

US  
01|2016



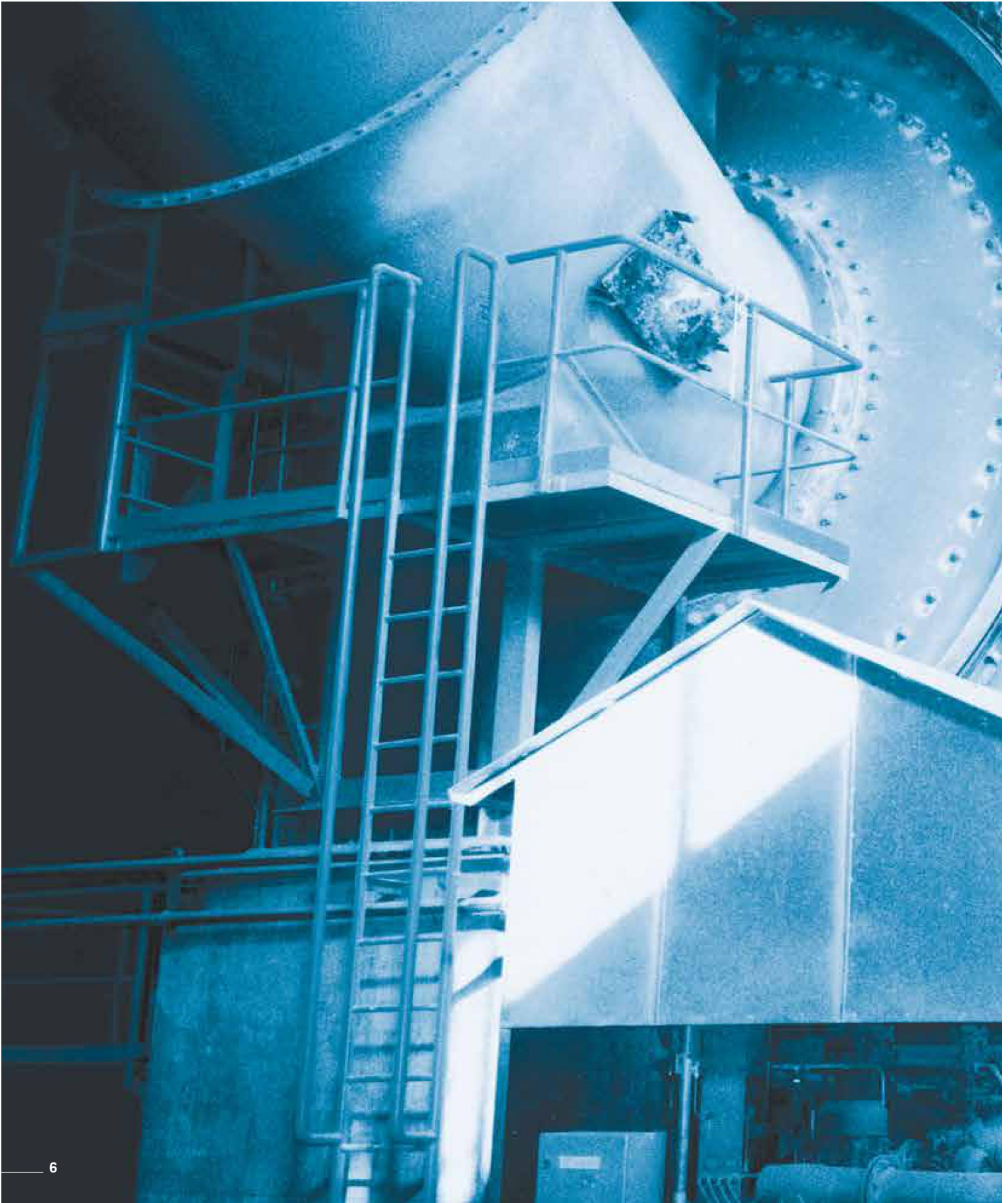
## Locking Assemblies & Locking Elements



Partner for Performance  
[www.ringfeder.com](http://www.ringfeder.com)



