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## Characteristics

Shrink discs are the modern method for creating a mechanical shrink fit. The shrink disc consists of either one or two thrust rings with tapered bores and a mating tapered inner ring. By tightening locking screws the thrust rings are drawn together compressing the inner ring and applying pressure to the outside of the hub clamping it to the shaft. Being positioned around the hub there is only one interface transmitting the loads giving the shrink disc method distinct advantages such as offering the possibility of very concentric and well balanced connections that are suited to high speed applications. Traditional shrink fits require complicated calculations, close machining tolerances and fine surface finishes, they also need considerable effort with mounting and removal. The shrink disc connection has none of these disadvantages and is better than any of the other usual connection methods with regard to fatigue strength under alternating torsional stress.

Unlimited range of applications – RINGFEDER® Shrink Disc connections are suitable for securing all types of hubs onto shafts and axles. Replacing traditional shrink fits, keys and polygon connections, splined shafts etc. So cog wheels and sprockets, levers, lifters, cam discs, pulleys or brake discs, balance wheels, couplings, slip on gear mechanisms, flanges, pulley wheels and rotors can be attached absolutely reliable.

**Clearances considered for the calculation of the function values:**

| $d_w$         |               | ISO    | max.<br>Clearance<br>S<br>inch |
|---------------|---------------|--------|--------------------------------|
| above<br>inch | up to<br>inch |        |                                |
| 0.236         | 0.394         | H6/j6  | 0.0005                         |
| 0.394         | 0.709         |        | 0.0006                         |
| 0.709         | 1.181         | H6/h6  | 0.0007                         |
| 1.181         | 1.969         | H6/g6  | 0.0013                         |
| 1.969         | 3.150         | H7/g6  | 0.0019                         |
| 3.150         | 4.724         |        | 0.0027                         |
| 4.724         | 7.087         |        | 0.0031                         |
| 7.087         | 9.843         |        | 0.0035                         |
| 9.843         | 12.402        |        | 0.0040                         |
| 12.402        | 15.748        |        | 0.0044                         |
| 15.748        | 19.685        |        | 0.0048                         |
| 19.685        | 24.803        |        | 0.0054                         |
| 24.803        | 31.496        | 0.0061 |                                |

Table is not valid for: RfN 4012, RfN 4022, RfN 4023

### Surface finishes

**For shaft diameter  $d_w$ : Peak-to-valley height  $R_a \leq 125$  RMS.**

Any other tolerances can be chosen. As long as the stated max. clearance is not exceeded, there will be no variations of the functional characteristics.

## Explanations to tables

### Basic dimensions when screws are not tightened

|                  |   |  |
|------------------|---|--|
| d                | = | Inner diameter   |
| D                | = | Outer diameter   |
| d <sub>w</sub>   | = | Solid shaft diameter   |
| d <sub>1</sub>   | = | Pitch circle diameter  |
| L                | = | Overall length   |
| L <sub>1</sub>   | = | Overall length without screws  |
| L <sub>2</sub>   | = | Thrust ring width  |
| L <sub>3</sub>   | = | Width of ring  |
| L <sub>B</sub>   | = | Width of the half shrink disc  |
| Z                | = | Depth of center value  |
| T <sub>A</sub>   | = | Max. tightened torque of the screws  |
| T                | = | Transmissible torque at given T <sub>A</sub>   |
| F <sub>ax</sub>  | = | Transmissible axial force  |
| G <sub>w</sub>   | = | Weight   |
| P                | = | Hub surface pressure   |
| σ <sub>v</sub>   | = | Equivalent stress in the hub   |
| n <sub>Sc</sub>  | = | Quantity of screws   |
| G                | = | Center diameter  |
| R                | = | Radius   |
| T <sub>max</sub> | = | Max. transmissible torque  |
| σ <sub>v</sub>   | = | Calculated combined stress in the hub extension (d/d <sub>w</sub> ) under consideration of the tangential, radial and torsional stresses following the equation: |

$$\sigma_v = \sqrt{\frac{1}{2} [(\sigma_x - \sigma_y)^2 + (\sigma_y - \sigma_z)^2 + (\sigma_z - \sigma_x)^2] + 3\tau^2}$$

Additional loads, e.g. tension, thrust or bending have to be taken into consideration accordingly.

### Function values

The functional characteristics are valid with the screw tightening torque listed in the tables and the following assumed conditions:

The locking screws are lubricated using MoS<sub>2</sub> (μ<sub>tot</sub> = 0,1).

The tapered cones are lubricated using MoS<sub>2</sub> (μ = 0,05).

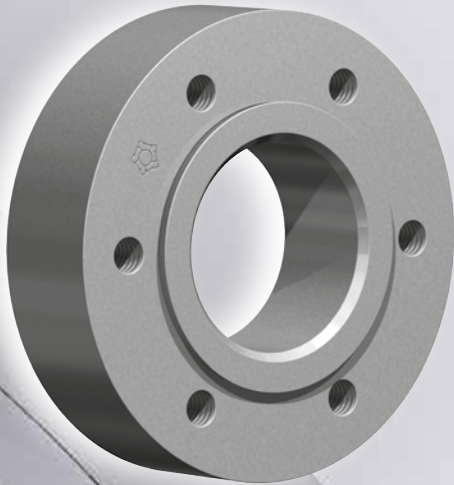
The contact surfaces (d<sub>w</sub>) are in lightly oiled condition with coefficient of friction μ = 0,12.

The hub and shaft materials have a modulus of elasticity of 210,000 N/mm<sup>2</sup>. (Lower values result in increased values for T and F<sub>ax</sub> with reduced tangential stress.)

The maximum clearance S is being fully utilized.

The shaft being used is solid, for hollow shaft applications the functional values will change.

In cases where the assumed conditions do not apply then contact our Technical Department where we will be happy to assist you with your application.



## Characteristics

**Reduced dimensions** – for lower transmissible torques, especially for applications with restricted space.

**Compensation of small tolerance errors** – please contact our engineers.

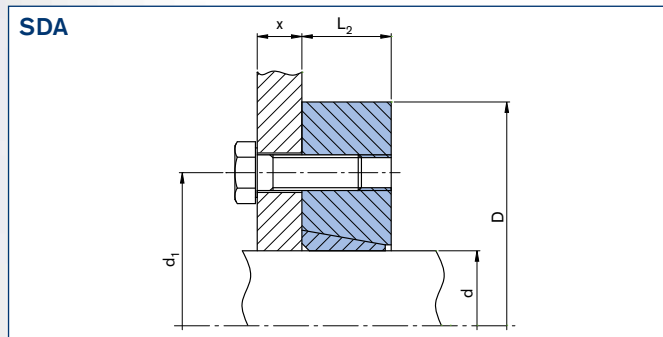
**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

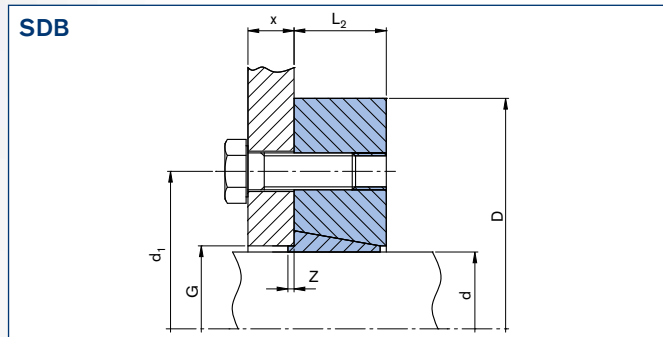
**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

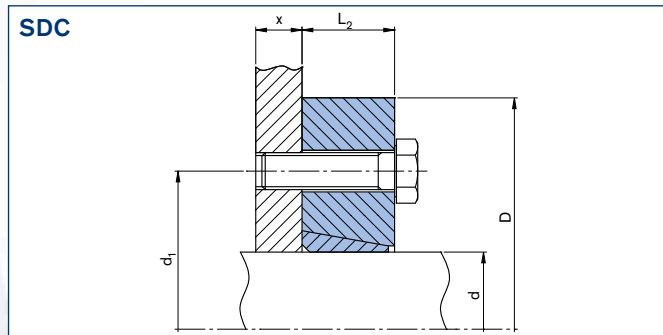
## Description of configurations



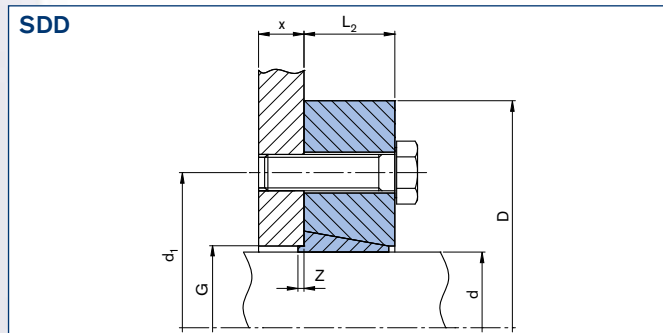
RfN 4012 configuration SDA thread in shrink disc without centering



RfN 4012 configuration SDB thread in shrink disc with centering



RfN 4012 configuration SDC through boring in shrink disc without centering



RfN 4012 configuration SDD through boring in shrink disc with centering

| Type    | Shrink Discs dimensions |               |                |                 |                |       | T <sub>A</sub> <sup>1)</sup> | Transmissible torques | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |          |        |    |
|---------|-------------------------|---------------|----------------|-----------------|----------------|-------|------------------------------|-----------------------|--|----------|--------|----|
|         | d x D                   |               | d <sub>1</sub> | G <sup>2)</sup> | L <sub>2</sub> | Z     |                              |                       | T  | Quantity | Thread | Gw |
|         | mm                      | inch          |                |                 |                |       |                              |                       |  |          |        |    |
| 10 SD-x | 9                       | 0.354         |                |                 |                |       |                              | 15                    |  |          |        |    |
|         | 10 x 39                 | 0.394 x 1.535 | 0.984          | 0.472           | 0.394          | 0.059 | 9                            | 15                    | 3  | M6       | 0.22   |    |
|         | 11                      | 0.433         |                |                 |                |       |                              | 15                    |  |          |        |    |
| 12 SD-x | 11                      | 0.433         |                |                 |                |       |                              | 37                    |  |          |        |    |
|         | 12 x 44                 | 0.472 x 1.732 | 1.102          | 0.551           | 0.512          | 0.059 | 9                            | 37                    | 3  | M6       | 0.22   |    |
|         | 13                      | 0.512         |                |                 |                |       |                              | 37                    |  |          |        |    |
| 15 SD-x | 14                      | 0.551         |                |                 |                |       |                              | 96                    |  |          |        |    |
|         | 15 x 52                 | 0.591 x 2.047 | 1.417          | 0.709           | 0.591          | 0.079 | 22                           | 96                    | 3  | M8       | 0.44   |    |
|         | 16                      | 0.630         |                |                 |                |       |                              | 96                    |  |          |        |    |
| 20 SD-x | 16                      | 0.630         |                |                 |                |       |                              | 148                   |  |          |        |    |
|         | 18 x 60                 | 0.709 x 2.362 | 1.654          | 0.866           | 0.669          | 0.079 | 22                           | 148                   | 3  | M8       | 0.66   |    |
|         | 20                      | 0.787         |                |                 |                |       |                              | 148                   |  |          |        |    |
| 25 SD-x | 20                      | 0.787         |                |                 |                |       |                              | 251                   |  |          |        |    |
|         | 22 x 66                 | 0.866 x 2.598 | 1.890          | 1.063           | 0.748          | 0.079 | 22                           | 251                   | 5  | M8       | 0.88   |    |
|         | 25                      | 0.984         |                |                 |                |       |                              | 251                   |  |          |        |    |
| 30 SD-x | 25                      | 0.984         |                |                 |                |       |                              | 406                   |  |          |        |    |
|         | 28 x 76                 | 1.102 x 2.992 | 2.205          | 1.260           | 0.827          | 0.079 | 22                           | 406                   | 6  | M8       | 1.32   |    |
|         | 30                      | 1.181         |                |                 |                |       |                              | 406                   |  |          |        |    |
| 40 SD-x | 30                      | 1.181         |                |                 |                |       |                              | 782                   |  |          |        |    |
|         | 35 x 96                 | 1.378 x 3.780 | 2.756          | 1.693           | 0.984          | 0.118 | 45                           | 782                   | 6  | M10      | 2.65   |    |
|         | 40                      | 1.575         |                |                 |                |       |                              | 782                   |  |          |        |    |
| 50 SD-x | 40                      | 1.575         |                |                 |                |       |                              | 738                   |  |          |        |    |
|         | 45 x 112                | 1.772 x 4.409 | 3.307          | 2.087           | 1.181          | 0.118 | 75                           | 1,328                 | 7  | M12      | 3.97   |    |
|         | 50                      | 1.969         |                |                 |                |       |                              | 1,623                 |  |          |        |    |

x = Configuration    SDA = Thread in shrink disc without centering    SDB = Thread in shrink disc with centering  
SDC = Through boring in shrink disc without centering    SDD = Through boring in shrink disc with centering

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table  
<sup>2)</sup> The bore tolerance of the customer component should be within the fit tolerance G6 and H7

Ordering examples: RfN 4012

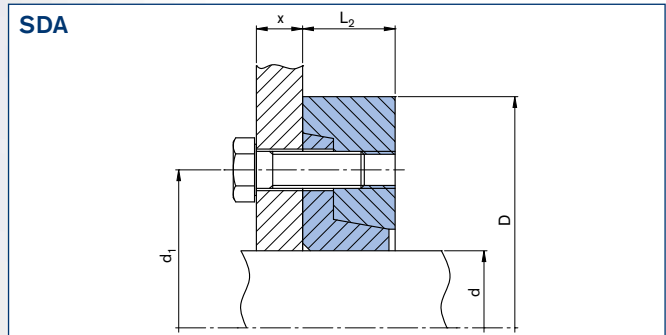
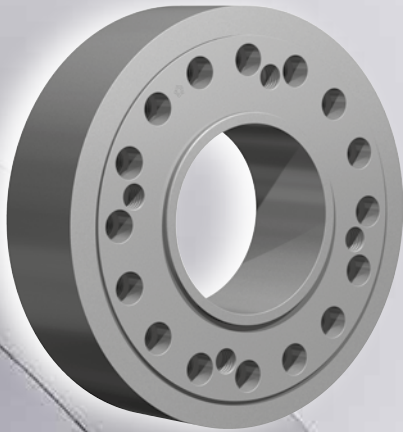
| Series   | Type   | d     |
|----------|--------|-------|
| RfN 4012 | 40 SDA | 1.378 |
| RfN 4012 | 40 SDB | 1.378 |
| RfN 4012 | 40 SDC | 1.378 |
| RfN 4012 | 40 SDD | 1.378 |

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft h9
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

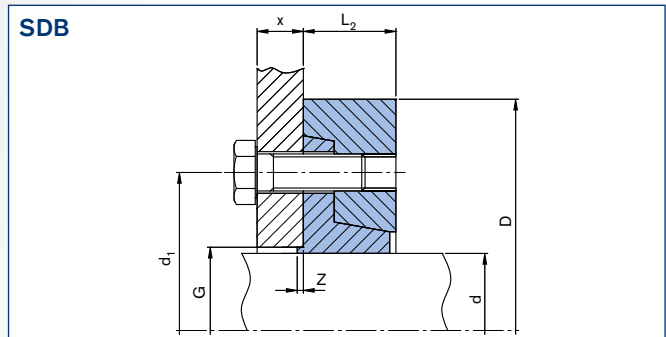
Explanations to tables: Page 9



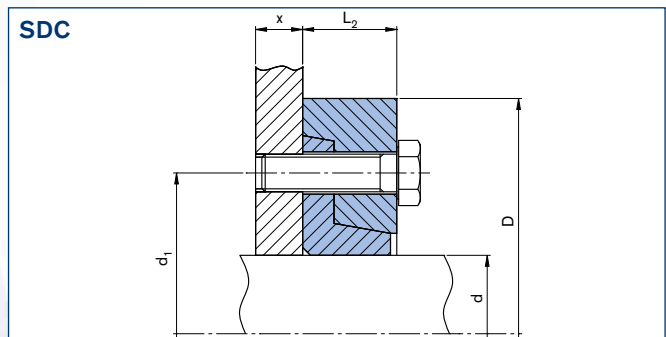
Description of configurations



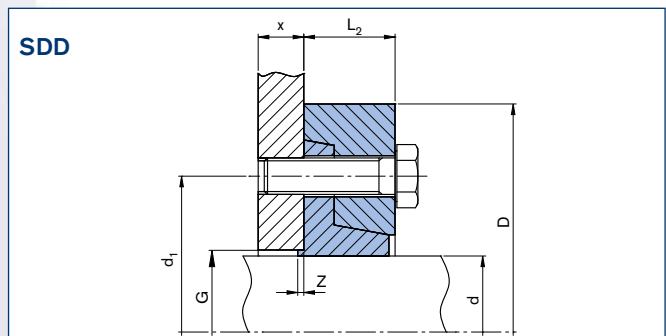
RfN 4022 configuration SDA thread in shrink disc without centering



