                    | 245                                | 316000                              | 2580                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 320 x 520          | 240                                | 311000                              | 2592                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 250                                | 340000                              | 2720                 | 154.5           | 142            | 122            | 386            | M20                                                                | 100    | 20         | 490                 | 219                                               | 131          |                 |
|                    | 260                                | 375000                              | 2885                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 330 x 520          | 250                                | 352000                              | 2816                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 260                                | 385000                              | 2962                 | 154.5           | 142            | 122            | 386            | M20                                                                | 100    | 22         | 490                 | 224                                               | 126.1        |                 |
|                    | 270                                | 420000                              | 3111                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 340 x 570          | 250                                | 389000                              | 3112                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 260                                | 422000                              | 3246                 | 168.5           | 156            | 134            | 408            | M20                                                                | 110    | 24         | 490                 | 227                                               | 186          |                 |
|                    | 270                                | 459000                              | 3400                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 350 x 580          | 270                                | 443000                              | 3281                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 280                                | 480000                              | 3429                 | 174.5           | 162            | 140            | 432            | M20                                                                | 110    | 24         | 490                 | 212                                               | 195          |                 |
|                    | 285                                | 500000                              | 3509                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 360 x 590          | 280                                | 462000                              | 3300                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 290                                | 500000                              | 3448                 | 174.5           | 162            | 140            | 432            | M20                                                                | 110    | 24         | 490                 | 204                                               | 204          |                 |
|                    | 300                                | 530000                              | 3533                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 380 x 645          | 290                                | 570000                              | 3931                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 300                                | 610000                              | 4067                 | 183             | 168            | 144            | 458            | M24                                                                | 120    | 20         | 840                 | 224                                               | 239          |                 |
|                    | 310                                | 660000                              | 4258                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 390 x 660          | 300                                | 625000                              | 4167                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 310                                | 670000                              | 4323                 | 183             | 168            | 144            | 468            | M24                                                                | 120    | 21         | 840                 | 229                                               | 260          |                 |
|                    | 320                                | 720000                              | 4500                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 400 x 680          | 315                                | 671000                              | 4260                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 320                                | 695000                              | 4344                 | 183             | 168            | 144            | 480            | M24                                                                | 120    | 21         | 840                 | 222                                               | 280          |                 |
|                    | 330                                | 745000                              | 4515                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 420 x 690          | 330                                | 782000                              | 4739                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 340                                | 841000                              | 4947                 | 203             | 188            | 164            | 504            | M24                                                                | 130    | 24         | 840                 | 211                                               | 316          |                 |
|                    | 350                                | 902000                              | 5154                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 440 x 750          | 340                                | 805000                              | 4735                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 350                                | 861000                              | 4920                 | 217             | 202            | 177            | 527            | M24                                                                | 140    | 24         | 840                 | 190                                               | 408          |                 |
|                    | 360                                | 920000                              | 5111                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 460 x 770          | 360                                | 1000000                             | 5556                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 370                                | 1073000                             | 5800                 | 217             | 202            | 177            | 547            | M24                                                                | 140    | 28         | 840                 | 210                                               | 420          |                 |
|                    | 380                                | 1141000                             | 6005                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 480 x 800          | 380                                | 1175000                             | 6184                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 390                                | 1250000                             | 6410                 | 228             | 213            | 188            | 570            | M24                                                                | 140    | 30         | 840                 | 206                                               | 505          |                 |
|                    | 400                                | 1312000                             | 6560                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
| 500 x 850          | 400                                | 1314000                             | 6570                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |
|                    | 410                                | 1382000                             | 6741                 | 230             | 213            | 188            | 590            | M27                                                                | 150    | 24         | 1250                | 205                                               | 575          |                 |
|                    | 420                                | 1460000                             | 6952                 |                 |                |                |                |                                                                    |        |            |                     |                                                   |              |                 |

● Sizes of clamping elements available from stock.  
Other sizes on request.

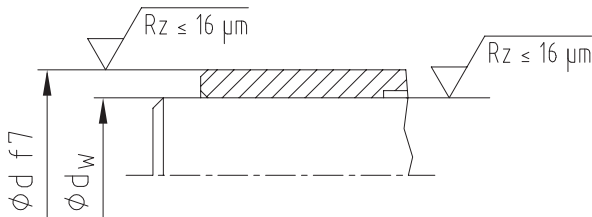
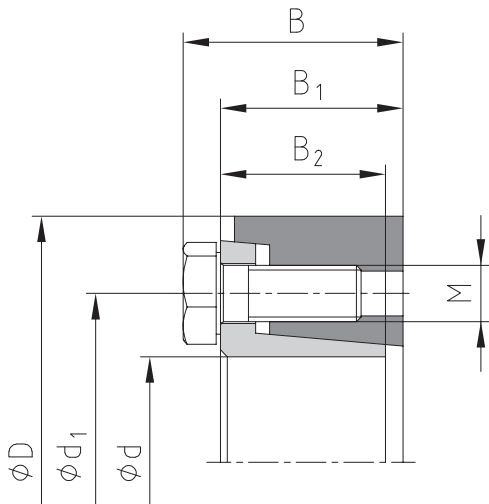
# CLAMPEX® KTR 620

## Clamping elements

Two-part external clamping set for applications on hollow shafts

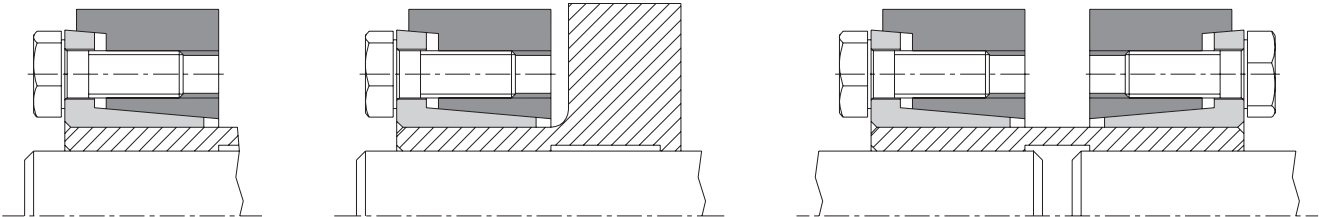


For legend of pictogram refer to flapper on the cover



Tolerances for  $d_w$   
 $d_w \leq \varnothing 160 = h6/H7$   
 $d_w > \varnothing 160 = g6/H7$