## RINGFEDER® Locking Assemblies

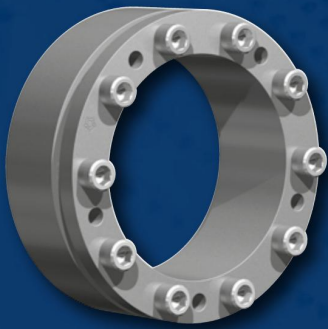




**RfN 7012**



**RfN 7012.2**



**RfN 7013.0**



**RfN 7013.1**



**RfN 7014**



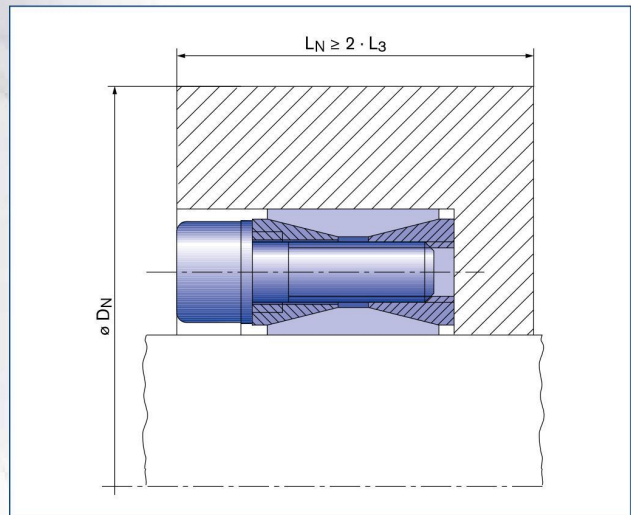
**RfN 7015.0**



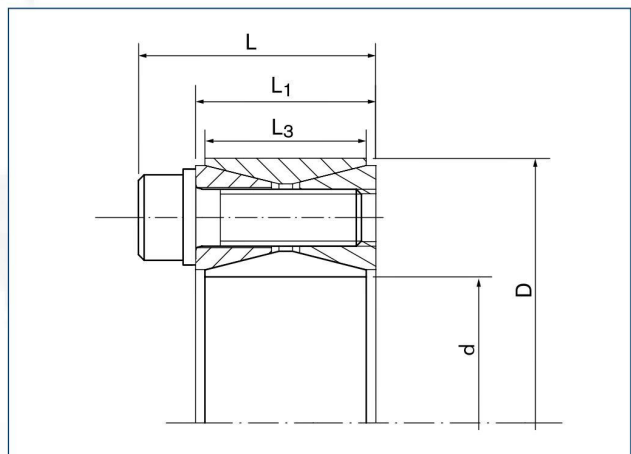
**RfN 7015.1**



**RfN 7515**



Locking Assembly RfN 7012 · Location · Calculation of hubs see on page 92-93  
(Calculation possible for other hub forms in our calculation program)



Locking Assembly RfN 7012 · Dimensions



■ **Mounting of Locking Assembly**

The Locking Assemblies are supplied slightly oiled and ready-to-use. The values for  $T$ ,  $F_{ax}$ ,  $p_w$  and  $p_N$  apply to Locking Assemblies in delivery condition.

■ **Surface finishes**

For shafts and hub bores  $R_a \leq 3,2 \mu m$

■ **Tolerances**

We recommend the following mounting tolerances

**Shaft: k9-h9; Hub: N9-H9**

**Max. permissible: Shaft: k11-h11; Hub: N11-H11**

To avoid excessive deformations of the relatively thickwalled thrust rings, the Locking Assembly should be located as symmetrically as possible between shaft and hub bore. If the shaft is smaller than nominal  $d$ , the bore should exceed nominal  $D$  to the same extent and vice versa. The concentricity quality is determined by the direct centering between shaft and hub.