RfN 4022 configuration SDB thread in shrink disc with centering



RfN 4022 configuration SDC through boring in shrink disc without centering



RfN 4022 configuration SDD through boring in shrink disc with centering

| Type     | Shrink Discs dimensions |       |       |         |                |                 |                | T <sub>A</sub> <sup>1)</sup> | Transmissible torques | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |        |          |        |       |
|----------|-------------------------|-------|-------|---------|----------------|-----------------|----------------|------------------------------|-----------------------|--|--------|----------|--------|-------|
|          | d x D                   |       | d x D |         | d <sub>1</sub> | G <sup>2)</sup> | L <sub>2</sub> |                              |                       | Z  | T      | Quantity | Thread | Gw    |
|          | mm                      | inch  | inch  | inch    | inch           | inch            | inch           |                              |                       | ft-lbs   | ft-lbs |          |        | lbs   |
| 12 SD-x  | 11                      | x 35  | 0.433 | x 1.378 | 0.945          | 0.551           | 0.433          | 0.059                        | 9                     | 37   | 3      | M6       | 0.22   |       |
|          | 12                      |       | 0.472 |         |                |                 |                |                              |                       |  |        |          |        | 37    |
|          | --                      |       | --    |         |                |                 |                |                              |                       |  |        |          |        | --    |
| 14 SD-x  | 13                      | x 38  | 0.512 | x 1.496 | 1.024          | 0.630           | 0.472          | 0.059                        | 9                     | 52   | 3      | M6       | 0.22   |       |
|          | 14                      |       | 0.551 |         |                |                 |                |                              |                       |  |        |          |        | 52    |
|          | --                      |       | --    |         |                |                 |                |                              |                       |  |        |          |        | --    |
| 16 SD-x  | 15                      | x 41  | 0.591 | x 1.614 | 1.102          | 0.709           | 0.591          | 0.079                        | 9                     | 59   | 3      | M6       | 0.22   |       |
|          | 16                      |       | 0.630 |         |                |                 |                |                              |                       |  |        |          |        | 59    |
|          | --                      |       | --    |         |                |                 |                |                              |                       |  |        |          |        | --    |
| 18 SD-x  | 17                      | x 44  | 0.669 | x 1.732 | 1.181          | 0.787           | 0.591          | 0.079                        | 9                     | 96   | 4      | M6       | 0.22   |       |
|          | 18                      |       | 0.709 |         |                |                 |                |                              |                       |  |        |          |        | 96    |
|          | --                      |       | --    |         |                |                 |                |                              |                       |  |        |          |        | --    |
| 20 SD-x  | 19                      | x 47  | 0.748 | x 1.850 | 1.260          | 0.866           | 0.591          | 0.079                        | 9                     | 103  | 4      | M6       | 0.44   |       |
|          | 20                      |       | 0.787 |         |                |                 |                |                              |                       |  |        |          |        | 103   |
|          | --                      |       | --    |         |                |                 |                |                              |                       |  |        |          |        | --    |
| 25 SD-x  | 22                      | x 50  | 0.866 | x 1.969 | 1.417          | 1.063           | 0.748          | 0.079                        | 9                     | 148  | 5      | M6       | 0.44   |       |
|          | 24                      |       | 0.945 |         |                |                 |                |                              |                       |  |        |          |        | 148   |
|          | 25*                     |       | 0.984 |         |                |                 |                |                              |                       |  |        |          |        | 148   |
| 30 SD-x  | 26                      | x 60  | 1.024 | x 2.362 | 1.732          | 1.260           | 0.748          | 0.118                        | 9                     | 221  | 6      | M6       | 0.66   |       |
|          | 28                      |       | 1.102 |         |                |                 |                |                              |                       |  |        |          |        | 221   |
|          | 30                      |       | 1.181 |         |                |                 |                |                              |                       |  |        |          |        | 221   |
| 35 SD-x  | 32                      | x 72  | 1.260 | x 2.835 | 2.047          | 1.496           | 0.827          | 0.118                        | 22                    | 332  | 5      | M8       | 1.10   |       |
|          | 35                      |       | 1.378 |         |                |                 |                |                              |                       |  |        |          |        | 369   |
|          | 36                      |       | 1.417 |         |                |                 |                |                              |                       |  |        |          |        | 369   |
| 40 SD-x  | 38                      | x 80  | 1.496 | x 3.150 | 2.402          | 1.811           | 0.906          | 0.118                        | 22                    | 531  | 6      | M8       | 1.32   |       |
|          | 40                      |       | 1.575 |         |                |                 |                |                              |                       |  |        |          |        | 553   |
|          | 44                      |       | 1.732 |         |                |                 |                |                              |                       |  |        |          |        | 553   |
| 50 SD-x  | 42                      | x 90  | 1.654 | x 3.543 | 2.677          | 2.087           | 0.984          | 0.118                        | 22                    | 738  | 8      | M8       | 1.98   |       |
|          | 45                      |       | 1.772 |         |                |                 |                |                              |                       |  |        |          |        | 959   |
|          | 50                      |       | 1.969 |         |                |                 |                |                              |                       |  |        |          |        | 959   |
| 55 SD-x  | 45                      | x 100 | 1.772 | x 3.937 | 2.835          | 2.283           | 1.063          | 0.118                        | 22                    | 1,180  | 8      | M8       | 2.65   |       |
|          | 52                      |       | 2.047 |         |                |                 |                |                              |                       |  |        |          |        | 1,180 |
|          | 55                      |       | 2.165 |         |                |                 |                |                              |                       |  |        |          |        | 1,180 |
| 60 SD-x  | 50                      | x 110 | 1.969 | x 4.331 | 3.150          | 2.480           | 1.063          | 0.118                        | 22                    | 1,475  | 9      | M8       | 3.09   |       |
|          | 60                      |       | 2.362 |         |                |                 |                |                              |                       |  |        |          |        | 1,475 |
|          | 62                      |       | 2.441 |         |                |                 |                |                              |                       |  |        |          |        | 1,475 |
| 70 SD-x  | 60                      | x 115 | 2.362 | x 4.528 | 3.386          | 2.913           | 1.063          | 0.157                        | 22                    | 1,549  | 9      | M8       | 3.09   |       |
|          | 65                      |       | 2.559 |         |                |                 |                |                              |                       |  |        |          |        | 1,549 |
|          | 70                      |       | 2.756 |         |                |                 |                |                              |                       |  |        |          |        | 1,549 |
| 80 SD-x  | 70                      | x 138 | 2.756 | x 5.433 | 3.937          | 3.307           | 1.142          | 0.157                        | 45                    | 2,950  | 10     | M10      | 4.85   |       |
|          | 75                      |       | 2.953 |         |                |                 |                |                              |                       |  |        |          |        | 2,950 |
|          | 80                      |       | 3.150 |         |                |                 |                |                              |                       |  |        |          |        | 2,950 |
| 90 SD-x  | 80                      | x 155 | 3.150 | x 6.102 | 4.488          | 3.701           | 1.378          | 0.157                        | 45                    | 4,204  | 12     | M10      | 7.5    |       |
|          | 85                      |       | 3.346 |         |                |                 |                |                              |                       |  |        |          |        | 4,204 |
|          | 90                      |       | 3.543 |         |                |                 |                |                              |                       |  |        |          |        | 4,204 |
| 100 SD-x | 90                      | x 170 | 3.543 | x 6.693 | 4.882          | 4.094           | 1.575          | 0.157                        | 75                    | 6,196  | 12     | M12      | 11.0   |       |
|          | 95                      |       | 3.740 |         |                |                 |                |                              |                       |  |        |          |        | 6,196 |
|          | 100                     |       | 3.937 |         |                |                 |                |                              |                       |  |        |          |        | 6,196 |
| 110 SD-x | 100                     | x 185 | 3.937 | x 7.283 | 5.354          | 4.567           | 1.850          | 0.197                        | 75                    | 6,786  | 12     | M12      | 13.2   |       |
|          | 105                     |       | 4.134 |         |                |                 |                |                              |                       |  |        |          |        | 6,786 |
|          | 110                     |       | 4.331 |         |                |                 |                |                              |                       |  |        |          |        | 6,786 |

\*Screws ISO 4762

**x = Configuration**    **SDA** = Thread in shrink disc without centering    **SDB** = Thread in shrink disc with centering  
**SDC** = Through boring in shrink disc without centering    **SDD** = Through boring in shrink disc with centering

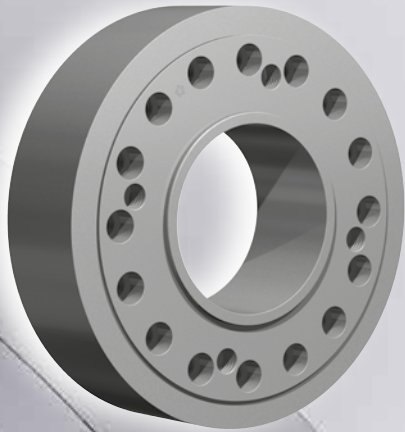
- <sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table  
<sup>2)</sup> The bore tolerance of the customer component should be within the fit tolerance G6 and H7

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 µm
- Tolerances  
For shaft h9
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Explanations to tables: Page 9

To continue see next page





### Characteristics

**Reduced dimensions** – for lower transmissible torques, especially for applications with restricted space.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

| Type     | Shrink Discs dimensions |                 |                |                 |                |       | T <sub>A</sub> <sup>1)</sup> | Transmissible torques | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |          |        |    |
|----------|-------------------------|-----------------|----------------|-----------------|----------------|-------|------------------------------|-----------------------|--|----------|--------|----|
|          | d x D                   |                 | d <sub>1</sub> | G <sup>2)</sup> | L <sub>2</sub> | Z     |                              |                       | T  | Quantity | Thread | Gw |
|          | mm                      | inch            |                |                 |                |       |                              |                       |  |          |        |    |
| 125 SD-x | 115                     | 4.528           | 6.299          | 4.961           | 1.969          | 0.197 | 185                          | 14751                 | 12   | M16      | 19.8   |    |
|          | 120 x 215               | 4.724 x 8.465   |                |                 |                |       |                              | 15,489                |  |          |        |    |
|          | 125                     | 4.921           |                |                 |                |       |                              | 15,489                |  |          |        |    |
| 140 SD-x | 130                     | 5.118           | 6.772          | 5.748           | 2.126          | 0.197 | 185                          | 19,177                | 14   | M16      | 24.3   |    |
|          | 135 x 230               | 5.315 x 9.055   |                |                 |                |       |                              | 19,177                |  |          |        |    |
|          | 140                     | 5.512           |                |                 |                |       |                              | 19,177                |  |          |        |    |
| 155 SD-x | 150                     | 5.906           | 7.559          | 6.535           | 2.283          | 0.197 | 185                          | 22,864                | 15   | M16      | 33.1   |    |
|          | 155 x 263               | 6.102 x 10.354  |                |                 |                |       |                              | 22,864                |  |          |        |    |
|          | 160                     | 6.299           |                |                 |                |       |                              | 22,864                |  |          |        |    |
| 170 SD-x | 160                     | 6.299           | 8.031          | 6.929           | 2.441          | 0.197 | 185                          | 26,552                | 16   | M16      | 46.3   |    |
|          | 165 x 290               | 6.496 x 11.417  |                |                 |                |       |                              | 26,552                |  |          |        |    |
|          | 170                     | 6.693           |                |                 |                |       |                              | 26,552                |  |          |        |    |
| 180 SD-x | 170                     | 6.693           | 8.583          | 7.323           | 2.441          | 0.197 | 185                          | 31,715                | 18   | M16      | 48.5   |    |
|          | 175 x 300               | 6.890 x 11.811  |                |                 |                |       |                              | 31,715                |  |          |        |    |
|          | 180                     | 7.087           |                |                 |                |       |                              | 31,715                |  |          |        |    |
| 190 SD-x | 180                     | 7.087           | 9.134          | 7.717           | 3.110          | 0.197 | 361                          | 44,254                | 15   | M20      | 70.6   |    |
|          | 185 x 320               | 7.283 x 12.598  |                |                 |                |       |                              | 44,254                |  |          |        |    |
|          | 190                     | 7.480           |                |                 |                |       |                              | 44,254                |  |          |        |    |
| 200 SD-x | 190                     | 7.480           | 9.685          | 8.110           | 3.110          | 0.197 | 361                          | 49,417                | 16   | M20      | 81.6   |    |
|          | 195 x 340               | 7.677 x 13.386  |                |                 |                |       |                              | 49,417                |  |          |        |    |
|          | 200                     | 7.874           |                |                 |                |       |                              | 49,417                |  |          |        |    |
| 220 SD-x | 200                     | 7.874           | 10.630         | 8.898           | 3.858          | 0.197 | 627                          | 68,593                | 14   | M24      | 117    |    |
|          | 210 x 370               | 8.268 x 14.567  |                |                 |                |       |                              | 68,593                |  |          |        |    |
|          | 220                     | 8.661           |                |                 |                |       |                              | 68,593                |  |          |        |    |
| 240 SD-x | 220                     | 8.661           | 11.654         | 9.685           | 3.976          | 0.197 | 627                          | 86,295                | 16   | M24      | 146    |    |
|          | 230 x 405               | 9.055 x 15.945  |                |                 |                |       |                              | 86,295                |  |          |        |    |
|          | 240                     | 9.449           |                |                 |                |       |                              | 86,295                |  |          |        |    |
| 260 SD-x | 240                     | 9.449           | 12.520         | 10.472          | 4.409          | 0.197 | 627                          | 92,933                | 16   | M24      | 176    |    |
|          | 250 x 430               | 9.843 x 16.929  |                |                 |                |       |                              | 92,933                |  |          |        |    |
|          | 260                     | 10.236          |                |                 |                |       |                              | 92,933                |  |          |        |    |
| 280 SD-x | 260                     | 10.236          | 13.386         | 11.260          | 4.961          | 0.197 | 627                          | 111,372               | 18   | M24      | 227    |    |
|          | 270 x 460               | 10.630 x 18.110 |                |                 |                |       |                              | 111,372               |  |          |        |    |
|          | 280                     | 11.024          |                |                 |                |       |                              | 111,372               |  |          |        |    |
| 300 SD-x | 280                     | 11.024          | 14.173         | 12.047          | 5.118          | 0.197 | 627                          | 131,286               | 20   | M24      | 256    |    |
|          | 290 x 485               | 11.417 x 19.094 |                |                 |                |       |                              | 131,286               |  |          |        |    |
|          | 300                     | 11.811          |                |                 |                |       |                              | 131,286               |  |          |        |    |
| 320 SD-x | 280                     | 11.024          | 14.961         | 12.992          | 5.118          | 0.197 | 920                          | 182,915               | 20   | M27      | 295    |    |
|          | 300 x 520               | 11.811 x 20.472 |                |                 |                |       |                              | 182,915               |  |          |        |    |
|          | 320                     | 12.598          |                |                 |                |       |                              | 182,915               |  |          |        |    |
| 340 SD-x | 300                     | 11.811          | 15.827         | 13.780          | 5.669          | 0.197 | 920                          | 202,830               | 21   | M27      | 408    |    |
|          | 320 x 570               | 12.598 x 22.441 |                |                 |                |       |                              | 202,830               |  |          |        |    |
|          | 340                     | 13.386          |                |                 |                |       |                              | 202,830               |  |          |        |    |
| 360 SD-x | 320                     | 12.598          | 16.693         | 14.567          | 5.669          | 0.315 | 920                          | 213,893               | 21   | M27      | 379    |    |
|          | 340 x 590               | 13.386 x 23.228 |                |                 |                |       |                              | 213,893               |  |          |        |    |
|          | 360                     | 14.173          |                |                 |                |       |                              | 213,893               |  |          |        |    |
| 390 SD-x | 350                     | 13.780          | 18.031         | 15.748          | 5.827          | 0.315 | 1,250                        | 267,735               | 20   | M30      | 490    |    |
|          | 370 x 630               | 14.567 x 24.803 |                |                 |                |       |                              | 267,735               |  |          |        |    |
|          | 390                     | 15.354          |                |                 |                |       |                              | 267,735               |  |          |        |    |
| 420 SD-x | 380                     | 14.961          | 19.291         | 16.929          | 6.614          | 0.315 | 1,250                        | 300,188               | 21   | M30      | 558    |    |
|          | 400 x 650               | 15.748 x 25.591 |                |                 |                |       |                              | 300,188               |  |          |        |    |
|          | 420                     | 16.535          |                |                 |                |       |                              | 300,188               |  |          |        |    |
| 440 SD-x | 400                     | 15.748          | 20.157         | 17.717          | 6.929          | 0.315 | 1,250                        | 314,201               | 21   | M30      | 606    |    |
|          | 420 x 670               | 16.535 x 26.378 |                |                 |                |       |                              | 314,201               |  |          |        |    |
|          | 440                     | 17.323          |                |                 |                |       |                              | 314,201               |  |          |        |    |