Example of application of hub type



|                          |         |                             |   |                             |
|--------------------------|---------|-----------------------------|---|-----------------------------|
| <b>Ordering example:</b> | KTR 620 | 55                          | x | 100                         |
|                          | Series  | Size of internal diameter d |   | Size of external diameter D |

| CLAMPEX® – KTR 620 |                                    |                                     |                      |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|--------------------|------------------------------------|-------------------------------------|----------------------|-----------------|----------------|----------------|----------------|----------------------------------------------------------------------------------|--------|------------|---------------------|---------------------------------------------------|--------------|-----------------|
| d x D [mm]         | Shaft diameter d <sub>W</sub> [mm] | Transmittable torque or axial force |                      | Dimensions [mm] |                |                |                | Clamping screws DIN EN ISO 4017 - 12.9 <sup>1)</sup><br>μ <sub>total</sub> =0.10 |        |            |                     | Surface pressure of clamping element/hollow shaft | Weight [~kg] | Stock programme |
|                    |                                    | T [Nm]                              | F <sub>ax</sub> [kN] | B               | B <sub>1</sub> | B <sub>2</sub> | d <sub>1</sub> | M                                                                                | Length | z = number | T <sub>A</sub> [Nm] | P <sub>H</sub> [N/mm <sup>2</sup> ]               |              |                 |
| 16 x 41            | 13                                 | 70                                  | 11                   | 19.5            | 15.3           | 13.5           | 28             | M6                                                                               | 12     | 3          | 13                  | 254                                               | 0.1          |                 |
|                    | 14                                 | 90                                  | 13                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 18 x 44            | 15                                 | 80                                  | 11                   | 19.5            | 15.3           | 13.5           | 30             | M6                                                                               | 12     | 4          | 13                  | 222                                               | 0.1          |                 |
|                    | 16                                 | 110                                 | 14                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 20 x 47            | 17                                 | 150                                 | 18                   | 19.5            | 15.3           | 13.5           | 32             | M6                                                                               | 12     | 4          | 13                  | 274                                               | 0.1          | ●               |
|                    | 18                                 | 175                                 | 19                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 24 x 50            | 19                                 | 165                                 | 17                   | 22              | 18.22          | 16             | 36             | M6                                                                               | 16     | 5          | 13                  | 243                                               | 0.2          | ●               |
|                    | 20                                 | 215                                 | 22                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 22                                 | 280                                 | 25                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 26 x 51.5          | 20                                 | 200                                 | 20                   | 22              | 18.05          | 16             | 38             | M6                                                                               | 16     | 5          | 13                  | 238                                               | 0.2          |                 |
|                    | 22                                 | 260                                 | 24                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 24                                 | 330                                 | 28                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 30 x 60            | 24                                 | 370                                 | 31                   | 24              | 20.26          | 18             | 44             | M6                                                                               | 16     | 6          | 13                  | 255                                               | 0.3          | ●               |
|                    | 25                                 | 420                                 | 34                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 26                                 | 465                                 | 36                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 36 x 72            | 27                                 | 480                                 | 36                   | 27.5            | 22.1           | 20             | 52             | M8                                                                               | 20     | 5          | 30                  | 250                                               | 0.5          | ●               |
|                    | 30                                 | 650                                 | 43                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 33                                 | 835                                 | 51                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 38 x 72            | 27                                 | 480                                 | 36                   | 27.5            | 22.1           | 20             | 54             | M8                                                                               | 20     | 5          | 30                  | 240                                               | 0.5          | ●               |
|                    | 30                                 | 645                                 | 43                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 33                                 | 765                                 | 46                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 40 x 80            | 34                                 | 830                                 | 49                   | 29.5            | 24.22          | 22             | 61             | M8                                                                               | 20     | 6          | 30                  | 209                                               | 0.6          | ●               |
| 44 x 80            | 35                                 | 770                                 | 44                   | 29.5            | 24.22          | 22             | 61             | M8                                                                               | 20     | 6          | 30                  | 192                                               | 0.6          | ●               |
|                    | 37                                 | 880                                 | 48                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 50 x 90            | 38                                 | 1130                                | 59                   | 31.5            | 26.1           | 23.5           | 68             | M8                                                                               | 20     | 8          | 30                  | 212                                               | 0.8          | ●               |
|                    | 40                                 | 1260                                | 63                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 42                                 | 1400                                | 67                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 55 x 100           | 42                                 | 1300                                | 62                   | 34.5            | 29             | 26             | 72             | M8                                                                               | 20     | 8          | 30                  | 195                                               | 1.1          | ●               |
|                    | 45                                 | 1600                                | 71                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 48                                 | 1900                                | 79                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 60 x 110           | 48                                 | 1700                                | 71                   | 34.5            | 29.25          | 26             | 80             | M8                                                                               | 20     | 9          | 30                  | 191                                               | 1.3          | ●               |
|                    | 50                                 | 1950                                | 78                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 52                                 | 2160                                | 83                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 62 x 110           | 48                                 | 1700                                | 71                   | 34.5            | 29.25          | 26             | 80             | M8                                                                               | 20     | 9          | 30                  | 189                                               | 1.3          | ●               |
|                    | 50                                 | 1950                                | 78                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 52                                 | 2160                                | 83                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 68 x 115           | 50                                 | 1900                                | 76                   | 35              | 29.4           | 26             | 86             | M8                                                                               | 20     | 9          | 30                  | 206                                               | 1.3          | ●               |
|                    | 55                                 | 2500                                | 91                   |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 60                                 | 3150                                | 105                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 75 x 138           | 55                                 | 2700                                | 98                   | 37.5            | 30.7           | 27             | 100            | M10                                                                              | 25     | 10         | 60                  | 211                                               | 2.3          | ●               |
|                    | 60                                 | 3400                                | 113                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 65                                 | 4100                                | 126                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 80 x 141           | 60                                 | 3300                                | 110                  | 37.5            | 31.1           | 27             | 104            | M10                                                                              | 25     | 10         | 60                  | 215                                               | 2.3          | ●               |
|                    | 65                                 | 4100                                | 126                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 70                                 | 4950                                | 141                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 85 x 155           | 65                                 | 5500                                | 169                  | 44.5            | 38.2           | 34             | 114            | M10                                                                              | 25     | 11         | 60                  | 216                                               | 3.2          |                 |
|                    | 70                                 | 6400                                | 183                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 75                                 | 7300                                | 195                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 90 x 155           | 65                                 | 5500                                | 169                  | 44.5            | 38.2           | 34             | 114            | M10                                                                              | 25     | 11         | 60                  | 223                                               | 3.2          | ●               |
|                    | 70                                 | 6600                                | 189                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 75                                 | 7900                                | 211                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 95 x 170           | 70                                 | 6200                                | 177                  | 50              | 43.45          | 39             | 124            | M10                                                                              | 30     | 14         | 60                  | 182                                               | 4.3          |                 |
|                    | 75                                 | 7400                                | 197                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 80                                 | 8600                                | 215                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 100 x 170          | 70                                 | 6200                                | 177                  | 50              | 43.45          | 39             | 124            | M10                                                                              | 30     | 14         | 60                  | 176                                               | 4.3          | ●               |
|                    | 75                                 | 7400                                | 197                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 80                                 | 8600                                | 215                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 105 x 185          | 80                                 | 10500                               | 263                  | 56.5            | 49.1           | 43.5           | 136            | M12                                                                              | 35     | 12         | 100                 | 208                                               | 5.8          |                 |
|                    | 85                                 | 11800                               | 278                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 90                                 | 13700                               | 304                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 110 x 185          | 80                                 | 10500                               | 263                  | 56.5            | 49.1           | 43.5           | 136            | M12                                                                              | 35     | 12         | 100                 | 202                                               | 5.8          | ●               |
|                    | 85                                 | 11800                               | 278                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 90                                 | 13700                               | 304                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 115 x 197          | 85                                 | 12500                               | 294                  | 60.5            | 53             | 48             | 147            | M12                                                                              | 35     | 14         | 100                 | 193                                               | 6.9          |                 |
|                    | 90                                 | 14100                               | 313                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 95                                 | 16000                               | 337                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
| 120 x 197          | 85                                 | 12500                               | 294                  | 60.5            | 53             | 48             | 147            | M12                                                                              | 35     | 14         | 100                 | 189                                               | 6.9          |                 |
|                    | 90                                 | 14100                               | 313                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |
|                    | 95                                 | 16000                               | 337                  |                 |                |                |                |                                                                                  |        |            |                     |                                                   |              |                 |