■ **Arrangement of several Locking Assemblies RfN 7012.2**

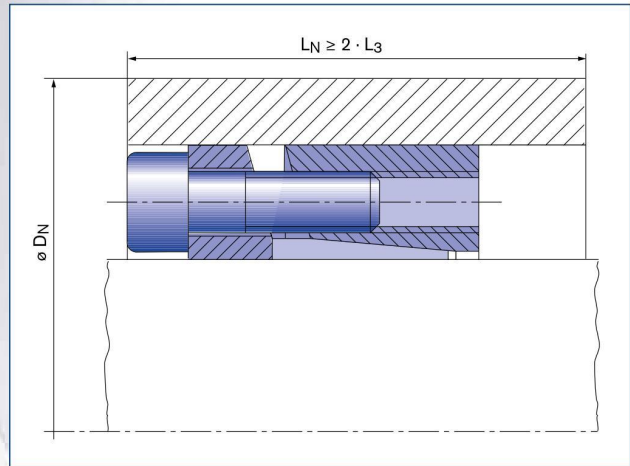
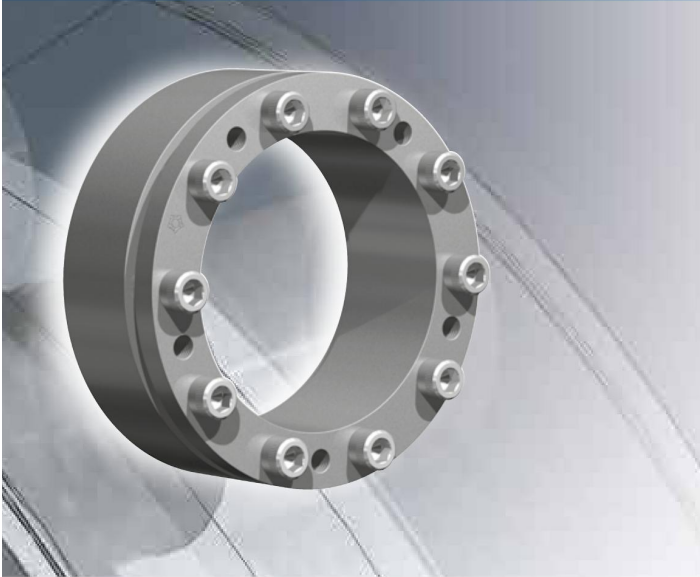
If several Locking Assemblies are to be installed the transmission values of the table can be added when the Locking Assemblies are located within a distance of  $4 \cdot L$ .

■ **Change of screw tightening torques**

The Locking Assemblies are equipped with 12.9 grade screws. A reduction of the screw tightening torque is possible. The lowest allowable screw tightening torque results from the multiplication of the  $T_A$ -value by 0.5. There is an approximate linear relationship between  $T$ ,  $T_A$ ,  $F_{ax}$ ,  $p_w$  and  $p_N$ .

■ **Auxiliary threads**

To facilitate removal, the front thrust rings have auxiliary threads.



Locking Assembly RfN 7013.0 · Location / Calculation of hubs see on Page 92-93  
Calculation possible for other hub forms in our calculation program

## Characteristics

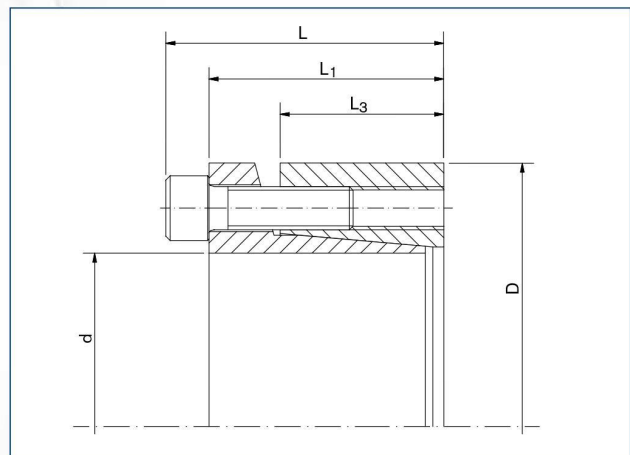
**Excellent concentricity and very easy to dismantle** – these Locking Assemblies provide particularly good concentricity between the clamped parts. The flange is reinforced at the critical point. This prevents a bending and lifting of the inner ring during installation and therefore a good dismantling is ensured.

**High rotation speed** – the Locking Assemblies remain true-to-form during assembly and so they are suitable in applications with higher rotational speeds.

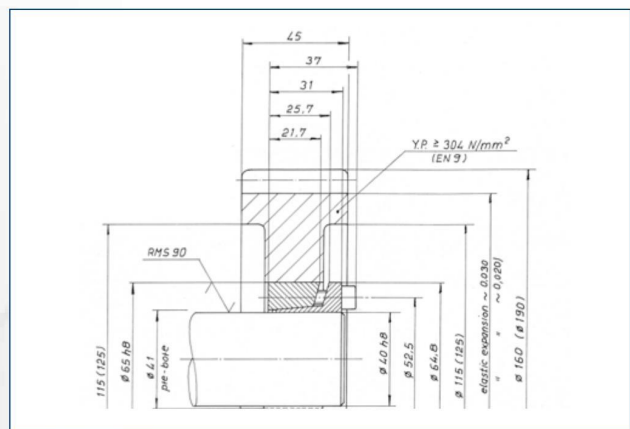
**High radial loads** – the material strength of the RfN 7013 Locking Assemblies makes them especially suitable for applications with high radial loads.

