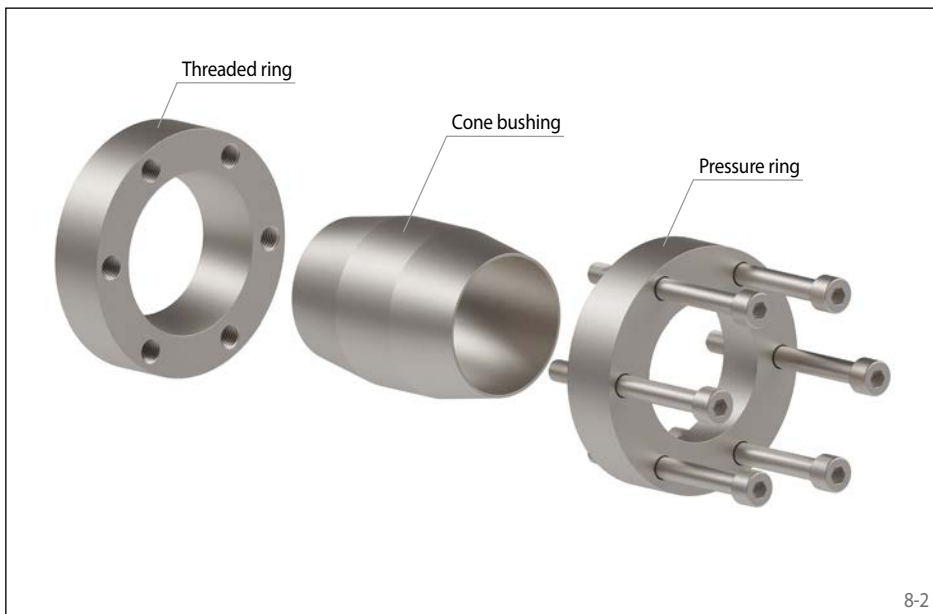




8-1

## Features

- Compact design
- Easy to remove
- For shaft diameters ranging from 14 mm to 100 mm
- Rigid and backlash-free connections of the shaft ends
- Shafts are not weakened by keyways
- No fretting corrosion like with keyway connections
- Transmission of torque and/or axial forces
- Typical applications: Connection of shaft sections e.g. with slitter winders in the paper industry



8-2

## Order example

|                                                   | Code |
|---------------------------------------------------|------|
| Coupling design                                   | RWK  |
| Coupling size                                     | 0014 |
| Type                                              | EEO  |
| Material of the hub:                              | STA  |
| • Steel                                           |      |
| Hub, type:                                        | 0    |
| • 0, standard                                     |      |
| Hub, design:                                      | SE   |
| • Clamping ring hub, clamping screws from outside |      |
| Bore diameter d                                   | 014  |

RWK 0014 EEO-STA-0SE014

## Transmissible torques and axial forces

The transmissible torques and axial forces listed on the following page are subject to the listed tolerances, surface finishes and material requirements. Please contact RINGSPANN in case of deviations.

### Tolerances

- h8 for shaft diameter d

### Surfaces

Average surface finish at the contact surfaces of the shafts  $R_z = 10 \dots 25 \mu\text{m}$ .

### Materials

The following apply to the shafts:

- E-module  $\geq 170 \text{ kN/mm}^2$

## Simultaneous transmission of torque and axial force

The transmissible torques  $T_{K \max}$  which are shown in the table apply for axial forces  $F_{ax \max} = 0 \text{ kN}$  and conversely, the indicated axial forces  $F_{ax \max}$  apply to torques  $T_{K \max} = 0 \text{ Nm}$ . If torque and axial force are to be transmitted simultaneously, the transmissible torque and the transmissible axial force are reduced.