Ordering examples: RfN 4022

| Series   | Type    | d     |
|----------|---------|-------|
| RfN 4022 | 170 SDA | 6.496 |
| RfN 4022 | 170 SDB | 6.496 |
| RfN 4022 | 170 SDC | 6.496 |
| RfN 4022 | 170 SDD | 6.496 |

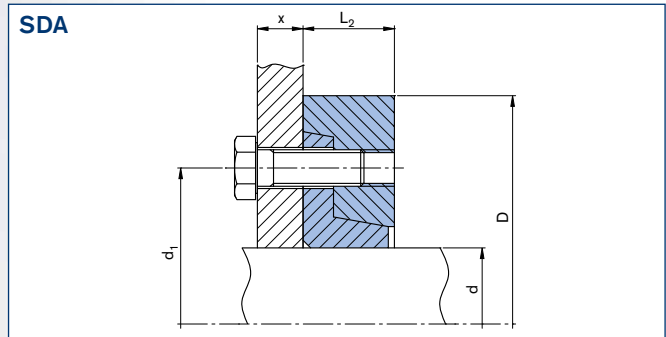
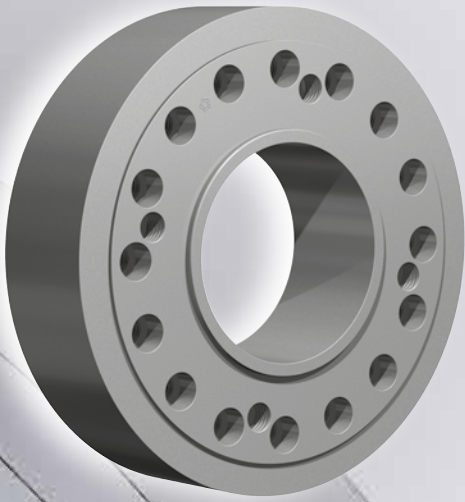
x = Configuration (Description of configurations see page 12)

- <sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table  
<sup>2)</sup> The bore tolerance of the customer component should be within the fit tolerance G6 and H7

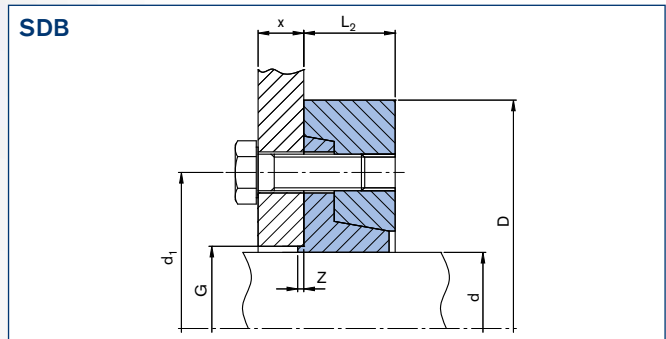
More sizes on request

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft h9
- When using a hollow shaft instead of a solid shaft please contact our Engineering-Team

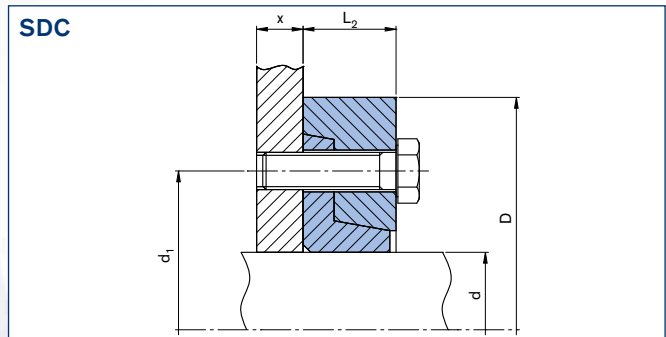
Description of configurations



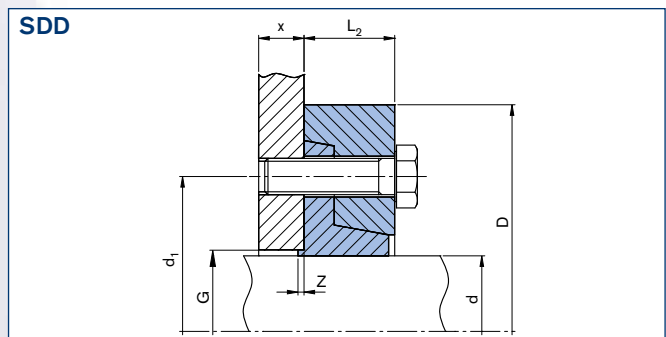
RfN 4023 configuration SDA thread in shrink disc without centering



RfN 4023 configuration SDB thread in shrink disc with centering



RfN 4023 configuration SDC through boring in shrink disc without centering



RfN 4023 configuration SDD through boring in shrink disc with centering

| Type     | Shrink Discs dimensions |                |       |        |                |                 |                | T <sub>A</sub> <sup>1)</sup><br>ft-lbs | Transmissible torques<br>T<br>ft-lbs | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |          |        |           |
|----------|-------------------------|----------------|-------|--------|----------------|-----------------|----------------|--|--------------------------------------|--|----------|--------|-----------|
|          | d x D                   |                | d x D |        | d <sub>1</sub> | G <sup>2)</sup> | L <sub>2</sub> |  |                                      | Z  | Quantity | Thread | Gw<br>lbs |
|          | mm                      | inch           | inch  | inch   | inch           | inch            | inch           |  |                                      | inch   |          |        |           |
| 50 SD-x  | 40                      |                | 1.575 |        |                |                 |                |  | 1,033                                | 7  | M12      | 4.41   |           |
|          | 45 x 115                | 1.772 x 4.528  |       | 3.307  | 2.087          | 1.181           | 0.118          | 75                                     | 1,623                                |  |          |        |           |
|          | 50                      | 1.969          |       |        |                |                 |                |  | 2,434                                |  |          |        |           |
| 60 SD-x  | 50                      |                | 1.969 |        |                |                 |                |  | 1,696                                | 9  | M12      | 4.85   |           |
|          | 55 x 120                | 2.165 x 4.724  |       | 3.701  | 2.480          | 1.339           | 0.118          | 75                                     | 2,581                                |  |          |        |           |
|          | 60                      | 2.362          |       |        |                |                 |                |  | 3,467                                |  |          |        |           |
| 70 SD-x  | 60                      |                | 2.362 |        |                |                 |                |  | 4,278                                | 8  | M16      | 10.4   |           |
|          | 65 x 155                | 2.559 x 6.102  |       | 4.409  | 2.913          | 1.575           | 0.157          | 185                                    | 5,605                                |  |          |        |           |
|          | 70                      | 2.756          |       |        |                |                 |                |  | 6,933                                |  |          |        |           |
| 80 SD-x  | 70                      |                | 2.756 |        |                |                 |                |  | 5,900                                | 9  | M16      | 13.5   |           |
|          | 75 x 167                | 2.953 x 6.575  |       | 5.118  | 3.307          | 1.732           | 0.157          | 185                                    | 7,376                                |  |          |        |           |
|          | 80                      | 3.150          |       |        |                |                 |                |  | 8,851                                |  |          |        |           |
| 90 SD-x  | 80                      |                | 3.150 |        |                |                 |                |  | 8,851                                | 12   | M16      | 17.6   |           |
|          | 85 x 185                | 3.346 x 7.283  |       | 5.669  | 3.701          | 1.969           | 0.157          | 185                                    | 11,063                               |  |          |        |           |
|          | 90                      | 3.543          |       |        |                |                 |                |  | 13,276                               |  |          |        |           |
| 100 SD-x | 90                      |                | 3.543 |        |                |                 |                |  | 11,801                               | 14   | M16      | 20.9   |           |
|          | 95 x 197                | 3.740 x 7.756  |       | 6.142  | 4.094          | 2.126           | 0.157          | 185                                    | 14,014                               |  |          |        |           |
|          | 100                     | 3.937          |       |        |                |                 |                |  | 16,964                               |  |          |        |           |
| 110 SD-x | 100                     |                | 3.937 |        |                |                 |                |  | 16,226                               | 10   | M20      | 26.5   |           |
|          | 105 x 215               | 4.134 x 8.465  |       | 6.535  | 4.567          | 2.283           | 0.197          | 361                                    | 19,177                               |  |          |        |           |
|          | 110                     | 4.331          |       |        |                |                 |                |  | 19,914                               |  |          |        |           |
| 120 SD-x | 110                     |                | 4.331 |        |                |                 |                |  | 24,340                               | 14   | M20      | 33.1   |           |
|          | 115 x 230               | 4.528 x 9.055  |       | 7.323  | 4.961          | 2.559           | 0.197          | 361                                    | 28,027                               |  |          |        |           |
|          | 120                     | 4.724          |       |        |                |                 |                |  | 31,715                               |  |          |        |           |
| 140 SD-x | 120                     |                | 4.724 |        |                |                 |                |  | 28,765                               | 16   | M20      | 66.2   |           |
|          | 130 x 290               | 5.118 x 11.417 |       | 8.504  | 5.748          | 2.992           | 0.197          | 361                                    | 36,878                               |  |          |        |           |
|          | 140                     | 5.512          |       |        |                |                 |                |  | 41,303                               |  |          |        |           |
| 160 SD-x | 140                     |                | 5.512 |        |                |                 |                |  | 47,204                               | 14   | M24      | 88.2   |           |
|          | 150 x 320               | 5.906 x 12.598 |       | 9.213  | 6.535          | 3.268           | 0.197          | 627                                    | 56,792                               |  |          |        |           |
|          | 160                     | 6.299          |       |        |                |                 |                |  | 56,792                               |  |          |        |           |
| 180 SD-x | 160                     |                | 6.299 |        |                |                 |                |  | 62,693                               | 16   | M24      | 106    |           |
|          | 170 x 340               | 6.693 x 13.386 |       | 10.866 | 7.323          | 3.701           | 0.197          | 627                                    | 74,494                               |  |          |        |           |
|          | 180                     | 7.087          |       |        |                |                 |                |  | 76,706                               |  |          |        |           |
| 200 SD-x | 180                     |                | 7.087 |        |                |                 |                |  | 84,082                               | 16   | M27      | 126    |           |
|          | 190 x 370               | 7.480 x 14.567 |       | 11.417 | 8.110          | 3.780           | 0.197          | 920                                    | 98,096                               |  |          |        |           |
|          | 200                     | 7.874          |       |        |                |                 |                |  | 106,209                              |  |          |        |           |
| 220 SD-x | 200                     |                | 7.874 |        |                |                 |                |  | 117,272                              | 18   | M27      | 157    |           |
|          | 210 x 405               | 8.268 x 15.945 |       | 12.598 | 8.898          | 3.819           | 0.197          | 920                                    | 131,286                              |  |          |        |           |
|          | 220                     | 8.661          |       |        |                |                 |                |  | 131,286                              |  |          |        |           |

x = Configuration    SDA = Thread in shrink disc without centering    SDB = Thread in shrink disc with centering  
SDC = Through boring in shrink disc without centering    SDD = Through boring in shrink disc with centering

- <sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table  
<sup>2)</sup> The bore tolerance of the customer component should be within the fit tolerance G6 and H7

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 µm
- Tolerances  
For shaft h9
- When using a hollow shaft instead of a solid shaft please contact our Engineering-Team

Explanations to tables: Page 9

To continue see next page

Ordering examples: RfN 4023

| Series   | Type   | d     |
|----------|--------|-------|
| RfN 4023 | 50 SDA | 1.772 |
| RfN 4023 | 50 SDB | 1.772 |
| RfN 4023 | 50 SDC | 1.772 |
| RfN 4023 | 50 SDD | 1.772 |

### Characteristics

**Heavy design** – suitable for high torque and bending moments.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

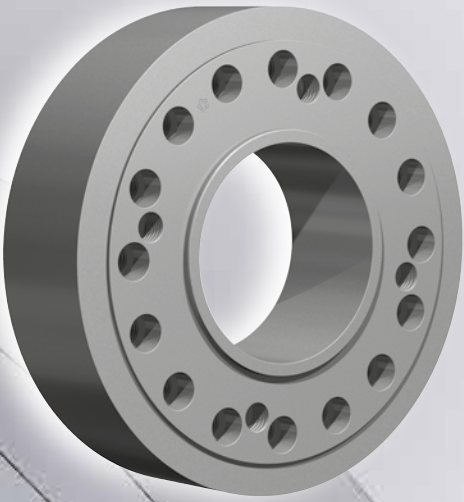
**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.





| Type     | Shrink Discs dimensions |                 |                |                 |                |       |          | T <sub>A</sub> <sup>1)</sup><br>ft-lbs | Transmissible torques<br>T<br>ft-lbs | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |     |  |
|----------|-------------------------|-----------------|----------------|-----------------|----------------|-------|----------|--|--------------------------------------|--|-----|--|
|          | d x D                   |                 | d <sub>1</sub> | G <sup>2)</sup> | L <sub>2</sub> | Z     | Quantity |  |                                      | Thread   | Gw  |  |
|          | mm                      | inch            | inch           | inch            | inch           | inch  |          |  |                                      |  | lbs |  |
| 240 SD-x | 220                     | 8.661           | 13.386         | 9.685           | 4.331          | 0.197 | 920      | 155,626                                | 20                                   | M27  | 190 |  |
|          | 230 x 430               | 9.055 x 16.929  |                |                 |                |       |          | 155,626                                |                                      |  |     |  |
|          | 240                     | 9.449           |                |                 |                |       |          | 155,626                                |                                      |  |     |  |
| 260 SD-x | 240                     | 9.449           | 14.016         | 11.260          | 4.685          | 0.197 | 920      | 172,590                                | 21                                   | M27  | 240 |  |
|          | 250 x 460               | 9.843 x 18.110  |                |                 |                |       |          | 172,590                                |                                      |  |     |  |
|          | 260                     | 10.236          |                |                 |                |       |          | 171,114                                |                                      |  |     |  |
| 280 SD-x | 260                     | 10.236          | 14.173         | 12.047          | 4.921          | 0.197 | 920      | 172,590                                | 21                                   | M27  | 276 |  |
|          | 270 x 485               | 10.630 x 19.094 |                |                 |                |       |          | 172,590                                |                                      |  |     |  |
|          | 280                     | 11.024          |                |                 |                |       |          | 172,590                                |                                      |  |     |  |
| 300 SD-x | 280                     | 11.024          | 14.961         | 12.992          | 5.118          | 0.197 | 920      | 182,178                                | 21                                   | M27  | 318 |  |
|          | 290 x 520               | 11.417 x 20.472 |                |                 |                |       |          | 182,178                                |                                      |  |     |  |
|          | 300                     | 11.811          |                |                 |                |       |          | 182,178                                |                                      |  |     |  |
| 320 SD-x | 300                     | 11.811          | 15.827         | 13.780          | 5.354          | 0.315 | 920      | 220,531                                | 24                                   | M27  | 368 |  |
|          | 310 x 550               | 12.205 x 21.654 |                |                 |                |       |          | 220,531                                |                                      |  |     |  |
|          | 320                     | 12.598          |                |                 |                |       |          | 220,531                                |                                      |  |     |  |
| 340 SD-x | 320                     | 12.598          | 16.693         | 14.567          | 5.591          | 0.315 | 920      | 232,332                                | 24                                   | M27  | 404 |  |
|          | 330 x 570               | 12.992 x 22.441 |                |                 |                |       |          | 232,332                                |                                      |  |     |  |
|          | 340                     | 13.386          |                |                 |                |       |          | 232,332                                |                                      |  |     |  |
| 360 SD-x | 340                     | 13.386          | 17.874         | 15.748          | 5.787          | 0.315 | 1,250    | 302,400                                | 24                                   | M30  | 481 |  |
|          | 350 x 610               | 13.780 x 24.016 |                |                 |                |       |          | 302,400                                |                                      |  |     |  |
|          | 360                     | 14.173          |                |                 |                |       |          | 302,400                                |                                      |  |     |  |
| 390 SD-x | 360                     | 14.173          | 19.134         | 16.929          | 6.575          | 0.315 | 1,250    | 323,790                                | 24                                   | M30  | 551 |  |
|          | 380 x 630               | 14.961 x 24.803 |                |                 |                |       |          | 323,790                                |                                      |  |     |  |
|          | 390                     | 15.354          |                |                 |                |       |          | 323,790                                |                                      |  |     |  |
| 420 SD-x | 390                     | 15.354          | 19.921         | 17.717          | 6.890          | 0.394 | 1,250    | 337,066                                | 24                                   | M30  | 644 |  |
|          | 410 x 670               | 16.142 x 26.378 |                |                 |                |       |          | 337,066                                |                                      |  |     |  |
|          | 420                     | 16.535          |                |                 |                |       |          | 337,066                                |                                      |  |     |  |
| 440 SD-x | 400                     | 15.748          | 21.024         | 18.504          | 6.890          | 0.394 | 1,250    | 414,510                                | 28                                   | M30  | 701 |  |
|          | 420 x 700               | 16.535 x 27.559 |                |                 |                |       |          | 414,510                                |                                      |  |     |  |
|          | 440                     | 17.323          |                |                 |                |       |          | 414,510                                |                                      |  |     |  |

x = Configuration    SDA = Thread in shrink disc without centering    SDB = Thread in shrink disc with centering  
SDC = Through boring in shrink disc without centering    SDD = Through boring in shrink disc with centering