## Example applications:

**Crane running wheels, couplings, gear wheels, flywheels, fan wheels**

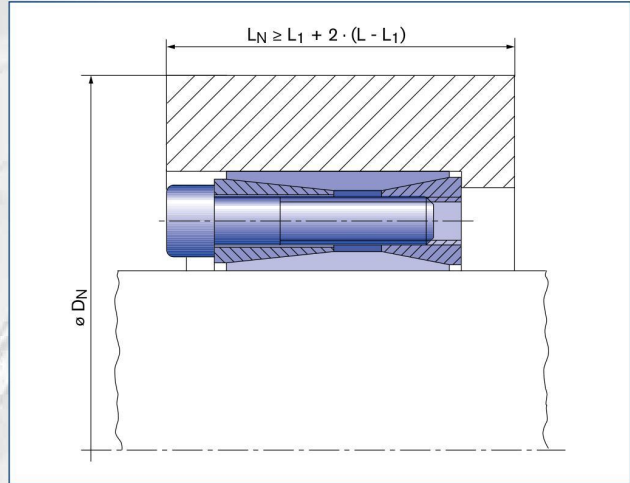
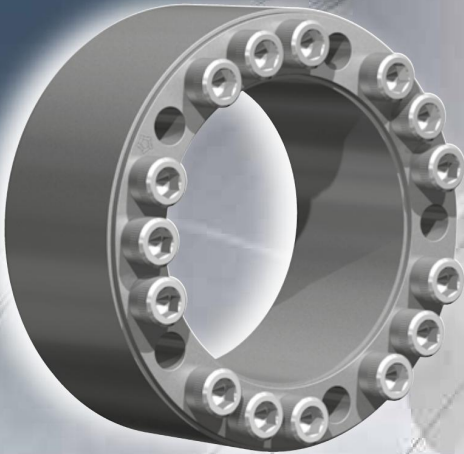


Locking Assembly RfN 7013.0 · Dimensions



Locking Assembly RfN 7013.0 · Gear wheels  
Calculation possible for other hub forms in our calculation program





Locking Assembly RfN 7014 · Location / Calculation of hubs see on Page 92-93  
Calculation possible for other hub forms in our calculation program

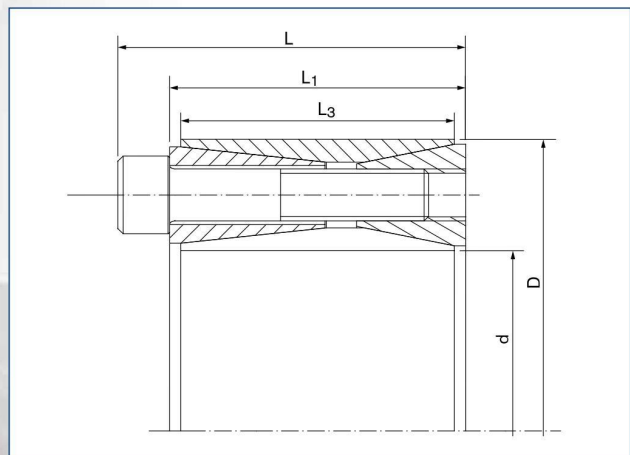
## Characteristics

**Large transmittable peripheral forces** – due to the long, flat cones it is possible to transmit maximum torques and axial forces with one Locking Assembly RfN 7014.

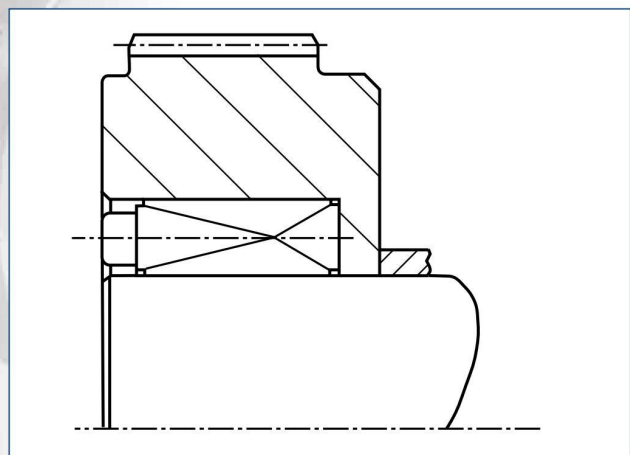
**Maximum reliability** – due to the flat cones and the relatively wide construction (large guide lengths) the Locking Assemblies RfN 7014 centre themselves. During installation the Locking Assembly, shaft and hub remain in position to one another. The shaft and hub are loaded by pressure, providing additional safety compared to 3-part versions.