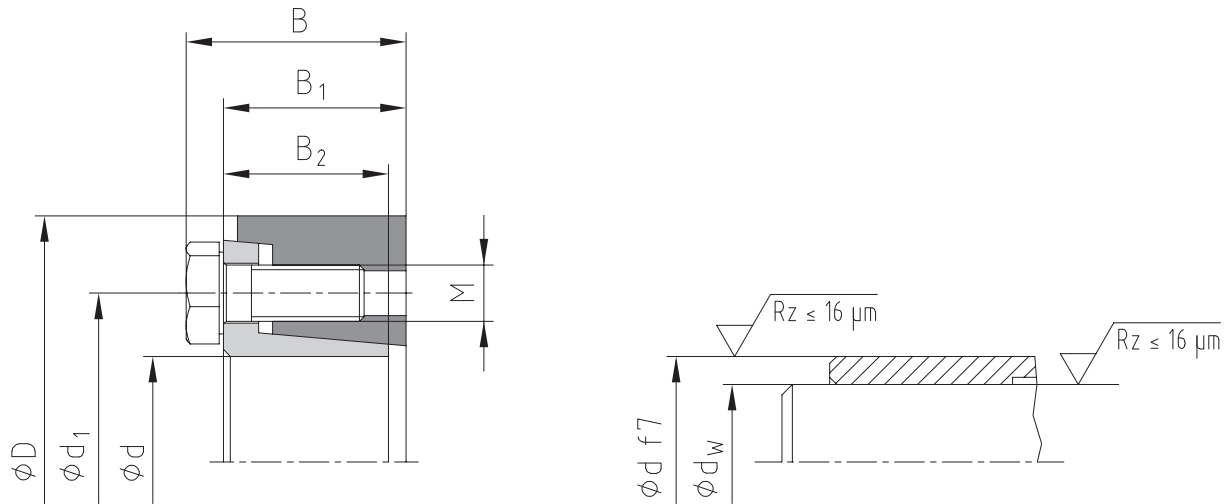
● Sizes of clamping elements available from stock.