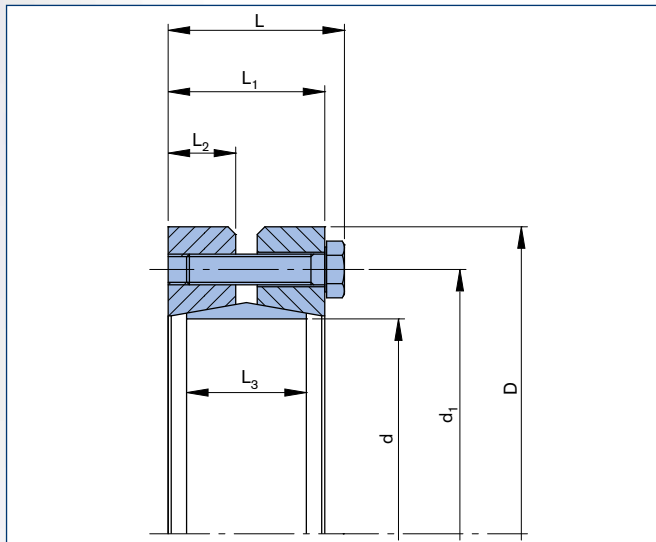
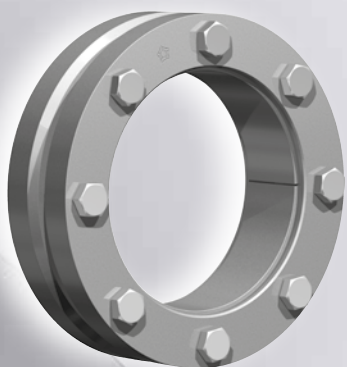
<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table  
<sup>2)</sup> The bore tolerance of the customer component should be within the fit tolerance G6 and H7

- Surface finishes For shaft R<sub>a</sub> ≤ 3,2 μm
  - Tolerances For shaft h9
  - When using a hollow shaft instead of a solid shaft please contact our Engineering-Team
- [Explanations to tables: Page 9](#)    [More sizes on request](#)

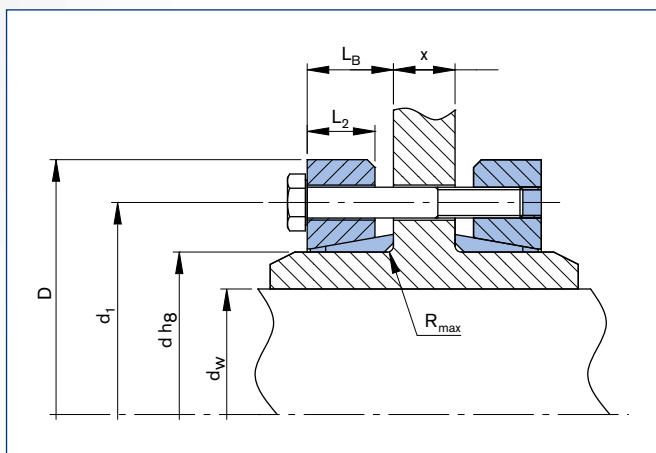
Ordering examples: RfN 4023

| Series   | Type    | d      |
|----------|---------|--------|
| RfN 4023 | 280 SDA | 10.630 |
| RfN 4023 | 280 SDB | 10.630 |
| RfN 4023 | 280 SDC | 10.630 |
| RfN 4023 | 280 SDD | 10.630 |





RINGFEDER® Shrink Disc RfN 4051 · Dimensions



RINGFEDER® Shrink Disc RfN 4051 GT · Location

#### Shrink discs GT (split)

In the application shown above special screws according to the dimension  $X$  are required, which have to be ordered accordingly. When dimension „ $X$ “ larger than  $2 \cdot L_1$  is chosen, a reduction of the transmissible torque up to 50% has to be considered to the type GT.

| Shrink Discs dimensions |   |      |        |   |        |                                  |                |       |                |                | Transmissible torques or axial forces |                |                              |                                    | Locking screws <sup>1)</sup> ISO 4014 / 4017 - 10.9 |        |                                      |          |        |       |                                     |
|-------------------------|---|------|--------|---|--------|----------------------------------|----------------|-------|----------------|----------------|---------------------------------------|----------------|------------------------------|------------------------------------|---|--------|--------------------------------------|----------|--------|-------|-------------------------------------|
| d                       | x | D    | d      | x | D      | d <sub>w</sub>                   | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub>                        | L <sub>B</sub> | T <sub>A</sub> <sup>1)</sup> | T                                  | F <sub>ax</sub>                                     | P      | σ <sub>v</sub>                       | Quantity | Thread | Gw    | T <sub>max</sub>                    |
| mm                      |   | inch | mm     |   | inch   | inch                             | inch           | inch  | inch           | inch           | inch                                  | inch           | ft-lbs                       | ft-lbs                             | lbs   | psi    | psi                                  |          |        | lbs   | ft-lbs                              |
| 125                     | x | 185  | 4.921  | x | 7.283  | 3.740<br>3.937<br>4.134<br>4.331 | 6.220          | 2.283 | 2.008          | 0.866          | 1.535                                 | 1.201          | 45                           | 7,781<br>8,925<br>10,178<br>10,916 | 49,458<br>53,954<br>58,451<br>59,575                | 27,723 | 40,350<br>40,641<br>41,802<br>38,899 | 8        | M10    | 11.2  | 9,736<br>11,156<br>12,723<br>13,645 |
| 140                     | x | 220  | 5.512  | x | 8.661  | 4.724<br>4.921                   | 6.890          | 2.283 | 2.008          | 0.866          | 1.535                                 | 1.215          | 45                           | 10,916<br>13,748<br>15,120         | 59,575<br>69,691<br>73,063                          | 27,868 | 40,786<br>40,786<br>45,721           | 9        | M10    | 17.6  | 17,185<br>18,900                    |
| 155                     | x | 245  | 6.102  | x | 9.646  | 5.118<br>5.315<br>5.512          | 7.559          | 2.283 | 2.008          | 0.866          | 1.535                                 | 1.201          | 45                           | 17,702<br>19,472<br>21,390         | 82,056<br>87,676<br>92,172                          | 30,771 | 42,527<br>44,414<br>48,478           | 11       | M10    | 22.0  | 24,340<br>26,737<br>35,495          |
| 165                     | x | 260  | 6.496  | x | 10.236 | 5.709<br>5.512<br>5.315          | 8.268          | 2.756 | 2.441          | 1.024          | 1.811                                 | 1.417          | 75                           | 28,396<br>25,962<br>23,602         | 119,149<br>112,405<br>106,785                       | 32,512 | 47,462<br>44,705<br>43,253           | 10       | M12    | 30.9  | 35,495<br>29,502                    |
| 175                     | x | 275  | 6.890  | x | 10.827 | 6.102<br>5.709<br>5.906          | 8.661          | 2.756 | 2.441          | 1.024          | 1.811                                 | 1.417          | 75                           | 33,928<br>28,765<br>31,273         | 132,638<br>120,273<br>125,894                       | 33,674 | 48,478<br>43,834<br>45,430           | 11       | M12    | 32.4  | 42,410<br>35,956<br>39,091          |
| 185                     | x | 295  | 7.283  | x | 11.614 | 6.496<br>6.299<br>6.102          | 8.858          | 2.756 | 2.441          | 1.024          | 1.811                                 | 1.417          | 75                           | 39,829<br>37,100<br>34,371         | 146,126<br>140,506<br>134,886                       | 34,835 | 49,494<br>46,301<br>44,560           | 12       | M12    | 37.9  | 49,785<br>46,374<br>42,963          |
| 195                     | x | 315  | 7.677  | x | 12.402 | 6.890<br>6.693<br>6.496          | 9.331          | 3.150 | 2.835          | 1.220          | 2.205                                 | 1.614          | 75                           | 53,474<br>49,933<br>46,467         | 185,468<br>178,724<br>170,856                       | 33,819 | 51,526<br>46,882<br>44,414           | 15       | M12    | 52.5  | 66,842<br>62,416<br>58,083          |
| 200                     | x | 330  | 7.874  | x | 12.992 | 7.283<br>6.890<br>7.087          | 9.528          | 3.150 | 2.835          | 1.220          | 2.205                                 | 1.614          | 75                           | 62,325<br>54,580<br>58,637         | 205,701<br>191,088<br>200,081                       | 35,270 | 63,864<br>48,478<br>53,413           | 16       | M12    | 59.1  | 77,905<br>68,224<br>73,295          |
| 220                     | x | 345  | 8.661  | x | 13.583 | 7.874<br>7.480<br>7.087          | 10.433         | 3.701 | 3.307          | 1.417          | 2.598                                 | 1.850          | 185                          | 77,445<br>68,963<br>61,071         | 237,175<br>220,314<br>206,825                       | 31,932 | 53,268<br>44,414<br>40,205           | 10       | M16    | 70.5  | 96,805<br>86,203<br>76,338          |
| 240                     | x | 370  | 9.449  | x | 14.567 | 7.874<br>8.268<br>8.465          | 11.417         | 3.701 | 3.307          | 1.417          | 2.598                                 | 1.850          | 185                          | 83,345<br>94,040<br>99,203         | 255,159<br>272,020<br>281,012                       | 35,270 | 44,124<br>47,898<br>51,672           | 12       | M16    | 79.4  | 104,181<br>117,549<br>124,003       |
| 260                     | x | 395  | 10.236 | x | 15.551 | 9.252<br>8.661<br>9.055          | 12.205         | 4.016 | 3.622          | 1.575          | 2.835                                 | 2.067          | 185                          | 127,600<br>109,898<br>121,699      | 331,595<br>303,494<br>322,602                       | 34,835 | 52,833<br>43,979<br>48,478           | 14       | M16    | 106.0 | 159,498<br>137,371<br>152,122       |
| 280                     | x | 425  | 11.024 | x | 16.732 | 9.843<br>9.449<br>9.055          | 13.110         | 4.488 | 4.094          | 1.811          | 3.307                                 | 2.343          | 185                          | 153,415<br>139,401<br>126,124      | 373,185<br>352,952<br>333,843                       | 31,642 | 47,027<br>41,657<br>39,189           | 16       | M16    | 132.0 | 191,766<br>174,249<br>157,654       |
| 300                     | x | 460  | 11.811 | x | 18.110 | 9.843<br>10.630<br>10.236        | 14.094         | 4.488 | 4.094          | 1.811          | 3.307                                 | 2.343          | 185                          | 158,578<br>188,080<br>172,591      | 386,673<br>424,891<br>404,658                       | 33,238 | 40,495<br>49,640<br>43,979           | 18       | M16    | 154.0 | 198,220<br>235,098<br>215,737       |
| 320                     | x | 495  | 12.598 | x | 19.488 | 11.417<br>10.630<br>11.024       | 14.882         | 4.567 | 4.173          | 1.890          | 3.307                                 | 2.382          | 185                          | 225,696<br>191,768<br>209,470      | 477,721<br>436,131<br>456,364                       | 34,690 | 51,526<br>42,527<br>45,430           | 20       | M16    | 185.0 | 282,117<br>239,708<br>261,835       |
| 340                     | x | 535  | 13.386 | x | 21.063 | 12.008<br>11.811<br>11.417       | 15.827         | 4.567 | 4.173          | 1.890          | 3.307                                 | 2.382          | 185                          | 248,561<br>238,973<br>221,271      | 496,830<br>485,590<br>465,357                       | 34,254 | 47,317<br>44,850<br>41,802           | 21       | M16    | 220.0 | 310,698<br>298,713<br>276,586       |
| 350                     | x | 545  | 13.780 | x | 21.457 | 11.811<br>12.008<br>12.205       | 16.260         | 5.315 | 4.803          | 2.126          | 3.937                                 | 2.697          | 361                          | 274,376<br>283,964<br>295,028      | 558,653<br>571,017<br>582,258                       | 33,383 | 42,382<br>44,124<br>46,446           | 16       | M20    | 265.0 | 342,966<br>354,952<br>368,781       |
| 360                     | x | 555  | 14.173 | x | 21.850 | 12.598<br>11.811<br>12.205       | 16.654         | 5.315 | 4.803          | 2.126          | 3.937                                 | 2.697          | 361                          | 306,092<br>265,525<br>286,177      | 582,258<br>539,544<br>562,025                       | 32,367 | 45,576<br>39,189<br>41,221           | 16       | M20    | 276.0 | 382,610<br>331,903<br>357,718       |
| 380                     | x | 585  | 14.961 | x | 23.031 | 12.992<br>12.795<br>12.598       | 17.402         | 5.866 | 5.354          | 2.362          | 4.409                                 | 2.972          | 361                          | 344,445<br>332,644<br>320,843      | 637,336<br>624,972<br>611,483                       | 30,916 | 41,366<br>39,915<br>38,899           | 18       | M20    | 331.0 | 430,552<br>415,801<br>401,049       |
| 390                     | x | 595  | 15.354 | x | 23.425 | 12.992<br>13.386<br>13.780       | 17.795         | 5.866 | 5.354          | 2.362          | 4.409                                 | 3.071          | 361                          | 372,473<br>388,288<br>425,578      | 687,919<br>713,772<br>740,749                       | 33,383 | 41,366<br>44,124<br>48,914           | 20       | M20    | 344.0 | 465,586<br>497,854<br>531,967       |

<sup>1)</sup> Shrink disc GT (split) delivered without screws. Tightening torques for screws quantity see table

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Explanations to tables: Page 9

To continue see next page

## Characteristics

**Light design** – suitable for medium transmissible values when space is limited.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

### Shrink discs GT (split)

In the application shown above special screws according to the dimension X are required, which have to be ordered accordingly. When dimension „X“ larger than  $2 \cdot L_1$  (RfN 4051 Light Duty Series, Page 20) is chosen, a reduction of the transmissible torque up to 50% has to be considered to the type GT.