## Example applications:

**Heavy pulleys, construction of heavy machinery, couplings, cable sheaves**



Locking Assembly RfN 7014 · Dimensions



Locking Assembly RfN 7014 · Gear wheel fastening

## RINGFEDER® Locking Assemblies with central lock nut

### Characteristics

- Easy to connect and to release – no seizures along the shaft
- Perfect for engaged connections
- Excellent concentricity and radial run
- Single locking nut for quick installation and settings
- Minimal external diameter for assembling thin-walled components
- Suitable for grooveless and keyless shafts
- Lightweight, low mass moment of inertia

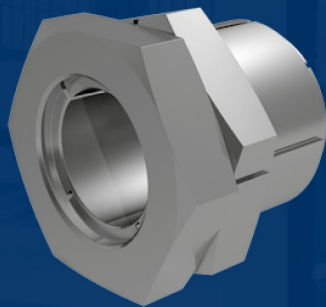




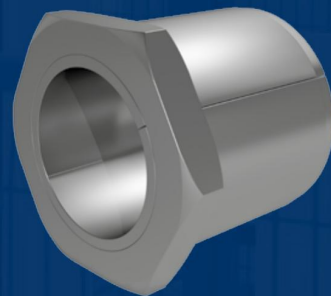
**RfN 7070**



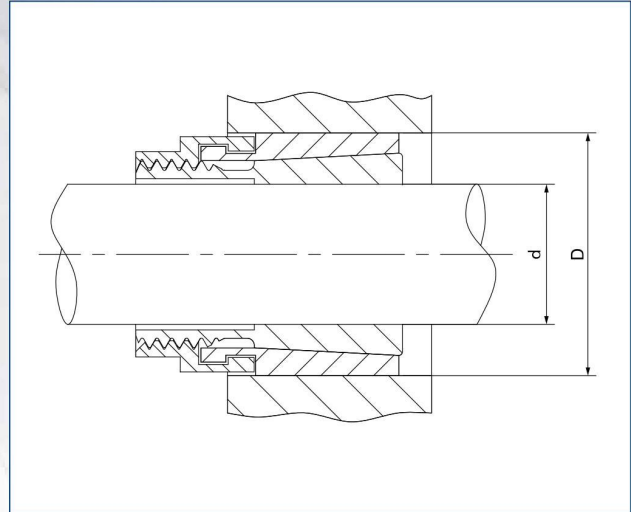
**RfN 7075**



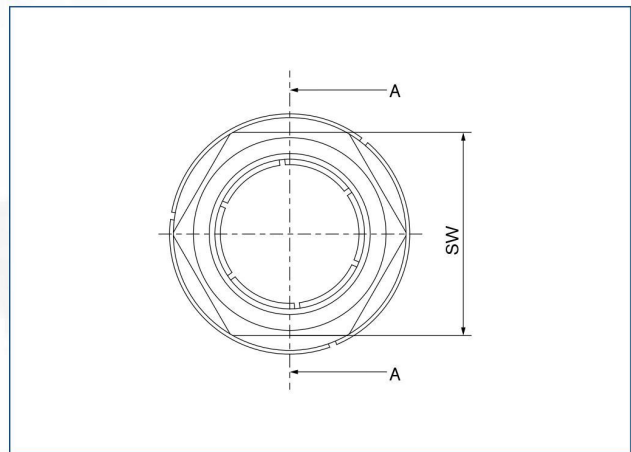
**RfN 7085**



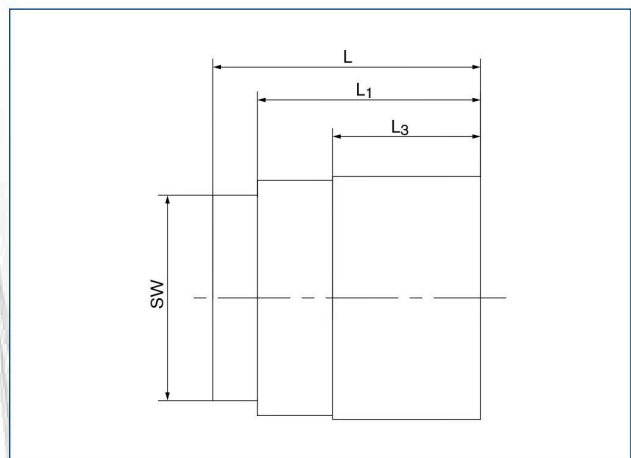
**RfN 7090**



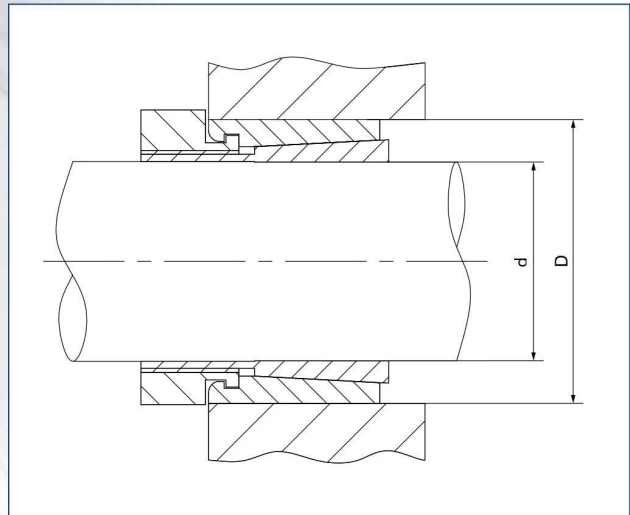
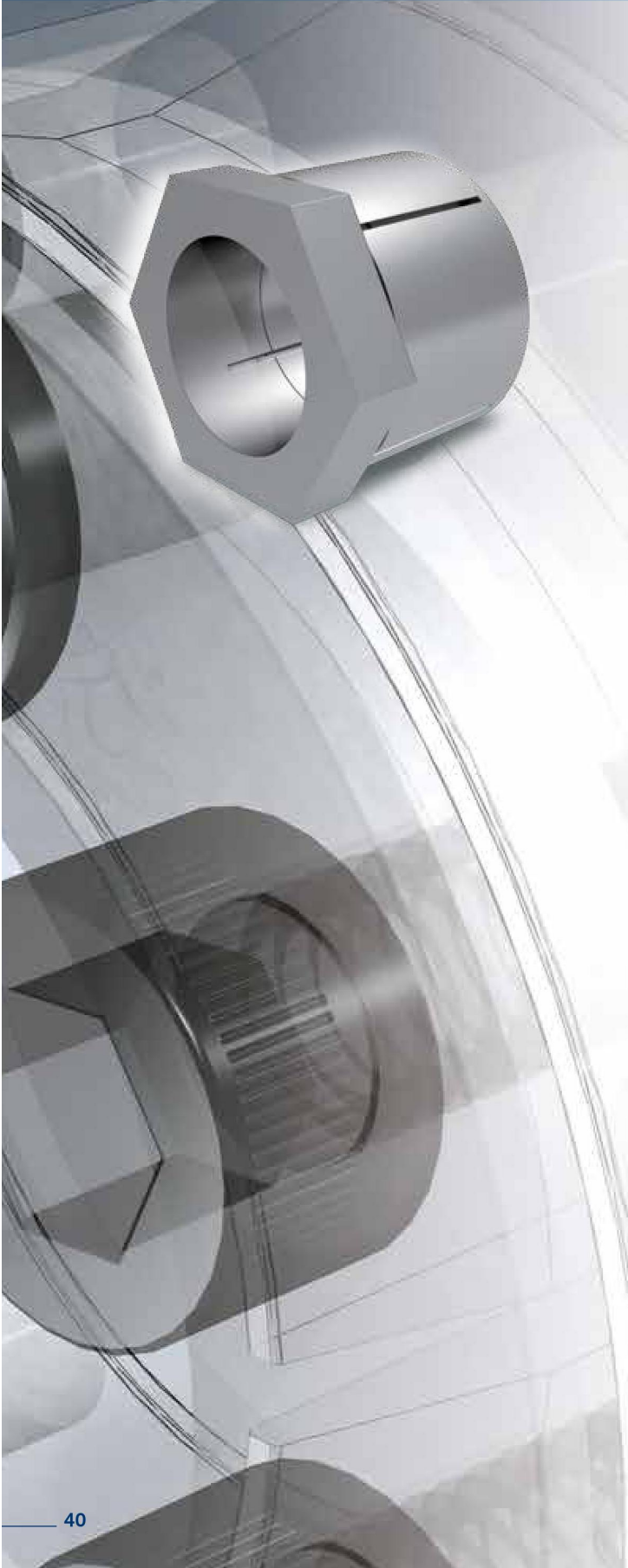
Locking Assembly RfN 7070 - Location