<sup>1)</sup> DIN EN ISO 4017-10.9 for size 16 x 41 to 20 x 47

# CLAMPEX® KTR 620

## Clamping elements

Two-part external clamping set for applications on hollow shafts



| CLAMPEX® – KTR 620 |                                          |                                        |                      |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|--------------------|------------------------------------------|----------------------------------------|----------------------|-----------------|----------------|----------------|----------------|--------------------------------------------------------------------|--------|------------|---------------------|-----------------------------------------------------------------------------------------|--------------|----------------------|
| d x D<br>[mm]      | Shaft<br>diameter d <sub>w</sub><br>[mm] | Transmittable torque or<br>axial force |                      | Dimensions [mm] |                |                |                | Clamping screws DIN EN ISO 4017 - 12.9<br>μ <sub>total</sub> =0.10 |        |            |                     | Surface pressure<br>of clamping ele-<br>ment/hollow shaft<br><br>P <sub>H</sub> [N/mm²] | Weight [~kg] | Stock pro-<br>gramme |
|                    |                                          | T [Nm]                                 | F <sub>ax</sub> [kN] | B               | B <sub>1</sub> | B <sub>2</sub> | d <sub>1</sub> | M                                                                  | Length | z = number | T <sub>A</sub> [Nm] |                                                                                         |              |                      |
| 125 x 215          | 90                                       | 14500                                  | 322                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 95                                       | 16600                                  | 349                  | 61              | 53.4           | 48             | 158            | M12                                                                | 35     | 14         | 100                 | 196                                                                                     | 8.7          | ●                    |
|                    | 100                                      | 18800                                  | 376                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 130 x 215          | 95                                       | 17000                                  | 358                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 100                                      | 18400                                  | 368                  | 61              | 53.4           | 48             | 158            | M12                                                                | 35     | 14         | 100                 | 187                                                                                     | 9.4          |                      |
|                    | 110                                      | 22000                                  | 400                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 130 x 230          | 95                                       | 18400                                  | 387                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 100                                      | 20800                                  | 416                  | 66.5            | 57.5           | 51             | 165            | M14                                                                | 40     | 12         | 160                 | 213                                                                                     | 10.8         | ●                    |
|                    | 110                                      | 26200                                  | 476                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 135x 230           | 95                                       | 18400                                  | 387                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 100                                      | 20800                                  | 416                  | 66.5            | 57.5           | 51             | 165            | M14                                                                | 40     | 12         | 160                 | 209                                                                                     | 10.8         |                      |
|                    | 110                                      | 26200                                  | 476                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 140 x 230          | 100                                      | 19900                                  | 398                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 105                                      | 22200                                  | 423                  | 67              | 57.8           | 51             | 172            | M14                                                                | 40     | 12         | 160                 | 207                                                                                     | 10.3         |                      |
|                    | 115                                      | 27800                                  | 483                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 150 x 263          | 110                                      | 27000                                  | 491                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 120                                      | 32000                                  | 533                  | 71              | 62.2           | 55             | 186            | M14                                                                | 40     | 14         | 160                 | 202                                                                                     | 15.2         |                      |
|                    | 125                                      | 36200                                  | 579                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 155 x 263          | 110                                      | 27000                                  | 491                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 120                                      | 32000                                  | 533                  | 71              | 62.2           | 55             | 186            | M14                                                                | 40     | 14         | 160                 | 199                                                                                     | 15.2         |                      |
|                    | 125                                      | 36200                                  | 579                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 160 x 290          | 120                                      | 39000                                  | 650                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 130                                      | 48000                                  | 738                  | 78.5            | 68.5           | 61             | 198            | M16                                                                | 45     | 12         | 250                 | 215                                                                                     | 21.5         |                      |
|                    | 135                                      | 51000                                  | 756                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 165 x 290          | 120                                      | 39000                                  | 650                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 130                                      | 48000                                  | 738                  | 78.5            | 68.5           | 61             | 198            | M16                                                                | 45     | 12         | 250                 | 212                                                                                     | 21.5         |                      |
|                    | 135                                      | 51000                                  | 756                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 170 x 300          | 130                                      | 46500                                  | 715                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 140                                      | 53000                                  | 757                  | 79              | 68.9           | 61             | 208            | M16                                                                | 50     | 14         | 250                 | 212                                                                                     | 22.5         |                      |
|                    | 145                                      | 59000                                  | 814                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 175 x 300          | 130                                      | 46500                                  | 715                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 140                                      | 53000                                  | 757                  | 79              | 68.9           | 61             | 208            | M16                                                                | 50     | 14         | 250                 | 209                                                                                     | 22.5         | ●                    |
|                    | 145                                      | 59000                                  | 814                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 180 x 320          | 140                                      | 66000                                  | 943                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 150                                      | 76000                                  | 1013                 | 95              | 85             | 77.5           | 222            | M16                                                                | 50     | 16         | 250                 | 210                                                                                     | 32.7         |                      |
|                    | 155                                      | 83000                                  | 1071                 |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 185 x 320          | 140                                      | 66000                                  | 943                  |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 150                                      | 76000                                  | 1013                 | 95              | 85             | 77.5           | 222            | M16                                                                | 50     | 16         | 250                 | 207                                                                                     | 32.7         |                      |
|                    | 155                                      | 83000                                  | 1071                 |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 190 x 340          | 150                                      | 82000                                  | 1093                 |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 160                                      | 91000                                  | 1138                 | 98              | 87.7           | 77.5           | 238            | M16                                                                | 50     | 16         | 250                 | 225                                                                                     | 36.3         |                      |
|                    | 165                                      | 102000                                 | 1236                 |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 195 x 340          | 150                                      | 82000                                  | 1093                 |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 160                                      | 91000                                  | 1138                 | 98              | 87.7           | 77.5           | 238            | M16                                                                | 50     | 16         | 250                 | 222                                                                                     | 36.3         |                      |
|                    | 165                                      | 102000                                 | 1236                 |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
| 200 x 340          | 150                                      | 82000                                  | 1093                 |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |
|                    | 160                                      | 91000                                  | 1138                 | 98              | 87.7           | 77.5           | 238            | M16                                                                | 50     | 16         | 250                 | 219                                                                                     | 36.3         |                      |
|                    | 165                                      | 102000                                 | 1236                 |                 |                |                |                |                                                                    |        |            |                     |                                                                                         |              |                      |

● Sizes of clamping elements available from stock.