| Shrink Discs dimensions |   |      |        |   |        |                |                |       |                |                | Transmissible torques or axial forces |                |                              |         | Locking screws <sup>1)</sup> ISO 4014 / 4017 - 10.9 |        |                |          |        |       |                  |
|-------------------------|---|------|--------|---|--------|----------------|----------------|-------|----------------|----------------|---------------------------------------|----------------|------------------------------|---------|---|--------|----------------|----------|--------|-------|------------------|
| d                       | x | D    | d      | x | D      | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub>                        | L <sub>B</sub> | T <sub>A</sub> <sup>1)</sup> | T       | F <sub>ax</sub>                                     | P      | σ <sub>v</sub> | Quantity | Thread | Gw    | T <sub>max</sub> |
| mm                      |   | inch | mm     |   | inch   | inch           | inch           | inch  | inch           | inch           | inch                                  | inch           | ft-lbs                       | ft-lbs  | lbs   | psi    | psi            |          |        | lbs   | ft-lbs           |
| 400                     | x | 615  | 15.748 | x | 24.213 | 14.173         | 18.189         | 5.866 | 5.354          | 2.362          | 4.409                                 | 3.071          | 361                          | 461,719 | 782,339   | 34,254 | 50,075         | 21       | M20    | 362.0 | 577,142          |
|                         |   |      |        |   |        | 13.386         |                |       |                |                |                                       |                |                              | 405,664 | 727,260   |        | 42,237         |          |        |       | 507,074          |
|                         |   |      |        |   |        | 13.780         |                |       |                |                |                                       |                |                              | 432,954 | 755,362   |        | 45,140         |          |        |       | 541,186          |
| 420                     | x | 630  | 16.535 | x | 24.803 | 14.567         | 19.094         | 6.181 | 5.669          | 2.520          | 4.724                                 | 3.228          | 361                          | 483,108 | 796,951   | 31,787 | 43,108         | 22       | M20    | 408.0 | 603,879          |
|                         |   |      |        |   |        | 14.173         |                |       |                |                |                                       |                |                              | 455,081 | 769,974   |        | 40,205         |          |        |       | 568,845          |
|                         |   |      |        |   |        | 13.780         |                |       |                |                |                                       |                |                              | 426,315 | 741,873   |        | 38,463         |          |        |       | 532,889          |
| 440                     | x | 660  | 17.323 | x | 25.984 | 14.567         | 19.882         | 6.181 | 5.669          | 2.520          | 4.724                                 | 3.228          | 361                          | 499,335 | 822,805   | 33,238 | 39,770         | 24       | M20    | 452.0 | 624,162          |
|                         |   |      |        |   |        | 14.961         |                |       |                |                |                                       |                |                              | 530,313 | 850,906   |        | 41,657         |          |        |       | 662,884          |
|                         |   |      |        |   |        | 15.354         |                |       |                |                |                                       |                |                              | 562,028 | 879,007   |        | 44,850         |          |        |       | 702,528          |
| 460                     | x | 685  | 18.110 | x | 26.969 | 16.142         | 20.748         | 6.732 | 6.220          | 2.795          | 5.197                                 | 3.602          | 361                          | 689,628 | 1,029,630   | 33,674 | 47,608         | 28       | M20    | 518.0 | 862,948          |
|                         |   |      |        |   |        | 15.354         |                |       |                |                |                                       |                |                              | 619,559 | 971,179   |        | 41,076         |          |        |       | 774,440          |
|                         |   |      |        |   |        | 15.748         |                |       |                |                |                                       |                |                              | 656,437 | 1,002,653   |        | 43,398         |          |        |       | 820,538          |
| 480                     | x | 715  | 18.898 | x | 28.150 | 16.535         | 21.535         | 6.732 | 6.220          | 2.795          | 5.197                                 | 3.602          | 361                          | 694,053 | 1,007,149   | 32,222 | 42,092         | 28       | M20    | 562.0 | 867,557          |
|                         |   |      |        |   |        | 16.732         |                |       |                |                |                                       |                |                              | 712,493 | 1,022,436   |        | 43,689         |          |        |       | 890,606          |
|                         |   |      |        |   |        | 16.142         |                |       |                |                |                                       |                |                              | 657,175 | 977,924   |        | 39,915         |          |        |       | 821,460          |
| 500                     | x | 750  | 19.685 | x | 29.528 | 16.732         | 22.323         | 6.732 | 6.220          | 2.795          | 5.197                                 | 3.602          | 361                          | 727,244 | 1,044,242   | 33,093 | 39,915         | 30       | M20    | 628.0 | 909,045          |
|                         |   |      |        |   |        | 16.929         |                |       |                |                |                                       |                |                              | 747,158 | 1,059,305   |        | 40,786         |          |        |       | 933,938          |
|                         |   |      |        |   |        | 17.323         |                |       |                |                |                                       |                |                              | 786,250 | 1,089,204   |        | 43,108         |          |        |       | 982,801          |

<sup>1)</sup> Shrink disc GT (split) delivered without screws. Tightening torques for screws quantity see table

■ Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$

■ Tolerances  
For shaft see table page 8

[Explanations to tables: Page 9](#)

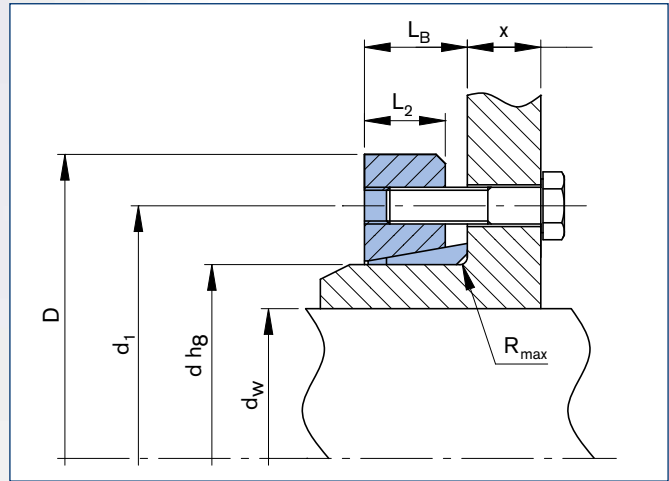
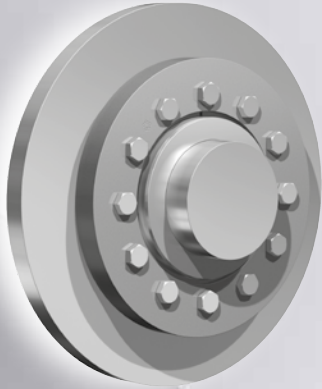
[More sizes on request](#)

■ When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

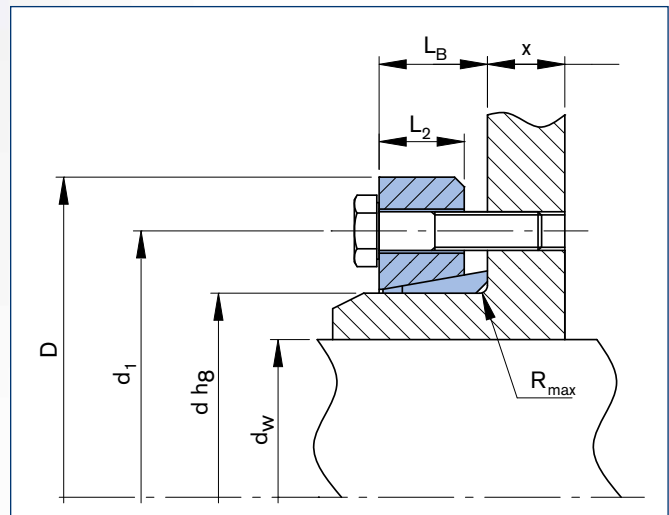
Ordering examples: RfN 4051

| Series   | d      | D      | Version |
|----------|--------|--------|---------|
| RfN 4051 | 16.535 | 24.803 | -       |
| RfN 4051 | 16.535 | 24.803 | GT      |

GT = Split



RINGFEDER® Shrink Disc RfN 4051 HT · Dimensions



RINGFEDER® Shrink Disc RfN 4051 HC · Dimensions

**Half shrink discs**

Type HT (Threaded holes in thrust ring)

Type HC (Clearance holes in thrust ring)



| Shrink Discs dimensions |   |     |        |   |        |                |                |                |                | Transmissible torques<br>or axial forces |                              | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |                 |          |        |      |
|-------------------------|---|-----|--------|---|--------|----------------|----------------|----------------|----------------|--|------------------------------|--|-----------------|----------|--------|------|
| d                       | x | D   | d      | x | D      | d <sub>w</sub> | d <sub>1</sub> | L <sub>B</sub> | L <sub>2</sub> | R  | T <sub>A</sub> <sup>1)</sup> | T  | F <sub>ax</sub> | Quantity | Thread | Gw   |
| mm                      |   |     | inch   |   |        | inch           | inch           | inch           | inch           | inch                                     | ft-lbs                       | ft-lbs   | lbs             |          |        | lbs  |
| 125                     | x | 185 | 4.921  | x | 7.283  | 3.740          | 6.220          | 1.201          | 0.866          | 0.189                                    | 45                           | 3,891  | 24,747          | 8        | M10    | 5.51 |
|                         |   |     |        |   |        | 3.937          |                |                |                |  |                              | 4,462  | 26,997          |          |        |      |
|                         |   |     |        |   |        | 4.134          |                |                |                |  |                              | 5,089  | 29,247          |          |        |      |
| 140                     | x | 220 | 5.512  | x | 8.661  | 4.331          | 6.890          | 1.215          | 0.866          | 0.189                                    | 45                           | 5,458  | 29,697          | 9        | M10    | 8.82 |
|                         |   |     |        |   |        | 4.724          |                |                |                |  |                              | 6,874  | 34,871          |          |        |      |
|                         |   |     |        |   |        | 4.921          |                |                |                |  |                              | 7,560  | 36,446          |          |        |      |
| 155                     | x | 245 | 6.102  | x | 9.646  | 5.118          | 7.559          | 1.201          | 0.866          | 0.189                                    | 45                           | 8,851  | 40,946          | 11       | M10    | 11.0 |
|                         |   |     |        |   |        | 5.315          |                |                |                |  |                              | 9,736  | 43,870          |          |        |      |
|                         |   |     |        |   |        | 5.512          |                |                |                |  |                              | 10,695   | 46,120          |          |        |      |
| 165                     | x | 260 | 6.496  | x | 10.236 | 5.315          | 8.268          | 1.417          | 1.024          | 0.189                                    | 75                           | 11,801   | 53,319          | 10       | M12    | 15.4 |
|                         |   |     |        |   |        | 5.512          |                |                |                |  |                              | 12,981   | 56,244          |          |        |      |
|                         |   |     |        |   |        | 5.709          |                |                |                |  |                              | 14,198   | 59,619          |          |        |      |
| 175                     | x | 275 | 6.890  | x | 10.827 | 5.709          | 8.661          | 1.417          | 1.024          | 0.189                                    | 75                           | 14,382   | 60,069          | 11       | M12    | 15.9 |
|                         |   |     |        |   |        | 5.906          |                |                |                |  |                              | 15,636   | 62,993          |          |        |      |
|                         |   |     |        |   |        | 6.102          |                |                |                |  |                              | 16,964   | 66,368          |          |        |      |
| 185                     | x | 295 | 7.283  | x | 11.614 | 6.102          | 8.858          | 1.417          | 1.024          | 0.189                                    | 75                           | 17,185   | 67,493          | 12       | M12    | 18.7 |
|                         |   |     |        |   |        | 6.299          |                |                |                |  |                              | 18,550   | 70,305          |          |        |      |
|                         |   |     |        |   |        | 6.496          |                |                |                |  |                              | 19,914   | 73,117          |          |        |      |
| 195                     | x | 315 | 7.677  | x | 12.402 | 6.496          | 9.331          | 1.614          | 1.220          | 0.189                                    | 75                           | 23,233   | 85,491          | 15       | M12    | 25.8 |
|                         |   |     |        |   |        | 6.693          |                |                |                |  |                              | 24,966   | 89,428          |          |        |      |
|                         |   |     |        |   |        | 6.890          |                |                |                |  |                              | 26,737   | 92,803          |          |        |      |
| 200                     | x | 330 | 7.874  | x | 12.992 | 6.890          | 9.528          | 1.614          | 1.220          | 0.189                                    | 75                           | 27,290   | 95,615          | 16       | M12    | 28.9 |
|                         |   |     |        |   |        | 7.087          |                |                |                |  |                              | 29,318   | 100,114         |          |        |      |
|                         |   |     |        |   |        | 7.283          |                |                |                |  |                              | 31,162   | 102,927         |          |        |      |
| 220                     | x | 345 | 8.661  | x | 13.583 | 7.087          | 10.433         | 1.850          | 1.417          | 0.189                                    | 185                          | 30,535   | 103,489         | 10       | M16    | 34.4 |
|                         |   |     |        |   |        | 7.480          |                |                |                |  |                              | 34,481   | 110,238         |          |        |      |
|                         |   |     |        |   |        | 7.874          |                |                |                |  |                              | 38,722   | 118,675         |          |        |      |
| 240                     | x | 370 | 9.449  | x | 14.567 | 7.874          | 11.417         | 1.850          | 1.417          | 0.189                                    | 185                          | 41,672   | 127,674         | 12       | M16    | 38.6 |
|                         |   |     |        |   |        | 8.268          |                |                |                |  |                              | 47,020   | 136,110         |          |        |      |
|                         |   |     |        |   |        | 8.465          |                |                |                |  |                              | 49,601   | 140,610         |          |        |      |
| 260                     | x | 395 | 10.236 | x | 15.551 | 8.661          | 12.205         | 2.067          | 1.575          | 0.252                                    | 185                          | 54,948   | 151,859         | 14       | M16    | 52.9 |
|                         |   |     |        |   |        | 9.055          |                |                |                |  |                              | 60,849   | 161,420         |          |        |      |
|                         |   |     |        |   |        | 9.252          |                |                |                |  |                              | 63,799   | 165,920         |          |        |      |
| 280                     | x | 425 | 11.024 | x | 16.732 | 9.055          | 13.110         | 2.343          | 1.811          | 0.252                                    | 185                          | 63,062   | 167,045         | 16       | M16    | 66.1 |
|                         |   |     |        |   |        | 9.449          |                |                |                |  |                              | 69,700   | 176,606         |          |        |      |
|                         |   |     |        |   |        | 9.843          |                |                |                |  |                              | 76,706   | 186,730         |          |        |      |
| 300                     | x | 460 | 11.811 | x | 18.110 | 9.843          | 14.094         | 2.343          | 1.811          | 0.252                                    | 185                          | 79,288   | 193,479         | 18       | M16    | 76.1 |
|                         |   |     |        |   |        | 10.236         |                |                |                |  |                              | 86,295   | 202,478         |          |        |      |
|                         |   |     |        |   |        | 10.630         |                |                |                |  |                              | 94,039   | 212,602         |          |        |      |
| 320                     | x | 495 | 12.598 | x | 19.488 | 10.630         | 14.882         | 2.382          | 1.890          | 0.252                                    | 185                          | 95,883   | 218,227         | 20       | M16    | 92.6 |
|                         |   |     |        |   |        | 11.024         |                |                |                |  |                              | 104,734  | 228,351         |          |        |      |
|                         |   |     |        |   |        | 11.417         |                |                |                |  |                              | 112,847  | 239,037         |          |        |      |
| 340                     | x | 535 | 13.386 | x | 21.063 | 11.417         | 15.827         | 2.382          | 1.890          | 0.252                                    | 185                          | 110,634  | 232,850         | 21       | M16    | 110  |
|                         |   |     |        |   |        | 11.811         |                |                |                |  |                              | 119,485  | 242,974         |          |        |      |
|                         |   |     |        |   |        | 12.008         |                |                |                |  |                              | 124,279  | 248,598         |          |        |      |
| 350                     | x | 545 | 13.780 | x | 21.457 | 11.811         | 16.260         | 2.697          | 2.126          | 0.252                                    | 361                          | 137,187  | 279,533         | 16       | M20    | 132  |
|                         |   |     |        |   |        | 12.008         |                |                |                |  |                              | 141,981  | 285,720         |          |        |      |
|                         |   |     |        |   |        | 12.205         |                |                |                |  |                              | 147,512  | 291,344         |          |        |      |
| 360                     | x | 555 | 14.173 | x | 21.850 | 11.811         | 16.654         | 2.697          | 2.126          | 0.252                                    | 361                          | 132,761  | 269,971         | 16       | M20    | 138  |
|                         |   |     |        |   |        | 12.205         |                |                |                |  |                              | 143,087  | 281,220         |          |        |      |
|                         |   |     |        |   |        | 12.598         |                |                |                |  |                              | 153,044  | 291,344         |          |        |      |
| 380                     | x | 585 | 14.961 | x | 23.031 | 12.598         | 17.402         | 2.972          | 2.362          | 0.252                                    | 361                          | 160,420  | 305,967         | 18       | M20    | 165  |
|                         |   |     |        |   |        | 12.795         |                |                |                |  |                              | 166,320  | 312,717         |          |        |      |
|                         |   |     |        |   |        | 12.992         |                |                |                |  |                              | 172,221  | 318,903         |          |        |      |
| 390                     | x | 595 | 15.354 | x | 23.425 | 12.992         | 17.795         | 3.071          | 2.362          | 0.331                                    | 361                          | 186,234  | 344,213         | 20       | M20    | 172  |
|                         |   |     |        |   |        | 13.386         |                |                |                |  |                              | 199,142  | 357,149         |          |        |      |
|                         |   |     |        |   |        | 13.780         |                |                |                |  |                              | 212,787  | 370,648         |          |        |      |

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

- Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Explanations to tables: Page 9

To continue see next page



## Characteristics

**Light design** – suitable for medium transmissible values when space is limited.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

### Half shrink discs

Type HT (Threaded holes in thrust ring)