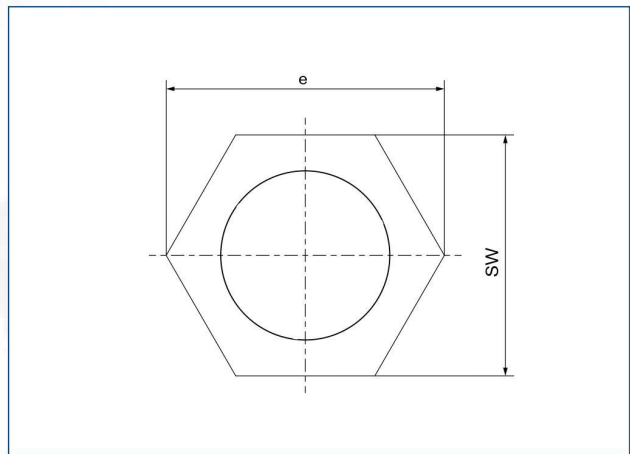
Locking Assembly RfN 7070 - Dimensions



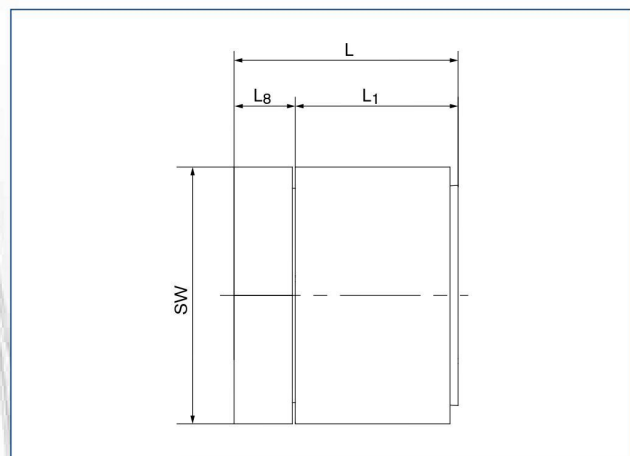
Locking Assembly RfN 7070 - Dimensions



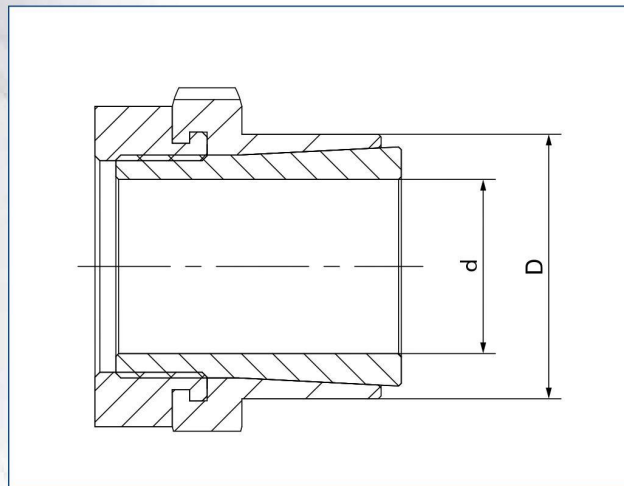
Locking Assembly RfN 7075 - Location



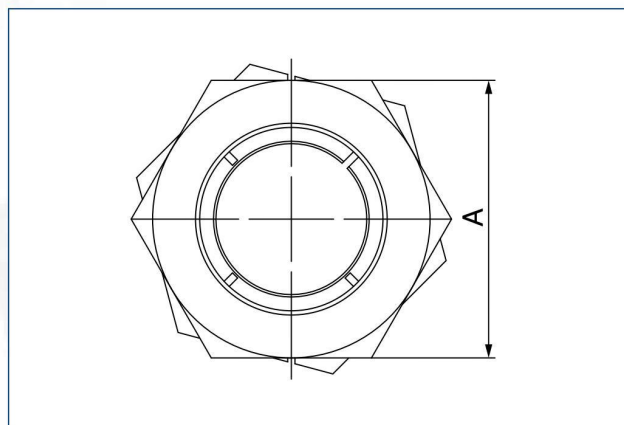
Locking Assembly RfN 7075 - Dimensions



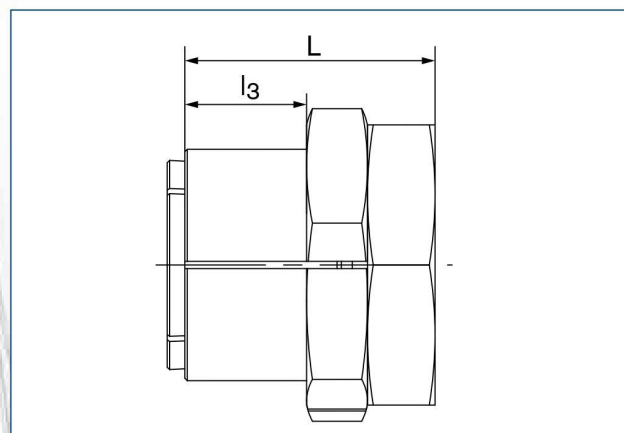
Locking Assembly RfN 7075 - Dimensions



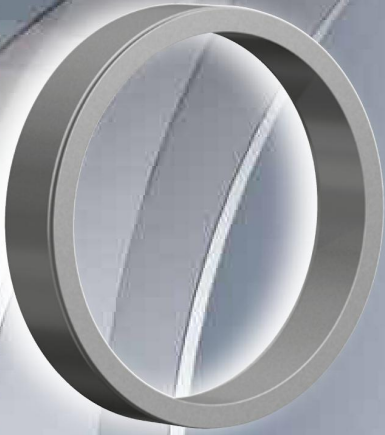
Self-centering Locking Assembly · RfN 7085  
Location



Self-centering Locking Assembly · RfN 7085  
Dimensions



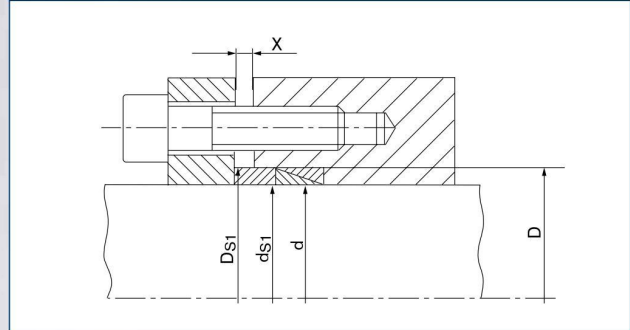
Self-centering Locking Assembly · RfN 7085  
Dimensions