# CLAMPEX® – KTR 620

| d x D<br>[mm] | Shaft<br>diameter d <sub>w</sub><br>[mm] | Transmittable torque or<br>axial force |                      | Dimensions [mm] |                |                |                | Clamping screws DIN EN ISO 4017 - 12.9 <sup>2)</sup><br>μ <sub>total</sub> =0.10 |        |            |                     | Surface pressure<br>of clamping ele-<br>ment/hollow shaft | Weight [-kg] | Stock pro-<br>gramme |
|---------------|------------------------------------------|----------------------------------------|----------------------|-----------------|----------------|----------------|----------------|----------------------------------------------------------------------------------|--------|------------|---------------------|-----------------------------------------------------------|--------------|----------------------|
|               |                                          | T [Nm]                                 | F <sub>ax</sub> [kN] | B               | B <sub>1</sub> | B <sub>2</sub> | d <sub>1</sub> | M                                                                                | Length | z = number | T <sub>A</sub> [Nm] | P <sub>H</sub> [N/mm <sup>2</sup> ]                       |              |                      |
| 220 x 370     | 160                                      | 105000                                 | 1313                 | 120             | 107.55         | 96.5           | 268            | M20                                                                              | 60     | 15         | 480                 | 205                                                       | 53           |                      |
|               | 170                                      | 122000                                 | 1435                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 180                                      | 138000                                 | 1533                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 240 x 405     | 170                                      | 125000                                 | 1471                 | 123.5           | 111.1          | 98             | 288            | M20                                                                              | 60     | 16         | 480                 | 214                                                       | 66           |                      |
|               | 180                                      | 145000                                 | 1611                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 200                                      | 182000                                 | 1820                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 260 x 430     | 190                                      | 165000                                 | 1737                 | 138             | 125.3          | 110.5          | 312            | M20                                                                              | 60     | 16         | 480                 | 202                                                       | 82           |                      |
|               | 200                                      | 190000                                 | 1900                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 220                                      | 238000                                 | 2164                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 280 x 460     | 210                                      | 220000                                 | 2095                 | 152.5           | 140            | 121            | 334            | M20                                                                              | 60     | 18         | 480                 | 193                                                       | 103          |                      |
|               | 220                                      | 245000                                 | 2227                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 240                                      | 300000                                 | 2500                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 300 x 485     | 220                                      | 297000                                 | 2700                 | 159             | 139.8          | 124            | 360            | M24                                                                              | 70     | 16         | 840                 | 205                                                       | 120          |                      |
|               | 230                                      | 330000                                 | 2870                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 250                                      | 399000                                 | 3192                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 320 x 520     | 240                                      | 331000                                 | 2758                 | 160.5           | 141.6          | 124            | 380            | M24                                                                              | 70     | 18         | 840                 | 190                                                       | 138          |                      |
|               | 250                                      | 365000                                 | 2920                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 270                                      | 437000                                 | 3237                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 340 x 570     | 250                                      | 429000                                 | 3432                 | 177.5           | 158.4          | 139            | 402            | M24                                                                              | 70     | 18         | 840                 | 195                                                       | 189          |                      |
|               | 260                                      | 469000                                 | 3608                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 280                                      | 556000                                 | 3971                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 360 x 590     | 270                                      | 545000                                 | 4037                 | 182             | 163            | 143            | 424            | M24                                                                              | 70     | 20         | 840                 | 216                                                       | 207          |                      |
|               | 280                                      | 592000                                 | 4229                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 290                                      | 694000                                 | 4786                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 390 x 650     | 290                                      | 704000                                 | 4855                 | 191             | 169.2          | 148            | 454            | M27                                                                              | 70     | 18         | 1250                | 216                                                       | 249          |                      |
|               | 300                                      | 760000                                 | 5067                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 320                                      | 879000                                 | 5494                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 420 x 670     | 320                                      | 827000                                 | 5169                 | 208.4           | 186.4          | 166            | 486            | M27                                                                              | 70     | 20         | 1250                | 184                                                       | 285          |                      |
|               | 330                                      | 876000                                 | 5309                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 350                                      | 1000000                                | 5714                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 440 x 710     | 340                                      | 1117000                                | 6571                 | 220             | 198            | 179            | 506            | M27                                                                              | 70     | 21         | 1250                | 222                                                       | 343          |                      |
|               | 350                                      | 1190000                                | 6800                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 370                                      | 1345000                                | 7270                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 460 x 750     | 360                                      | 1306000                                | 7256                 | 223             | 201            | 179            | 534            | M27                                                                              | 70     | 21         | 1250                | 230                                                       | 387          |                      |
|               | 370                                      | 1386000                                | 7492                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 390                                      | 1554000                                | 7969                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 470 x 705     | 370                                      | 950000                                 | 5135                 | 241.6           | 219.6          | 200            | 538            | M27                                                                              | 70     | 21         | 1250                | 151                                                       | 340          |                      |
|               | 380                                      | 1000000                                | 5263                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 400                                      | 1150000                                | 5750                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 480 x 770     | 380                                      | 1557000                                | 8195                 | 247             | 223            | 201            | 552            | M30                                                                              | 100    | 21         | 1650                | 223                                                       | 449          |                      |
|               | 390                                      | 1648000                                | 8451                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 410                                      | 1818000                                | 8868                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 500 x 820     | 400                                      | 1653000                                | 8265                 | 241             | 217            | 198            | 572            | M30                                                                              | 100    | 24         | 1650                | 214                                                       | 515          |                      |
|               | 410                                      | 1725000                                | 8415                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 430                                      | 1915000                                | 8907                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 530 x 850     | 430                                      | 2048000                                | 9526                 | 262.3           | 238.3          | 216            | 606.5          | M30                                                                              | 100    | 24         | 1650                | 208                                                       | 585          |                      |
|               | 440                                      | 2154000                                | 9791                 |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 460                                      | 2374000                                | 10322                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 560 x 885     | 450                                      | 2306000                                | 10249                | 266             | 242            | 220            | 632            | M30                                                                              | 100    | 24         | 1650                | 212                                                       | 636          |                      |
|               | 460                                      | 2419000                                | 10517                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 480                                      | 2654000                                | 11058                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 590 x 950     | 470                                      | 2735000                                | 11638                | 281.5           | 257.5          | 236            | 664            | M30                                                                              | 100    | 28         | 1650                | 211                                                       | 805          |                      |
|               | 480                                      | 2863000                                | 11929                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 500                                      | 3128000                                | 12512                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 620 x 960     | 500                                      | 3150000                                | 12600                | 307             | 283            | 258            | 706            | M30                                                                              | 100    | 28         | 1650                | 201                                                       | 853          |                      |
|               | 520                                      | 3396000                                | 13062                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 540                                      | 3689000                                | 13663                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 660 x 1020    | 530                                      | 3636000                                | 13721                | 319             | 293            | 267            | 748            | M33                                                                              | 130    | 28         | 2250                | 199                                                       | 993          |                      |
|               | 550                                      | 3942000                                | 14335                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 570                                      | 4261000                                | 14951                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 700 x 1085    | 560                                      | 4189000                                | 14961                | 318.5           | 292.5          | 263            | 788            | M33                                                                              | 130    | 28         | 2250                | 187                                                       | 1112         |                      |
|               | 580                                      | 4520000                                | 15586                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 600                                      | 4863000                                | 16210                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 750 x 1100    | 600                                      | 5281000                                | 17603                | 346             | 320            | 280            | 850            | M33                                                                              | 130    | 32         | 2250                | 202                                                       | 1111         |                      |
|               | 620                                      | 5672000                                | 18297                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 650                                      | 6287000                                | 19345                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
| 800 x 1230    | 640                                      | 6091000                                | 19034                | 359             | 333            | 296            | 900            | M33                                                                              | 130    | 32         | 2250                | 202                                                       | 1589         |                      |
|               | 660                                      | 6511000                                | 19730                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |
|               | 700                                      | 7394000                                | 21126                |                 |                |                |                |                                                                                  |        |            |                     |                                                           |              |                      |