For a given axial force  $F_{AN \max}$ , the reduced torque  $T_{K \max r}$  is calculated as:

$$T_{K \max r} = \sqrt{T_{K \max}^2 - (F_{AN \max} \cdot \frac{d}{2})^2}$$

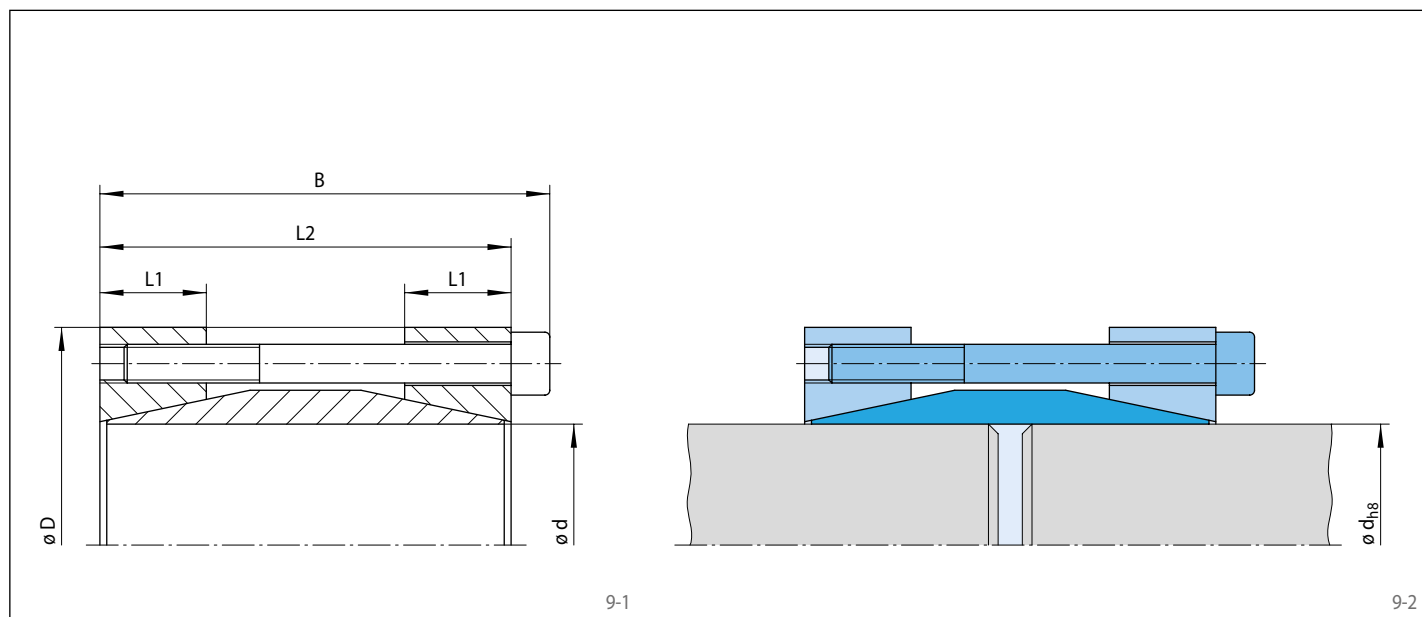
For a given torque  $T_{N \max}$ , the reduced axial force  $F_{ax \max r}$  is calculated as:

$$F_{ax \max r} = \frac{2}{d} \sqrt{T_{K \max}^2 - T_{N \max}^2}$$

|                |                                                    |
|----------------|----------------------------------------------------|
| $T_{K \max}$   | = Max. transmissible torque of the coupling [Nm]   |
| $T_{K \max r}$ | = Reduced maximum torque of the coupling [Nm]      |
| $T_{N \max}$   | = Maximum torque occurring in the application [Nm] |

|                 |                                                         |
|-----------------|---------------------------------------------------------|
| $F_{AN \max}$   | = Maximum axial force occurring in the application [kN] |
| $F_{ax \max}$   | = Max. transmissible axial force [kN]                   |
| $F_{ax \max r}$ | = Reduced axial force [kN]                              |
| d               | = Shaft diameter [mm]                                   |