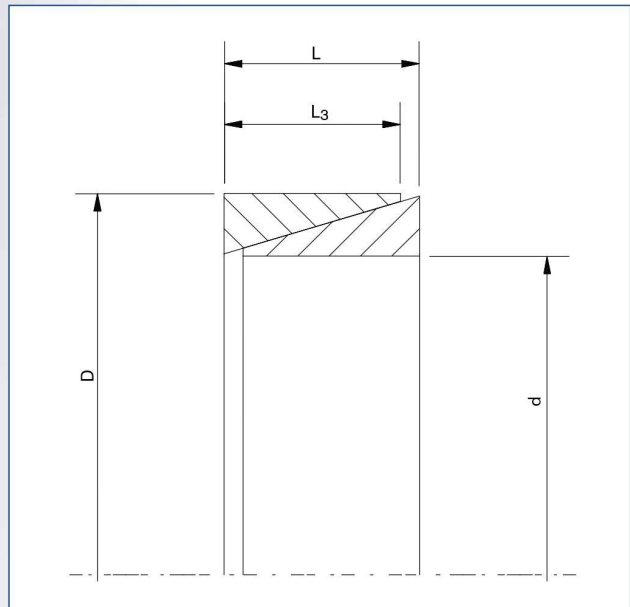
solid



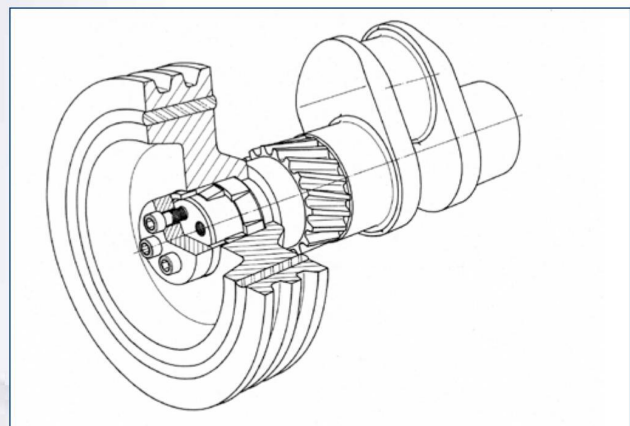
slit



RINGFEDER® Locking Element RfN 8006 · Location



RINGFEDER® Locking Elements RfN 8006 · Dimensions



V-belt pulley

## Special Solutions



Locking Assemblies



RfN 7006.2



RfN 7012

### Special Solution Locking Assemblies

Where the use of standard Locking Assemblies is not sufficient we develop special solutions optimised to specific customer requirements so that the parts are ideal for the specific application. In this way it is possible to make use of applications which previously were not possible.



RfN 7006.2





## Special Solutions



RfN 7012