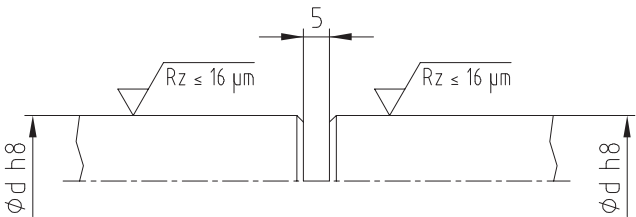
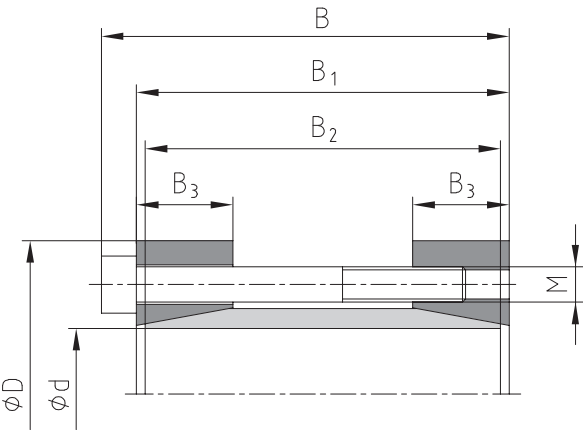
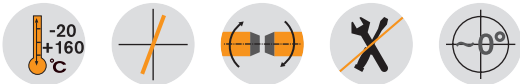
# CLAMPEX® KTR 700

## Clamping elements

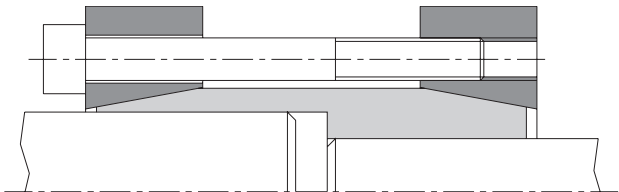
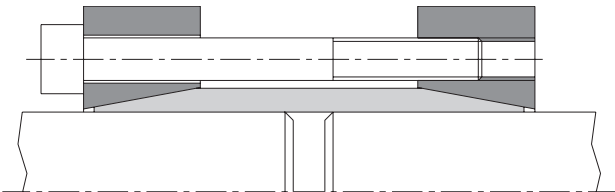
### Rigid shaft coupling to connect two shaft ends



For legend of pictogram refer to flapper on the cover



Example of application



Type on request

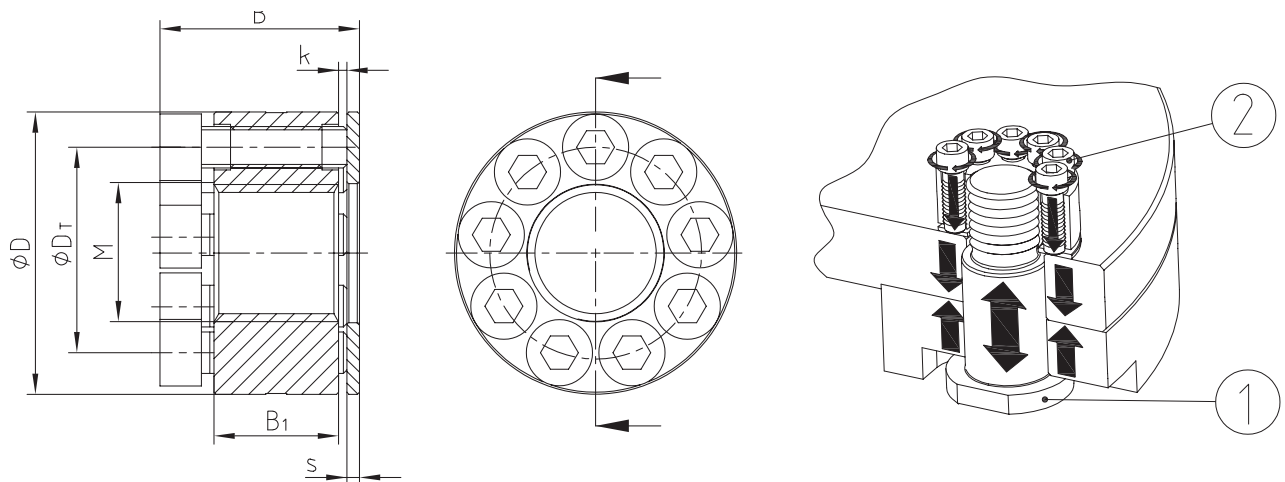
|                          |         |                             |   |                             |
|--------------------------|---------|-----------------------------|---|-----------------------------|
| <b>Ordering example:</b> | KTR 700 | 35                          | x | 75                          |
|                          | Series  | Size of internal diameter d |   | Size of external diameter D |