Type HC (Clearance holes in thrust ring)

| Shrink Discs dimensions |   |     |        |   |        |                |                |                |                | T <sub>A</sub> <sup>1)</sup> | Transmissible torques<br>or axial forces |         | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |          | Gw  |        |
|-------------------------|---|-----|--------|---|--------|----------------|----------------|----------------|----------------|------------------------------|--|---------|--|----------|-----|--------|
| d                       | x | D   | d      | x | D      | d <sub>w</sub> | d <sub>1</sub> | L <sub>B</sub> | L <sub>2</sub> |                              | R  | T       | F <sub>ax</sub>  | Quantity |     | Thread |
| mm                      |   |     | inch   |   |        | inch           | inch           | inch           | inch           | inch                         | ft-lbs                                   | lbs     |  |          | lbs |        |
| 400                     | x | 615 | 15.748 | x | 24.213 | 13.386         | 18.189         | 3.071          | 2.362          | 0.331                        | 361                                      | 202,830 | 363,899  | 21       | M20 | 177    |
|                         |   |     |        |   |        | 13.780         |                |                |                |                              |  | 216,474 | 377,960  |          |     |        |
|                         |   |     |        |   |        | 14.173         |                |                |                |                              |  | 230,857 | 391,458  |          |     |        |
| 420                     | x | 630 | 16.535 | x | 24.803 | 13.780         | 19.094         | 3.228          | 2.520          | 0.331                        | 361                                      | 213,155 | 371,210  | 22       | M20 | 204    |
|                         |   |     |        |   |        | 14.173         |                |                |                |                              |  | 227,538 | 385,271  |          |     |        |
|                         |   |     |        |   |        | 14.567         |                |                |                |                              |  | 241,552 | 398,770  |          |     |        |
| 440                     | x | 660 | 17.323 | x | 25.984 | 14.567         | 19.882         | 3.228          | 2.520          | 0.331                        | 361                                      | 249,665 | 411,706  | 24       | M20 | 226    |
|                         |   |     |        |   |        | 14.961         |                |                |                |                              |  | 265,154 | 425,767  |          |     |        |
|                         |   |     |        |   |        | 15.354         |                |                |                |                              |  | 281,011 | 439,828  |          |     |        |
| 460                     | x | 685 | 18.110 | x | 26.969 | 15.354         | 20.748         | 3.602          | 2.795          | 0.390                        | 361                                      | 309,776 | 485,948  | 28       | M20 | 259    |
|                         |   |     |        |   |        | 15.748         |                |                |                |                              |  | 328,215 | 501,696  |          |     |        |
|                         |   |     |        |   |        | 16.142         |                |                |                |                              |  | 344,810 | 515,195  |          |     |        |
| 480                     | x | 715 | 18.898 | x | 28.150 | 16.142         | 21.535         | 3.602          | 2.795          | 0.390                        | 361                                      | 328,584 | 489,323  | 28       | M20 | 281    |
|                         |   |     |        |   |        | 16.535         |                |                |                |                              |  | 347,023 | 503,946  |          |     |        |
|                         |   |     |        |   |        | 16.732         |                |                |                |                              |  | 356,242 | 511,595  |          |     |        |
| 500                     | x | 750 | 19.685 | x | 29.528 | 16.732         | 22.323         | 3.602          | 2.795          | 0.390                        | 361                                      | 363,618 | 522,507  | 30       | M20 | 314    |
|                         |   |     |        |   |        | 16.929         |                |                |                |                              |  | 373,575 | 530,043  |          |     |        |
|                         |   |     |        |   |        | 17.323         |                |                |                |                              |  | 393,121 | 545,004  |          |     |        |

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

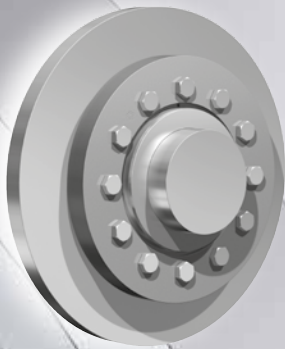
[Explanations to tables: Page 9](#)

Ordering examples: RfN 4051

| Series   | d      | D      | Version |
|----------|--------|--------|---------|
| RfN 4051 | 16.535 | 24.803 | HT      |
| RfN 4051 | 16.535 | 24.803 | HC      |

HT = Half shrink disc with threaded holes in thrust ring

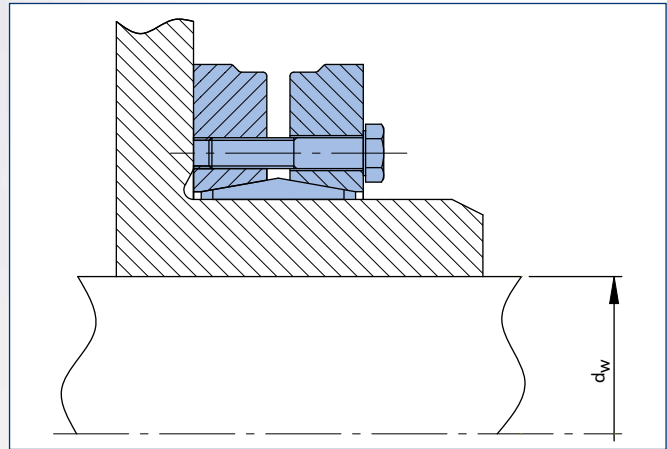
HC = Half shrink disc with clearance holes in thrust ring



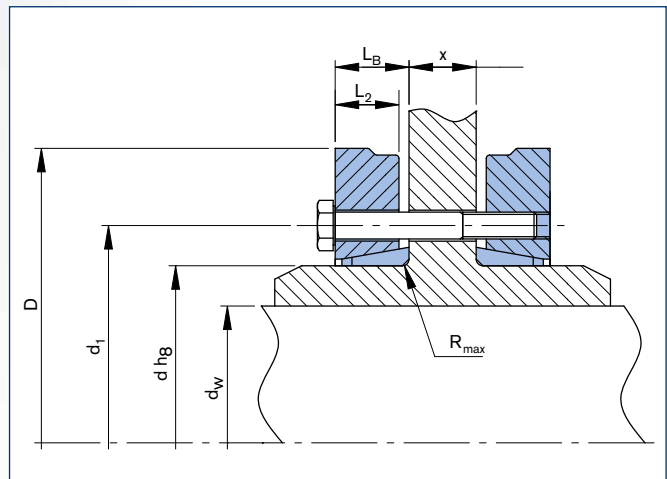
**OPTIONAL  
NICKEL PLATED**

### Shrink discs GT (split)

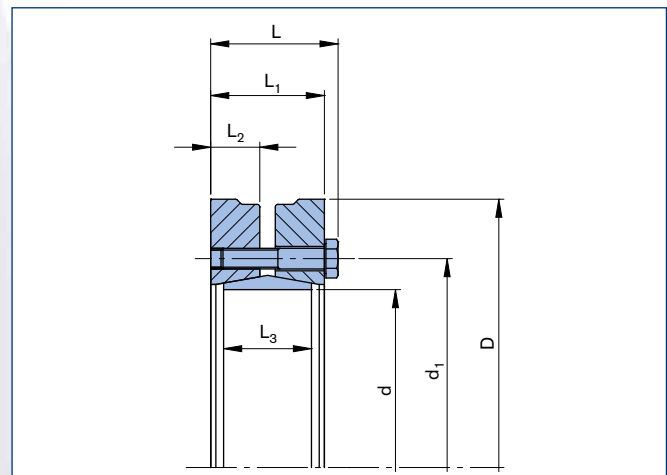
In the application shown above special screws according to the dimension X are required, which have to be ordered accordingly. When dimension „X“ larger than  $2 \cdot L_1$  (RfN 4061 Standard Series, Page 28) is chosen, a reduction of the transmissible torque up to 50% has to be considered to the type GT.



RINGFEDER® Shrink Disc RfN 4061 · Location



RINGFEDER® Shrink Disc RfN 4061 GT · Location



RINGFEDER® Shrink Disc RfN 4061 · Dimensions

| Shrink Discs dimensions |   |      |       |   |       |                |                |       |                |                |                | Transmissible torques or axial forces |                              |        |                 | Locking screws <sup>1)</sup> ISO 4014 / 4017 - 10.9 |                |          |        |                |                  |
|-------------------------|---|------|-------|---|-------|----------------|----------------|-------|----------------|----------------|----------------|---------------------------------------|------------------------------|--------|-----------------|---|----------------|----------|--------|----------------|------------------|
| d                       | x | D    | d     | x | D     | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>B</sub>                        | T <sub>A</sub> <sup>1)</sup> | T      | F <sub>ax</sub> | P   | σ <sub>v</sub> | Quantity | Thread | G <sub>w</sub> | T <sub>max</sub> |
| mm                      |   | inch | mm    |   | inch  | inch           | inch           | inch  | inch           | inch           | inch           | inch                                  | ft-lbs                       | ft-lbs | lbs             | psi   | psi            |          |        | lbs            | ft-lbs           |
| 14                      | x | 37   | 0.551 | x | 1.457 | 0.394          | 0.945          | 0.583 | 0.472          | 0.197          | 0.354          | 0.374                                 | 2                            | 22     | 1,800           | 40,350  | 60,235         | 3        | M4*    | 0.2            | 28               |
|                         |   |      |       |   |       | 0.472          |                |       |                |                |                |                                       |                              | 27     | 1,800           |   | 68,799         |          |        |                | 34               |
|                         |   |      |       |   |       | 0.472          |                |       |                |                |                |                                       |                              | 35     | 2,250           |   | 80,846         |          |        |                | 44               |
| 16                      | x | 41   | 0.630 | x | 1.614 | 0.472          | 1.063          | 0.728 | 0.591          | 0.246          | 0.472          | 0.374                                 | 3                            | 52     | 3,375           | 48,769  | 73,879         | 4        | M5     | 0.2            | 66               |
|                         |   |      |       |   |       | 0.512          |                |       |                |                |                |                                       |                              | 66     | 4,050           |   | 83,458         |          |        |                | 81               |
|                         |   |      |       |   |       | 0.551          |                |       |                |                |                |                                       |                              | 81     | 4,500           |   | 112,342        |          |        |                | 96               |
| 18                      | x | 44   | 0.709 | x | 1.732 | 0.551          | 1.142          | 0.728 | 0.591          | 0.246          | 0.472          | 0.374                                 | 3                            | 66     | 3,600           | 43,398  | 66,622         | 4        | M5     | 0.4            | 81               |
|                         |   |      |       |   |       | 0.591          |                |       |                |                |                |                                       |                              | 74     | 4,050           |   | 75,911         |          |        |                | 96               |
|                         |   |      |       |   |       | 0.630          |                |       |                |                |                |                                       |                              | 89     | 4,500           |   | 102,327        |          |        |                | 118              |
| 20                      | x | 46   | 0.787 | x | 1.811 | 0.591          | 1.260          | 0.827 | 0.689          | 0.276          | 0.472          | 0.453                                 | 3                            | 81     | 4,500           | 48,769  | 67,057         | 5        | M5     | 0.4            | 103              |
|                         |   |      |       |   |       | 0.630          |                |       |                |                |                |                                       |                              | 103    | 4,949           |   | 72,137         |          |        |                | 125              |
|                         |   |      |       |   |       | 0.669          |                |       |                |                |                |                                       |                              | 118    | 5,399           |   | 84,184         |          |        |                | 148              |
| 21                      | x | 50   | 0.827 | x | 1.969 | 0.630          | 1.417          | 0.886 | 0.748          | 0.315          | 0.591          | 0.465                                 | 3.7                          | 148    | 6,974           | 55,736  | 77,507         | 6        | M5     | 0.4            | 184              |
|                         |   |      |       |   |       | 0.669          |                |       |                |                |                |                                       |                              | 170    | 7,649           |   | 87,377         |          |        |                | 214              |
|                         |   |      |       |   |       | 0.709          |                |       |                |                |                |                                       |                              | 192    | 8,324           |   | 108,278        |          |        |                | 243              |
| 24                      | x | 50   | 0.945 | x | 1.969 | 0.748          | 1.417          | 0.886 | 0.748          | 0.315          | 0.591          | 0.465                                 | 3.7                          | 177    | 7,199           | 48,769  | 71,847         | 6        | M5     | 0.4            | 221              |
|                         |   |      |       |   |       | 0.787          |                |       |                |                |                |                                       |                              | 199    | 7,874           |   | 80,410         |          |        |                | 251              |
|                         |   |      |       |   |       | 0.827          |                |       |                |                |                |                                       |                              | 221    | 8,549           |   | 98,553         |          |        |                | 288              |
| 30                      | x | 52   | 1.181 | x | 2.047 | 0.945          | 1.634          | 1.024 | 0.886          | 0.374          | 0.709          | 0.504                                 | 3.7                          | 258    | 8,549           | 37,883  | 56,607         | 7        | M5     | 0.4            | 332              |
|                         |   |      |       |   |       | 0.984          |                |       |                |                |                |                                       |                              | 295    | 9,224           |   | 61,832         |          |        |                | 369              |
|                         |   |      |       |   |       | 1.024          |                |       |                |                |                |                                       |                              | 325    | 9,674           |   | 71,411         |          |        |                | 413              |
| 36                      | x | 72   | 1.417 | x | 2.835 | 1.102          | 2.047          | 1.083 | 0.925          | 0.394          | 0.709          | 0.543                                 | 9                            | 435    | 11,924          | 43,979  | 56,607         | 5        | M6     | 1.1            | 538              |
|                         |   |      |       |   |       | 1.181          |                |       |                |                |                |                                       |                              | 509    | 13,049          |   | 63,574         |          |        |                | 634              |
|                         |   |      |       |   |       | 1.220          |                |       |                |                |                |                                       |                              | 516    | 13,049          |   | 77,798         |          |        |                | 656              |
| 38                      | x | 72   | 1.496 | x | 2.835 | 1.142          | 2.165          | 1.181 | 1.024          | 0.413          | 0.827          | 0.598                                 | 9                            | 516    | 13,949          | 42,818  | 54,865         | 6        | M6     | 1.1            | 656              |
|                         |   |      |       |   |       | 1.181          |                |       |                |                |                |                                       |                              | 568    | 14,623          |   | 57,187         |          |        |                | 715              |
|                         |   |      |       |   |       | 1.220          |                |       |                |                |                |                                       |                              | 575    | 14,173          |   | 68,799         |          |        |                | 723              |
| 40                      | x | 72   | 1.575 | x | 2.835 | 1.181          | 2.244          | 1.122 | 0.965          | 0.413          | 0.748          | 0.583                                 | 9                            | 531    | 13,724          | 44,995  | 54,429         | 6        | M6     | 1.1            | 664              |
|                         |   |      |       |   |       | 1.220          |                |       |                |                |                |                                       |                              | 538    | 13,274          |   | 65,315         |          |        |                | 671              |
|                         |   |      |       |   |       | 1.260          |                |       |                |                |                |                                       |                              | 583    | 13,949          |   | 66,767         |          |        |                | 730              |
| 44                      | x | 80   | 1.732 | x | 3.150 | 1.260          | 2.480          | 1.181 | 1.024          | 0.433          | 0.787          | 0.602                                 | 9                            | 590    | 14,173          | 45,285  | 62,267         | 7        | M6     | 1.1            | 738              |
|                         |   |      |       |   |       | 1.378          |                |       |                |                |                |                                       |                              | 738    | 16,423          |   | 64,444         |          |        |                | 922              |
|                         |   |      |       |   |       | 1.417          |                |       |                |                |                |                                       |                              | 774    | 17,098          |   | 66,476         |          |        |                | 996              |
| 48                      | x | 80   | 1.890 | x | 3.150 | 1.417          | 2.677          | 1.181 | 1.024          | 0.433          | 0.866          | 0.622                                 | 9                            | 664    | 14,623          | 37,738  | 53,849         | 7        | M6     | 1.3            | 848              |
|                         |   |      |       |   |       | 1.496          |                |       |                |                |                |                                       |                              | 774    | 16,198          |   | 55,155         |          |        |                | 996              |
|                         |   |      |       |   |       | 1.575          |                |       |                |                |                |                                       |                              | 885    | 17,548          |   | 58,493         |          |        |                | 1,143            |
| 50                      | x | 90   | 1.969 | x | 3.543 | 1.496          | 2.756          | 1.240 | 1.083          | 0.472          | 0.886          | 0.642                                 | 9                            | 996    | 20,023          | 45,576  | 60,671         | 9        | M6     | 2              | 1,217            |
|                         |   |      |       |   |       | 1.575          |                |       |                |                |                |                                       |                              | 1,106  | 21,598          |   | 62,848         |          |        |                | 1,401            |
|                         |   |      |       |   |       | 1.654          |                |       |                |                |                |                                       |                              | 1,254  | 23,173          |   | 67,783         |          |        |                | 1,586            |
| 55                      | x | 100  | 2.165 | x | 3.937 | 1.654          | 2.953          | 1.358 | 1.201          | 0.512          | 0.906          | 0.701                                 | 9                            | 959    | 17,548          | 35,996  | 49,785         | 8        | M6     | 2.4            | 1,180            |
|                         |   |      |       |   |       | 1.772          |                |       |                |                |                |                                       |                              | 1,143  | 19,573          |   | 52,107         |          |        |                | 1,438            |
|                         |   |      |       |   |       | 1.890          |                |       |                |                |                |                                       |                              | 1,328  | 21,598          |   | 59,509         |          |        |                | 1,696            |
| 62                      | x | 110  | 2.441 | x | 4.331 | 1.890          | 3.386          | 1.358 | 1.201          | 0.512          | 0.906          | 0.701                                 | 9                            | 1,770  | 28,347          | 47,898  | 59,074         | 12       | M6     | 2.9            | 2,213            |
|                         |   |      |       |   |       | 1.969          |                |       |                |                |                |                                       |                              | 1,955  | 29,922          |   | 60,816         |          |        |                | 2,434            |
|                         |   |      |       |   |       | 2.047          |                |       |                |                |                |                                       |                              | 2,065  | 30,597          |   | 69,960         |          |        |                | 2,581            |
| 68                      | x | 115  | 2.677 | x | 4.528 | 1.969          | 3.386          | 1.358 | 1.201          | 0.512          | 0.925          | 0.701                                 | 9                            | 1,401  | 21,373          | 35,561  | 45,576         | 10       | M6     | 3.1            | 1,733            |
|                         |   |      |       |   |       | 2.165          |                |       |                |                |                |                                       |                              | 1,660  | 23,398          |   | 53,268         |          |        |                | 2,102            |
|                         |   |      |       |   |       | 2.362          |                |       |                |                |                |                                       |                              | 2,102  | 27,222          |   | 59,655         |          |        |                | 2,655            |
| 75                      | x | 138  | 2.953 | x | 5.433 | 2.165          | 3.937          | 1.488 | 1.280          | 0.551          | 0.984          | 0.776                                 | 22                           | 1,955  | 27,222          | 40,205  | 54,720         | 7        | M8     | 5.1            | 2,434            |
|                         |   |      |       |   |       | 2.362          |                |       |                |                |                |                                       |                              | 2,434  | 31,272          |   | 55,445         |          |        |                | 3,061            |
|                         |   |      |       |   |       | 2.559          |                |       |                |                |                |                                       |                              | 2,987  | 35,546          |   | 60,380         |          |        |                | 3,762            |
| 80                      | x | 145  | 3.150 | x | 5.709 | 2.362          | 3.937          | 1.488 | 1.280          | 0.551          | 0.984          | 0.776                                 | 22                           | 2,360  | 28,347          | 37,593  | 51,236         | 7        | M8     | 5.5            | 2,950            |
|                         |   |      |       |   |       | 2.559          |                |       |                |                |                |                                       |                              | 2,876  | 32,172          |   | 51,962         |          |        |                | 3,614            |
|                         |   |      |       |   |       | 2.756          |                |       |                |                |                |                                       |                              | 3,393  | 35,996          |   | 56,897         |          |        |                | 4,241            |

<sup>1)</sup> Different quality of screws. ISO 4014/4017 - 8.8

<sup>1)</sup> Shrink disc GT (split) delivered without screws. Tightening torques for screws quantity see table

■ Surface finishes  
For shaft  $R_a \leq 3,2 \mu m$

■ Tolerances  
For shaft see table page 8

Explanations to tables: Page 9

To continue see next page

■ When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

### Characteristics

**Standard series** – this is the most popular shrink disc. High transmission values are possible and by varying the screw tightening torque the shrink disc can be adapted to the design specification.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.