## backlash-free connection of two shaft ends



| Coupling size | Max. transmissible torque or axial force |                     | Clamping screws   |        |      |        | D   | B   | L1 | L2  | Weight |
|---------------|------------------------------------------|---------------------|-------------------|--------|------|--------|-----|-----|----|-----|--------|
|               |                                          |                     | Tightening torque | Number | Size | Length |     |     |    |     |        |
| d             | T <sub>K max</sub>                       | F <sub>ax max</sub> | M <sub>S</sub>    |        |      |        | mm  | mm  | mm | mm  | kg     |
| 0014          | 130                                      | 18                  | 16                | 4      | M 6  | 45     | 45  | 56  | 15 | 50  | 0,38   |
| 0015          | 140                                      | 18                  | 16                | 4      | M 6  | 45     | 45  | 56  | 15 | 50  | 0,35   |
| 0016          | 150                                      | 18                  | 16                | 4      | M 6  | 45     | 45  | 56  | 15 | 50  | 0,37   |
| 0017          | 160                                      | 18                  | 16                | 4      | M 6  | 45     | 45  | 56  | 15 | 50  | 0,40   |
| 0018          | 160                                      | 17                  | 16                | 4      | M 6  | 45     | 50  | 56  | 15 | 50  | 0,45   |
| 0019          | 170                                      | 17                  | 16                | 4      | M 6  | 45     | 50  | 56  | 15 | 50  | 0,44   |
| 0020          | 180                                      | 18                  | 16                | 4      | M 6  | 45     | 50  | 56  | 15 | 50  | 0,44   |
| 0022          | 310                                      | 28                  | 16                | 6      | M 6  | 55     | 55  | 66  | 18 | 60  | 0,50   |
| 0024          | 330                                      | 27                  | 16                | 6      | M 6  | 55     | 55  | 66  | 18 | 60  | 0,63   |
| 0025          | 350                                      | 28                  | 16                | 6      | M 6  | 55     | 55  | 66  | 18 | 60  | 0,61   |
| 0028          | 340                                      | 24                  | 16                | 6      | M 6  | 55     | 60  | 66  | 18 | 60  | 0,75   |
| 0030          | 370                                      | 24                  | 16                | 6      | M 6  | 55     | 60  | 66  | 18 | 60  | 0,71   |
| 0032          | 520                                      | 32                  | 37                | 4      | M 8  | 70     | 75  | 83  | 20 | 75  | 0,14   |
| 0035          | 570                                      | 32                  | 37                | 4      | M 8  | 70     | 75  | 83  | 20 | 75  | 1,33   |
| 0038          | 620                                      | 32                  | 37                | 4      | M 8  | 70     | 75  | 83  | 20 | 75  | 1,20   |
| 0040          | 650                                      | 32                  | 37                | 4      | M 8  | 70     | 75  | 83  | 20 | 75  | 1,19   |
| 0042          | 990                                      | 47                  | 37                | 6      | M 8  | 80     | 85  | 93  | 22 | 85  | 1,80   |
| 0045          | 1050                                     | 46                  | 37                | 6      | M 8  | 80     | 85  | 93  | 22 | 85  | 1,72   |
| 0050          | 1200                                     | 48                  | 37                | 6      | M 8  | 80     | 90  | 93  | 22 | 85  | 1,80   |
| 0055          | 1700                                     | 61                  | 37                | 8      | M 8  | 80     | 95  | 93  | 22 | 85  | 2,00   |
| 0060          | 1950                                     | 65                  | 37                | 8      | M 8  | 80     | 100 | 93  | 22 | 85  | 2,17   |
| 0065          | 2150                                     | 66                  | 37                | 8      | M 8  | 80     | 105 | 93  | 22 | 85  | 2,60   |
| 0070          | 2800                                     | 80                  | 73                | 6      | M 10 | 80     | 115 | 110 | 35 | 100 | 4,10   |
| 0075          | 2900                                     | 77                  | 73                | 6      | M 10 | 80     | 120 | 110 | 35 | 100 | 4,30   |
| 0080          | 4200                                     | 100                 | 73                | 8      | M 10 | 80     | 125 | 110 | 35 | 100 | 4,48   |
| 0090          | 4700                                     | 100                 | 73                | 8      | M 10 | 80     | 135 | 110 | 35 | 100 | 5,20   |
| 0100          | 7600                                     | 150                 | 126               | 8      | M 12 | 100    | 155 | 132 | 40 | 120 | 6,00   |

### Bending moments

Where there are bending moments in the application in addition to the torque  $T_{N \max}$  or the axial force  $F_{AN \max}$ , the transmissible torque or transmissible axial force is reduced compared to the values for  $T_{K \max}$  or  $F_{ax \max}$  as listed in the table. Please contact RINGSPANN.

### Mounting

The installation and operating instruction for Cone Clamping Coupling RWK ... EEO is available on request.