| CLAMPEX® – KTR 700 |                 |                |                |                |                                                                    |        |            |                     |                                     |                      |                                                   |                 |                      |
|--------------------|-----------------|----------------|----------------|----------------|--------------------------------------------------------------------|--------|------------|---------------------|-------------------------------------|----------------------|---------------------------------------------------|-----------------|----------------------|
| d x D [mm]         | Dimensions [mm] |                |                |                | Clamping screws DIN EN ISO 4762 - 12.9<br>μ <sub>total</sub> =0.14 |        |            |                     | Transmittable torque or axial force |                      | Surface pressure of<br>clamping element/<br>shaft | Weight<br>[~kg] | Stock pro-<br>gramme |
|                    | B               | B <sub>1</sub> | B <sub>2</sub> | B <sub>3</sub> | M                                                                  | Length | z = number | T <sub>A</sub> [Nm] | T [Nm]                              | F <sub>ax</sub> [kN] | P <sub>W</sub> [N/mm²]                            |                 |                      |
| 10 x 35            | 42              | 38             | 36             | 15             | M4                                                                 | 30     | 6          | 5.5                 | 62                                  | 12                   | 219                                               | 0.2             |                      |
| 11 x 35            | 42              | 38             | 36             | 15             | M4                                                                 | 30     | 6          | 5.5                 | 66                                  | 12                   | 193                                               | 0.2             |                      |
| 12 x 35            | 42              | 38             | 36             | 15             | M4                                                                 | 30     | 6          | 5.5                 | 72                                  | 12                   | 177                                               | 0.2             |                      |
| 14 x 35            | 42              | 38             | 36             | 15             | M4                                                                 | 30     | 6          | 5                   | 76                                  | 11                   | 137                                               | 0.2             |                      |
| 15 x 45            | 56              | 50             | 47             | 15             | M6                                                                 | 45     | 4          | 17                  | 160                                 | 21                   | 252                                               | 0.4             |                      |
| 16 x 45            | 56              | 50             | 47             | 15             | M6                                                                 | 45     | 4          | 17                  | 170                                 | 21                   | 235                                               | 0.4             |                      |
| 17 x 45            | 56              | 50             | 47             | 15             | M6                                                                 | 45     | 4          | 17                  | 180                                 | 21                   | 220                                               | 0.4             | ●                    |
| 18 x 50            | 56              | 50             | 47             | 15             | M6                                                                 | 45     | 4          | 17                  | 190                                 | 21                   | 207                                               | 0.5             |                      |
| 19 x 50            | 56              | 50             | 47             | 15             | M6                                                                 | 45     | 4          | 17                  | 200                                 | 21                   | 196                                               | 0.4             |                      |
| 20 x 50            | 56              | 50             | 47             | 15             | M6                                                                 | 45     | 4          | 17                  | 220                                 | 22                   | 195                                               | 0.4             | ●                    |
| 22 x 55            | 66              | 60             | 57             | 18             | M6                                                                 | 55     | 6          | 17                  | 360                                 | 33                   | 219                                               | 0.5             |                      |
| 24 x 55            | 66              | 60             | 57             | 18             | M6                                                                 | 55     | 6          | 17                  | 390                                 | 33                   | 200                                               | 0.6             |                      |
| 25 x 55            | 66              | 60             | 57             | 18             | M6                                                                 | 55     | 6          | 17                  | 400                                 | 32                   | 189                                               | 0.6             | ●                    |
| 28 x 60            | 66              | 60             | 57             | 18             | M6                                                                 | 55     | 6          | 17                  | 390                                 | 28                   | 147                                               | 0.8             |                      |
| 30 x 60            | 66              | 60             | 57             | 18             | M6                                                                 | 55     | 6          | 17                  | 420                                 | 28                   | 138                                               | 0.7             | ●                    |
| 32 x 75            | 83              | 75             | 72             | 20             | M8                                                                 | 70     | 4          | 41                  | 610                                 | 38                   | 158                                               | 0.1             |                      |
| 35 x 75            | 83              | 75             | 72             | 20             | M8                                                                 | 70     | 4          | 41                  | 670                                 | 38                   | 145                                               | 1.3             | ●                    |
| 38 x 75            | 83              | 75             | 72             | 20             | M8                                                                 | 70     | 4          | 41                  | 730                                 | 38                   | 134                                               | 1.2             |                      |
| 40 x 75            | 83              | 75             | 72             | 20             | M8                                                                 | 70     | 4          | 41                  | 760                                 | 38                   | 126                                               | 1.2             | ●                    |
| 42 x 85            | 93              | 85             | 81             | 22             | M8                                                                 | 80     | 6          | 41                  | 1170                                | 56                   | 160                                               | 1.8             |                      |
| 45 x 85            | 93              | 85             | 81             | 22             | M8                                                                 | 80     | 6          | 41                  | 1260                                | 56                   | 150                                               | 1.7             |                      |
| 48 x 90            | 93              | 85             | 81             | 22             | M8                                                                 | 80     | 6          | 41                  | 1360                                | 57                   | 142                                               | 1.9             |                      |
| 50 x 90            | 93              | 85             | 81             | 22             | M8                                                                 | 80     | 6          | 41                  | 1400                                | 56                   | 135                                               | 1.8             | ●                    |
| 55 x 95            | 93              | 85             | 81             | 22             | M8                                                                 | 80     | 8          | 41                  | 2000                                | 73                   | 159                                               | 2.0             |                      |
| 60 x 100           | 93              | 85             | 81             | 22             | M8                                                                 | 80     | 8          | 41                  | 2260                                | 75                   | 151                                               | 2.2             | ●                    |
| 65 x 105           | 93              | 85             | 81             | 22             | M8                                                                 | 80     | 8          | 41                  | 2500                                | 77                   | 143                                               | 2.6             |                      |
| 70 x 115           | 110             | 100            | 96             | 35             | M10                                                                | 80     | 8          | 83                  | 3300                                | 94                   | 102                                               | 4.1             |                      |
| 75 x 120           | 110             | 100            | 96             | 35             | M10                                                                | 80     | 8          | 83                  | 3500                                | 93                   | 94                                                | 4.3             |                      |
| 80 x 125           | 110             | 100            | 96             | 35             | M10                                                                | 80     | 7          | 75                  | 3900                                | 98                   | 92                                                | 4.5             |                      |
| 90 x 136           | 110             | 100            | 96             | 35             | M10                                                                | 80     | 8          | 75                  | 5100                                | 113                  | 95                                                | 5.2             |                      |
| 100 x 158          | 132             | 120            | 116            | 40             | M12                                                                | 100    | 8          | 130                 | 8350                                | 167                  | 111                                               | 6.0             |                      |

● Sizes of clamping elements available from stock.