**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.



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| Shrink Discs dimensions |   |      |       |      |        |                |                |       |                |                | Transmissible torques or axial forces |                |                              |        | Locking screws <sup>1)</sup> ISO 4014 / 4017 - 10.9 |        |                |          |        |      |                  |
|-------------------------|---|------|-------|------|--------|----------------|----------------|-------|----------------|----------------|---------------------------------------|----------------|------------------------------|--------|---|--------|----------------|----------|--------|------|------------------|
| d                       | x | D    | d     | x    | D      | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub>                        | L <sub>B</sub> | T <sub>A</sub> <sup>1)</sup> | T      | F <sub>ax</sub>                                     | P      | σ <sub>v</sub> | Quantity | Thread | Gw   | T <sub>max</sub> |
| mm                      |   | inch | inch  | inch | inch   | inch           | inch           | inch  | inch           | inch           | inch                                  | inch           | ft-lbs                       | ft-lbs | lbs   | psi    | psi            |          |        | lbs  | ft-lbs           |
| 85                      | x | 155  | 3.346 | x    | 6.102  | 2.362          | 4.488          | 1.803 | 1.594          | 0.630          | 1.181                                 | 0.906          | 22                           | 3,577  | 42,520  | 47,172 | 58,639         | 11       | M8     | 7.7  | 4,462            |
|                         |   |      |       |      |        | 2.559          |                |       |                |                |                                       |                |                              | 4,278  | 47,695  |        | 61,977         |          |        |      | 5,347            |
|                         |   |      |       |      |        | 2.756          |                |       |                |                |                                       |                |                              | 5,015  | 52,869  |        | 61,977         |          |        |      | 6,269            |
| 90                      | x | 155  | 3.543 | x    | 6.102  | 2.559          | 4.488          | 1.752 | 1.535          | 0.669          | 1.181                                 | 0.906          | 22                           | 3,540  | 39,146  | 39,770 | 51,236         | 10       | M8     | 7.2  | 4,425            |
|                         |   |      |       |      |        | 2.756          |                |       |                |                |                                       |                |                              | 4,462  | 43,870  |        | 51,672         |          |        |      | 5,569            |
|                         |   |      |       |      |        | 2.953          |                |       |                |                |                                       |                |                              | 5,384  | 48,370  |        | 53,994         |          |        |      | 6,749            |
| 95                      | x | 170  | 3.740 | x    | 6.693  | 2.559          | 5.000          | 2.067 | 1.858          | 0.748          | 1.339                                 | 0.925          | 22                           | 3,946  | 43,870  | 39,915 | 50,656         | 12       | M8     | 10.4 | 4,942            |
|                         |   |      |       |      |        | 2.756          |                |       |                |                |                                       |                |                              | 4,979  | 48,820  |        | 50,656         |          |        |      | 6,232            |
|                         |   |      |       |      |        | 2.953          |                |       |                |                |                                       |                |                              | 6,011  | 53,994  |        | 51,526         |          |        |      | 7,523            |
| 100                     | x | 170  | 3.937 | x    | 6.693  | 2.756          | 5.000          | 2.067 | 1.858          | 0.748          | 1.339                                 | 1.004          | 22                           | 5,126  | 45,445  | 37,883 | 48,043         | 12       | M8     | 9.9  | 6,417            |
|                         |   |      |       |      |        | 2.953          |                |       |                |                |                                       |                |                              | 5,605  | 50,170  |        | 48,043         |          |        |      | 7,007            |
|                         |   |      |       |      |        | 3.150          |                |       |                |                |                                       |                |                              | 6,712  | 55,119  |        | 49,059         |          |        |      | 8,371            |
| 110                     | x | 185  | 4.331 | x    | 7.283  | 2.953          | 5.709          | 2.339 | 2.087          | 0.906          | 1.654                                 | 1.122          | 45                           | 6,011  | 58,269  | 36,867 | 45,866         | 10       | M10    | 13.9 | 7,486            |
|                         |   |      |       |      |        | 3.150          |                |       |                |                |                                       |                |                              | 7,449  | 64,118  |        | 45,866         |          |        |      | 9,293            |
|                         |   |      |       |      |        | 3.346          |                |       |                |                |                                       |                |                              | 8,998  | 66,593  |        | 51,817         |          |        |      | 11,248           |
| 115                     | x | 185  | 4.528 | x    | 7.283  | 3.150          | 5.709          | 2.457 | 2.205          | 0.906          | 1.654                                 | 1.260          | 45                           | 7,007  | 60,069  | 35,270 | 43,834         | 10       | M10    | 13.4 | 8,740            |
|                         |   |      |       |      |        | 3.543          |                |       |                |                |                                       |                |                              | 8,925  | 67,943  |        | 49,640         |          |        |      | 11,137           |
|                         |   |      |       |      |        | 3.740          |                |       |                |                |                                       |                |                              | 10,363 | 74,017  |        | 51,236         |          |        |      | 12,944           |
| 125                     | x | 215  | 4.921 | x    | 8.465  | 3.346          | 6.299          | 2.378 | 2.126          | 0.906          | 1.654                                 | 1.260          | 45                           | 8,150  | 67,493  | 39,044 | 51,381         | 12       | M10    | 19.2 | 10,178           |
|                         |   |      |       |      |        | 3.543          |                |       |                |                |                                       |                |                              | 9,662  | 73,567  |        | 51,091         |          |        |      | 12,059           |
|                         |   |      |       |      |        | 3.740          |                |       |                |                |                                       |                |                              | 11,174 | 79,866  |        | 51,091         |          |        |      | 13,977           |
| 140                     | x | 230  | 5.512 | x    | 9.055  | 3.740          | 6.890          | 2.677 | 2.382          | 1.024          | 1.811                                 | 1.398          | 75                           | 11,137 | 82,116  | 38,173 | 48,769         | 10       | M12    | 23.4 | 13,903           |
|                         |   |      |       |      |        | 3.937          |                |       |                |                |                                       |                |                              | 12,944 | 88,866  |        | 48,624         |          |        |      | 16,153           |
|                         |   |      |       |      |        | 4.134          |                |       |                |                |                                       |                |                              | 14,751 | 95,390  |        | 48,624         |          |        |      | 18,439           |
| 165                     | x | 290  | 6.496 | x    | 11.417 | 4.528          | 8.268          | 3.189 | 2.795          | 1.220          | 2.205                                 | 1.594          | 185                          | 23,159 | 135,211   | 40,641 | 48,478         | 8        | M16    | 47.8 | 28,986           |
|                         |   |      |       |      |        | 4.724          |                |       |                |                |                                       |                |                              | 26,183 | 143,310   |        | 48,624         |          |        |      | 32,748           |
|                         |   |      |       |      |        | 4.921          |                |       |                |                |                                       |                |                              | 29,060 | 149,384   |        | 50,510         |          |        |      | 36,325           |
| 185                     | x | 330  | 7.283 | x    | 12.992 | 5.315          | 9.291          | 3.795 | 3.402          | 1.504          | 2.795                                 | 1.890          | 185                          | 38,722 | 176,831   | 35,706 | 44,560         | 10       | M16    | 79.4 | 48,384           |
|                         |   |      |       |      |        | 5.512          |                |       |                |                |                                       |                |                              | 42,299 | 186,280   |        | 44,995         |          |        |      | 52,846           |
|                         |   |      |       |      |        | 5.709          |                |       |                |                |                                       |                |                              | 46,024 | 195,729   |        | 45,576         |          |        |      | 57,530           |
| 195                     | x | 350  | 7.677 | x    | 13.780 | 5.512          | 9.685          | 3.780 | 3.386          | 1.504          | 2.795                                 | 1.890          | 185                          | 48,642 | 212,152   | 40,641 | 48,188         | 12       | M16    | 88.2 | 60,812           |
|                         |   |      |       |      |        | 5.906          |                |       |                |                |                                       |                |                              | 57,235 | 232,850   |        | 49,059         |          |        |      | 71,544           |
|                         |   |      |       |      |        | 6.102          |                |       |                |                |                                       |                |                              | 61,771 | 243,199   |        | 50,075         |          |        |      | 77,223           |
| 200                     | x | 350  | 7.874 | x    | 13.780 | 5.906          | 9.685          | 3.780 | 3.386          | 1.504          | 2.795                                 | 1.890          | 185                          | 55,317 | 224,976   | 39,625 | 47,317         | 12       | M16    | 86   | 69,146           |
|                         |   |      |       |      |        | 6.102          |                |       |                |                |                                       |                |                              | 59,743 | 235,100   |        | 47,898         |          |        |      | 74,641           |
|                         |   |      |       |      |        | 6.299          |                |       |                |                |                                       |                |                              | 64,315 | 245,449   |        | 48,914         |          |        |      | 80,394           |

<sup>1)</sup> Shrink disc GT (split) delivered without screws. Tightening torques for screws quantity see table

- Surface finishes For shaft  $R_a \leq 3,2 \mu\text{m}$
- Tolerances For shaft see table page 8
- When using a hollow shaft instead of a solid shaft please contact our Engineering-Team

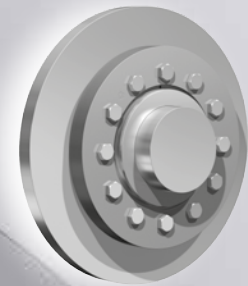
Explanations to tables: Page 9

Ordering examples: RfN 4061

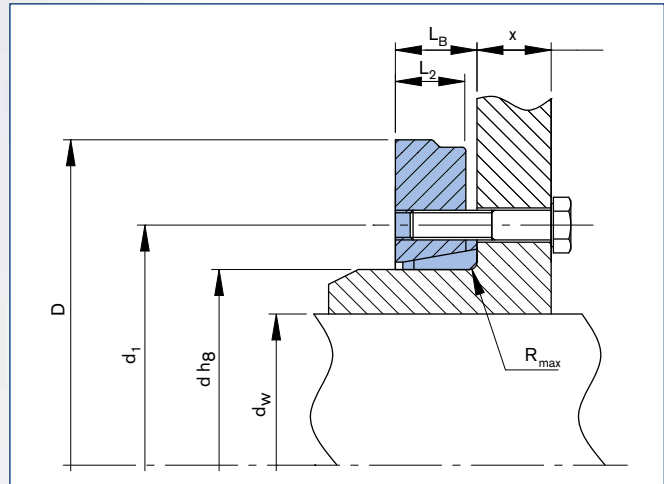
| Series   | d     | D      | Version |
|----------|-------|--------|---------|
| RfN 4061 | 7.677 | 13.780 | -       |
| RfN 4061 | 7.677 | 13.780 | N       |
| RfN 4061 | 7.677 | 13.780 | GT      |
| RfN 4061 | 7.677 | 13.780 | GT-N    |

N = Nickel plated series  
 GT = Split  
 GT-N = Split-nickel plated

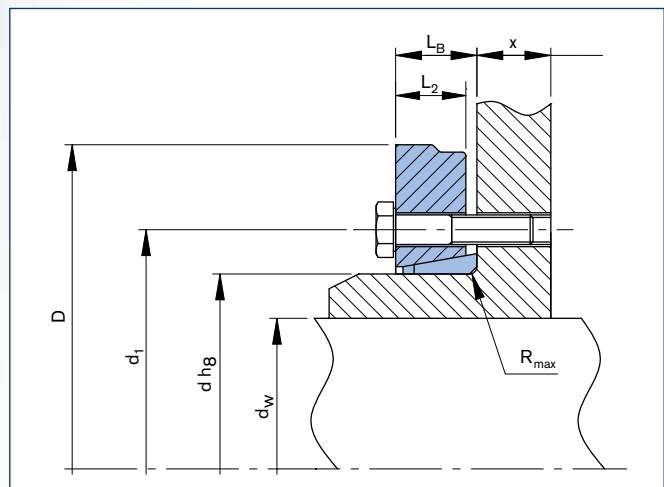




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RINGFEDER® Shrink Disc RfN 4061 HT version



RINGFEDER® Shrink Disc RfN 4061 HC · Dimensions

**Half shrink discs**

Type HT (Threaded holes in thrust ring)

Type HC (Clearance holes in thrust ring)