# KTR Clamping nuts

Large screw connections for easy and quick assembly

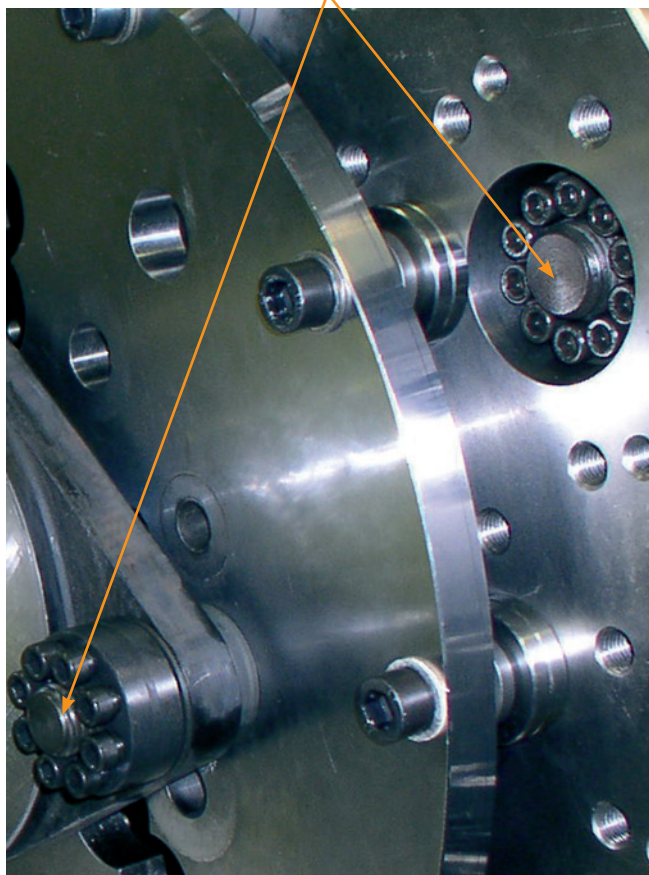


| KTR Clamping nuts |                 |                |       |                |     |       |                       |            |                                     |                   |                                      |                   |
|-------------------|-----------------|----------------|-------|----------------|-----|-------|-----------------------|------------|-------------------------------------|-------------------|--------------------------------------|-------------------|
| Size              | Dimensions [mm] |                |       |                |     |       | Pressure screw pos. 2 |            | Property class 8.8,<br>screw pos. 1 |                   | Property class 10.9,<br>screw pos. 1 |                   |
|                   | D               | D <sub>T</sub> | B     | B <sub>1</sub> | s   | k     | DIN EN ISO 4762       | z = number | Tightening torque<br>* [Nm]         | Preload force [N] | Tightening torque<br>* [Nm]          | Preload force [N] |
| M24 x 3.0         | 52              | 39             | 36.0  | 20             | 3.0 | 1 - 2 | M8                    | 8          | 21                                  | 174000            | 30                                   | 249000            |
| M27 x 3.0         | 57              | 42             | 41.0  | 25             | 3.0 | 1 - 2 | M8                    | 9          | 24                                  | 224000            | 30                                   | 280000            |
| M30 x 3.5         | 65              | 48             | 43.0  | 25             | 3.0 | 1 - 2 | M10                   | 8          | 41                                  | 274000            | 60                                   | 401000            |
| M33 x 3.5         | 68              | 51             | 48.0  | 30             | 3.0 | 1 - 2 | M10                   | 9          | 45                                  | 338000            | 60                                   | 451000            |
| M36 x 4.0         | 80              | 58             | 50.0  | 30             | 3.0 | 1 - 2 | M12                   | 8          | 71                                  | 396000            | 105                                  | 586000            |
| M42 x 4.5         | 86              | 64             | 55.0  | 35             | 3.0 | 1 - 2 | M12                   | 10         | 78                                  | 544000            | 105                                  | 732000            |
| M48 x 5.0         | 90              | 72             | 60.0  | 40             | 3.0 | 1 - 2 | M12                   | 11         | 94                                  | 721000            | 105                                  | 806000            |
| M52 x 5.0         | 100             | 79             | 66.5  | 42             | 4.5 | 1 - 2 | M12                   | 13         | 95                                  | 862000            | 105                                  | 952000            |
| M56 x 5.5         | 108             | 83             | 75.5  | 45             | 4.5 | 1 - 2 | M16                   | 9          | 210                                 | 1001000           | 250                                  | 1192000           |
| M60 x 5.5         | 112             | 86             | 80.5  | 48             | 4.5 | 1 - 2 | M16                   | 10         | 215                                 | 1139000           | 250                                  | 1325000           |
| M64 x 6.0         | 120             | 92             | 84.0  | 52             | 8.0 | 1 - 2 | M16                   | 11         | 225                                 | 1311000           | 250                                  | 1457000           |
| M72 x 6.0         | 142             | 107            | 98.0  | 58             | 8.0 | 1 - 2 | M20                   | 10         | 400                                 | 1696000           | 490                                  | 2077000           |
| M80 x 6.0         | 164             | 122            | 103.0 | 64             | 8.0 | 1 - 2 | M20                   | 12         | 420                                 | 2137000           | 490                                  | 2493000           |

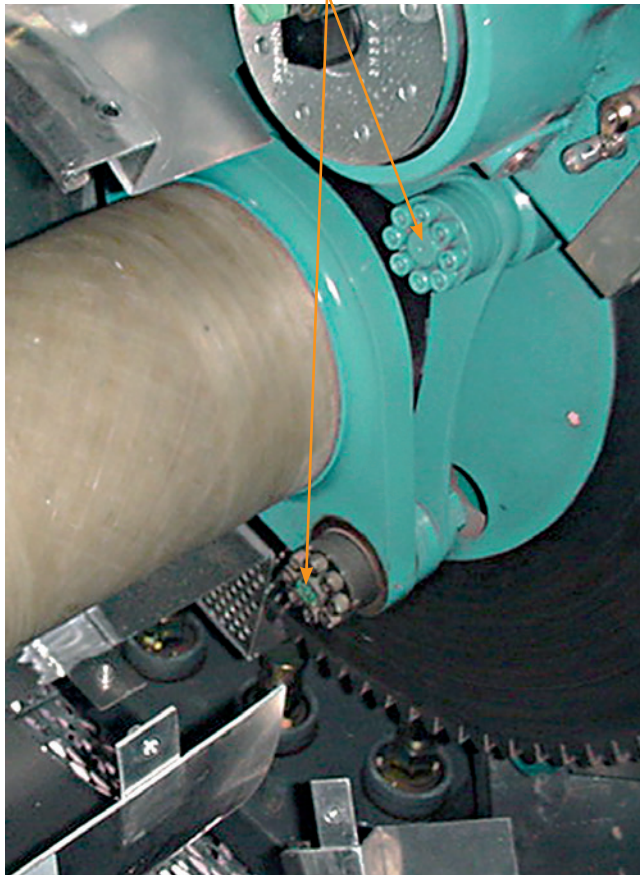
\* per screw pos. 2

|                   |                  |           |
|-------------------|------------------|-----------|
| Ordering example: | KTR clamping nut | M33 x 3.5 |
|                   | Description      | Size      |

Used on 100 kNm test bench flanges



Used on couplings for wind turbines



Available as a complete unit including  
dowel screw