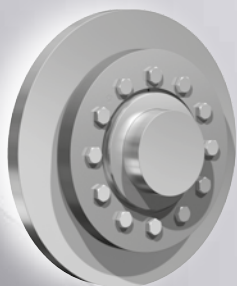
| Shrink Discs dimensions |   |      |       |      |       |                |                |                |                | T <sub>A</sub> <sup>1)</sup> | Transmissible torques<br>or axial forces |                 | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |        | Gw | T <sub>max</sub> |       |
|-------------------------|---|------|-------|------|-------|----------------|----------------|----------------|----------------|------------------------------|--|-----------------|--|--------|----|------------------|-------|
| d                       | x | D    | d     | x    | D     | d <sub>w</sub> | d <sub>1</sub> | L <sub>B</sub> | L <sub>2</sub> |                              | T  | F <sub>ax</sub> | Quantity   | Thread |    |                  |       |
| mm                      |   | inch | inch  | inch | inch  | inch           | inch           | inch           | inch           |                              | ft-lbs                                   | lbs             |  |        |    |                  |       |
| 14                      | x | 37   | 0.551 | x    | 1.457 | 0.394          | 0.945          | 0.374          | 0.197          | 0.039                        | 2  | 11              | 900  | 3      | M4 | 0.1              | 13    |
|                         |   |      |       |      |       | 0.433          |                |                |                |                              |  | 17              | 1,125  |        |    |                  | 17    |
|                         |   |      |       |      |       | 0.472          |                |                |                |                              |  | 26              | 1,687  |        |    |                  | 22    |
| 16                      | x | 41   | 0.630 | x    | 1.614 | 0.472          | 1.063          | 0.374          | 0.246          | 0.039                        | 3  | 26              | 1,687  | 4      | M5 | 0.1              | 33    |
|                         |   |      |       |      |       | 0.512          |                |                |                |                              |  | 33              | 2,025  |        |    |                  | 41    |
|                         |   |      |       |      |       | 0.551          |                |                |                |                              |  | 41              | 2,250  |        |    |                  | 48    |
| 18                      | x | 44   | 0.709 | x    | 1.732 | 0.551          | 1.142          | 0.374          | 0.246          | 0.039                        | 3  | 33              | 1,800  | 4      | M5 | 0.2              | 41    |
|                         |   |      |       |      |       | 0.591          |                |                |                |                              |  | 37              | 2,025  |        |    |                  | 48    |
|                         |   |      |       |      |       | 0.630          |                |                |                |                              |  | 44              | 2,250  |        |    |                  | 59    |
| 20                      | x | 46   | 0.787 | x    | 1.811 | 0.591          | 1.260          | 0.453          | 0.276          | 0.051                        | 3  | 41              | 2,250  | 5      | M5 | 0.2              | 52    |
|                         |   |      |       |      |       | 0.630          |                |                |                |                              |  | 52              | 2,475  |        |    |                  | 63    |
|                         |   |      |       |      |       | 0.669          |                |                |                |                              |  | 59              | 2,700  |        |    |                  | 74    |
| 21                      | x | 50   | 0.827 | x    | 1.969 | 0.630          | 1.417          | 0.465          | 0.315          | 0.051                        | 3.7                                      | 74              | 3,487  | 6      | M5 | 0.2              | 85    |
|                         |   |      |       |      |       | 0.669          |                |                |                |                              |  | 85              | 3,825  |        |    |                  | 107   |
|                         |   |      |       |      |       | 0.709          |                |                |                |                              |  | 96              | 4,162  |        |    |                  | 122   |
| 24                      | x | 50   | 0.945 | x    | 1.969 | 0.748          | 1.417          | 0.465          | 0.315          | 0.051                        | 3.7                                      | 89              | 3,600  | 6      | M5 | 0.2              | 111   |
|                         |   |      |       |      |       | 0.787          |                |                |                |                              |  | 100             | 3,937  |        |    |                  | 125   |
|                         |   |      |       |      |       | 0.827          |                |                |                |                              |  | 111             | 4,275  |        |    |                  | 144   |
| 30                      | x | 52   | 1.181 | x    | 2.047 | 0.945          | 1.634          | 0.504          | 0.374          | 0.051                        | 3.7                                      | 129             | 4,275  | 7      | M5 | 0.2              | 148   |
|                         |   |      |       |      |       | 0.984          |                |                |                |                              |  | 148             | 4,612  |        |    |                  | 184   |
|                         |   |      |       |      |       | 1.024          |                |                |                |                              |  | 162             | 4,837  |        |    |                  | 207   |
| 36                      | x | 72   | 1.417 | x    | 2.835 | 1.220          | 2.047          | 0.543          | 0.394          | 0.051                        | 9  | 258             | 6,524  | 5      | M6 | 0.6              | 258   |
|                         |   |      |       |      |       | 1.181          |                |                |                |                              |  | 254             | 6,524  |        |    |                  | 317   |
|                         |   |      |       |      |       | 1.102          |                |                |                |                              |  | 218             | 5,962  |        |    |                  | 269   |
| 38                      | x | 72   | 1.496 | x    | 2.835 | 1.142          | 2.165          | 0.598          | 0.413          | 0.051                        | 9  | 258             | 6,974  | 6      | M6 | 0.6              | 284   |
|                         |   |      |       |      |       | 1.181          |                |                |                |                              |  | 284             | 7,312  |        |    |                  | 358   |
|                         |   |      |       |      |       | 1.220          |                |                |                |                              |  | 288             | 7,087  |        |    |                  | 361   |
| 40                      | x | 72   | 1.575 | x    | 2.835 | 1.181          | 2.244          | 0.583          | 0.413          | 0.051                        | 9  | 266             | 6,862  | 6      | M6 | 0.6              | 269   |
|                         |   |      |       |      |       | 1.220          |                |                |                |                              |  | 269             | 6,637  |        |    |                  | 336   |
|                         |   |      |       |      |       | 1.260          |                |                |                |                              |  | 291             | 6,974  |        |    |                  | 365   |
| 44                      | x | 80   | 1.732 | x    | 3.150 | 1.260          | 2.480          | 0.602          | 0.433          | 0.110                        | 9  | 295             | 7,087  | 7      | M6 | 0.6              | 369   |
|                         |   |      |       |      |       | 1.378          |                |                |                |                              |  | 369             | 8,212  |        |    |                  | 461   |
|                         |   |      |       |      |       | 1.417          |                |                |                |                              |  | 387             | 8,549  |        |    |                  | 498   |
| 48                      | x | 80   | 1.890 | x    | 3.150 | 1.575          | 2.677          | 0.622          | 0.433          | 0.110                        | 9  | 443             | 8,774  | 7      | M6 | 0.7              | 443   |
|                         |   |      |       |      |       | 1.496          |                |                |                |                              |  | 387             | 8,099  |        |    |                  | 498   |
|                         |   |      |       |      |       | 1.417          |                |                |                |                              |  | 332             | 7,312  |        |    |                  | 424   |
| 50                      | x | 90   | 1.969 | x    | 3.543 | 1.654          | 2.756          | 0.642          | 0.472          | 0.110                        | 9  | 627             | 11,586   | 9      | M6 | 0.9              | 498   |
|                         |   |      |       |      |       | 1.496          |                |                |                |                              |  | 498             | 10,011   |        |    |                  | 608   |
|                         |   |      |       |      |       | 1.575          |                |                |                |                              |  | 553             | 10,799   |        |    |                  | 701   |
| 55                      | x | 100  | 2.165 | x    | 3.937 | 1.890          | 2.953          | 0.701          | 0.512          | 0.110                        | 9  | 664             | 10,799   | 8      | M6 | 1.2              | 664   |
|                         |   |      |       |      |       | 1.772          |                |                |                |                              |  | 572             | 9,786  |        |    |                  | 719   |
|                         |   |      |       |      |       | 1.654          |                |                |                |                              |  | 479             | 8,774  |        |    |                  | 590   |
| 62                      | x | 110  | 2.441 | x    | 4.331 | 1.890          | 3.386          | 0.701          | 0.512          | 0.110                        | 9  | 885             | 14,173   | 12     | M6 | 1.4              | 977   |
|                         |   |      |       |      |       | 1.969          |                |                |                |                              |  | 977             | 14,961   |        |    |                  | 1,217 |
|                         |   |      |       |      |       | 2.047          |                |                |                |                              |  | 1,033           | 15,298   |        |    |                  | 1,291 |
| 68                      | x | 115  | 2.677 | x    | 4.528 | 1.969          | 3.386          | 0.701          | 0.512          | 0.110                        | 9  | 701             | 10,686   | 10     | M6 | 1.5              | 701   |
|                         |   |      |       |      |       | 2.165          |                |                |                |                              |  | 830             | 11,699   |        |    |                  | 1,051 |
|                         |   |      |       |      |       | 2.362          |                |                |                |                              |  | 1,051           | 13,611   |        |    |                  | 1,328 |
| 75                      | x | 138  | 2.953 | x    | 5.433 | 2.165          | 3.937          | 0.776          | 0.551          | 0.110                        | 22                                       | 977             | 13,611   | 7      | M8 | 2.5              | 1,217 |
|                         |   |      |       |      |       | 2.362          |                |                |                |                              |  | 1,217           | 15,636   |        |    |                  | 1,530 |
|                         |   |      |       |      |       | 2.559          |                |                |                |                              |  | 1,494           | 17,773   |        |    |                  | 1,881 |
| 80                      | x | 145  | 3.150 | x    | 5.709 | 2.362          | 3.937          | 0.776          | 0.551          | 0.110                        | 22                                       | 1,180           | 14,173   | 7      | M8 | 2.6              | 1,180 |
|                         |   |      |       |      |       | 2.559          |                |                |                |                              |  | 1,438           | 16,086   |        |    |                  | 1,807 |
|                         |   |      |       |      |       | 2.756          |                |                |                |                              |  | 1,696           | 17,998   |        |    |                  | 2,120 |
| 85                      | x | 155  | 3.346 | x    | 6.102 | 2.362          | 4.488          | 0.906          | 0.630          | 0.130                        | 22                                       | 1,789           | 21,260   | 11     | M8 | 3.6              | 1,789 |
|                         |   |      |       |      |       | 2.559          |                |                |                |                              |  | 2,139           | 23,847   |        |    |                  | 2,231 |
|                         |   |      |       |      |       | 2.756          |                |                |                |                              |  | 2,508           | 26,435   |        |    |                  | 3,135 |

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Explanations to tables: Page 9

To continue see next page



OPTIONAL  
NICKEL PLATED

## Characteristics

**Standard series** – this is the most popular shrink disc. High transmission values are possible and by varying the screw tightening torque the shrink disc can be adapted to the design specification.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

| Shrink Discs dimensions |   |      |       |      |        |                | Transmissible torques<br>or axial forces |                | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |       |                              |        |                 |          |        |      |                  |
|-------------------------|---|------|-------|------|--------|----------------|--|----------------|--|-------|------------------------------|--------|-----------------|----------|--------|------|------------------|
| d                       | x | D    | d     | x    | D      | d <sub>w</sub> | d <sub>1</sub>                           | L <sub>B</sub> | L <sub>2</sub>   | R     | T <sub>A</sub> <sup>1)</sup> | T      | F <sub>ax</sub> | Quantity | Thread | Gw   | T <sub>max</sub> |
| mm                      |   | inch | inch  | inch | inch   | inch           | inch                                     | inch           | inch   | inch  | ft-lbs                       | ft-lbs | lbs             |          |        | lbs  | ft-lbs           |
| 90                      | x | 155  | 3.543 | x    | 6.102  | 2.559          | 4.488                                    | 0.906          | 0.669  | 0.130 | 22                           | 1,770  | 19,573          | 10       | M8     | 3.4  | 2,213            |
|                         |   |      |       |      |        | 2.756          |  |                |  |       |                              | 2,231  | 21,935          |          |        |      | 2,784            |
|                         |   |      |       |      |        | 2.953          |  |                |  |       |                              | 2,692  | 24,185          |          |        |      | 3,374            |
| 95                      | x | 170  | 3.740 | x    | 6.693  | 2.559          | 5.000                                    | 0.925          | 0.748  | 0.130 | 22                           | 1,973  | 21,935          | 12       | M8     | 4.9  | 2,471            |
|                         |   |      |       |      |        | 2.756          |  |                |  |       |                              | 2,489  | 24,410          |          |        |      | 3,116            |
|                         |   |      |       |      |        | 2.953          |  |                |  |       |                              | 3,006  | 26,997          |          |        |      | 3,762            |
| 100                     | x | 170  | 3.937 | x    | 6.693  | 2.756          | 5.000                                    | 1.004          | 0.748  | 0.130 | 22                           | 2,563  | 22,723          | 12       | M8     | 4.7  | 3,208            |
|                         |   |      |       |      |        | 2.953          |  |                |  |       |                              | 2,803  | 25,085          |          |        |      | 3,503            |
|                         |   |      |       |      |        | 3.150          |  |                |  |       |                              | 3,356  | 27,560          |          |        |      | 4,186            |
| 110                     | x | 185  | 4.331 | x    | 7.283  | 2.953          | 5.709                                    | 1.122          | 0.906  | 0.189 | 45                           | 3,006  | 29,134          | 10       | M10    | 6.5  | 3,743            |
|                         |   |      |       |      |        | 3.346          |  |                |  |       |                              | 4,499  | 33,296          |          |        |      | 5,624            |
|                         |   |      |       |      |        | 3.150          |  |                |  |       |                              | 3,725  | 32,059          |          |        |      | 4,647            |
| 115                     | x | 185  | 4.528 | x    | 7.283  | 3.150          | 5.709                                    | 1.260          | 0.906  | 0.189 | 45                           | 3,503  | 30,034          | 10       | M10    | 6.4  | 4,370            |
|                         |   |      |       |      |        | 3.543          |  |                |  |       |                              | 4,462  | 33,971          |          |        |      | 5,569            |
|                         |   |      |       |      |        | 3.740          |  |                |  |       |                              | 5,181  | 37,009          |          |        |      | 6,472            |
| 125                     | x | 215  | 4.921 | x    | 8.465  | 3.346          | 6.299                                    | 1.260          | 0.906  | 0.189 | 45                           | 4,075  | 33,746          | 12       | M10    | 9.3  | 5,089            |
|                         |   |      |       |      |        | 3.543          |  |                |  |       |                              | 4,831  | 36,784          |          |        |      | 6,030            |
|                         |   |      |       |      |        | 3.740          |  |                |  |       |                              | 5,587  | 39,933          |          |        |      | 6,988            |
| 140                     | x | 230  | 5.512 | x    | 9.055  | 3.740          | 6.890                                    | 1.398          | 1.024  | 0.189 | 75                           | 5,569  | 41,058          | 10       | M12    | 11.4 | 6,952            |
|                         |   |      |       |      |        | 3.937          |  |                |  |       |                              | 6,472  | 44,433          |          |        |      | 8,076            |
|                         |   |      |       |      |        | 4.134          |  |                |  |       |                              | 7,376  | 47,695          |          |        |      | 9,220            |
| 165                     | x | 290  | 6.496 | x    | 11.417 | 4.528          | 8.268                                    | 1.594          | 1.220  | 0.189 | 185                          | 11,580 | 67,605          | 8        | M16    | 23.1 | 14,493           |
|                         |   |      |       |      |        | 4.724          |  |                |  |       |                              | 14,530 | 71,655          |          |        |      | 16,374           |
|                         |   |      |       |      |        | 4.921          |  |                |  |       |                              | 13,092 | 74,692          |          |        |      | 18,162           |
| 185                     | x | 330  | 7.283 | x    | 12.992 | 5.709          | 9.291                                    | 1.890          | 1.504  | 0.189 | 185                          | 23,012 | 97,865          | 10       | M16    | 38.6 | 28,765           |
|                         |   |      |       |      |        | 5.315          |  |                |  |       |                              | 19,361 | 88,416          |          |        |      | 24,192           |
|                         |   |      |       |      |        | 5.512          |  |                |  |       |                              | 21,150 | 93,140          |          |        |      | 26,423           |
| 195                     | x | 350  | 7.677 | x    | 13.780 | 5.906          | 9.685                                    | 1.890          | 1.504  | 0.189 | 185                          | 28,617 | 116,425         | 12       | M16    | 43.0 | 35,772           |
|                         |   |      |       |      |        | 6.102          |  |                |  |       |                              | 30,885 | 121,600         |          |        |      | 38,611           |
|                         |   |      |       |      |        | 5.512          |  |                |  |       |                              | 24,321 | 106,076         |          |        |      | 30,406           |
| 200                     | x | 350  | 7.874 | x    | 13.780 | 5.906          | 9.685                                    | 1.890          | 1.504  | 0.189 | 185                          | 27,659 | 112,488         | 12       | M16    | 41.9 | 34,573           |
|                         |   |      |       |      |        | 6.102          |  |                |  |       |                              | 29,871 | 117,550         |          |        |      | 37,321           |
|                         |   |      |       |      |        | 6.299          |  |                |  |       |                              | 32,158 | 122,724         |          |        |      | 40,197           |

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

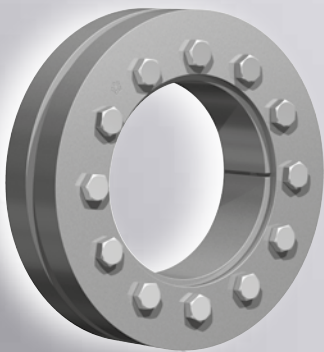
- Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Explanations to tables: Page 9

Ordering examples: RfN 4061

| Series   | d     | D     | Version |
|----------|-------|-------|---------|
| RfN 4061 | 4.331 | 7.283 | HT      |
| RfN 4061 | 4.331 | 7.283 | HT-N    |
| RfN 4061 | 4.331 | 7.283 | HC      |
| RfN 4061 | 4.331 | 7.283 | HC-N    |

- HT = Half shrink disc with threaded holes in thrust ring
- HT-N = Half shrink disc with threaded holes in thrust ring - nickel plated
- HC = Half shrink disc with clearance holes in thrust ring
- HC-N = Half shrink disc with clearance holes in thrust ring - nickel plated



## Characteristics

**Standard series** – this is the most popular shrink disc. High transmission values are possible and by varying the screw tightening torque the shrink disc can be adapted to the design specification.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

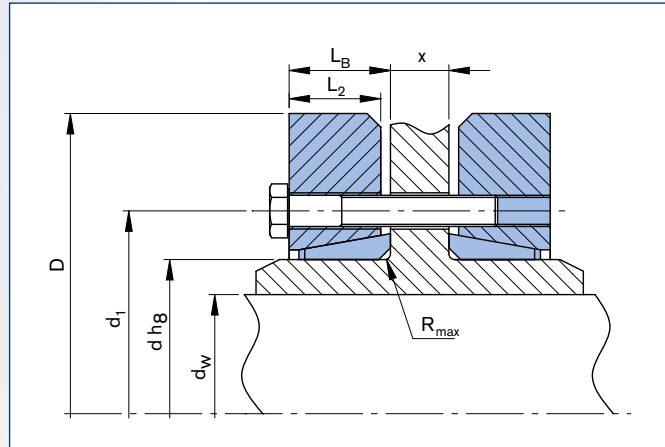
**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

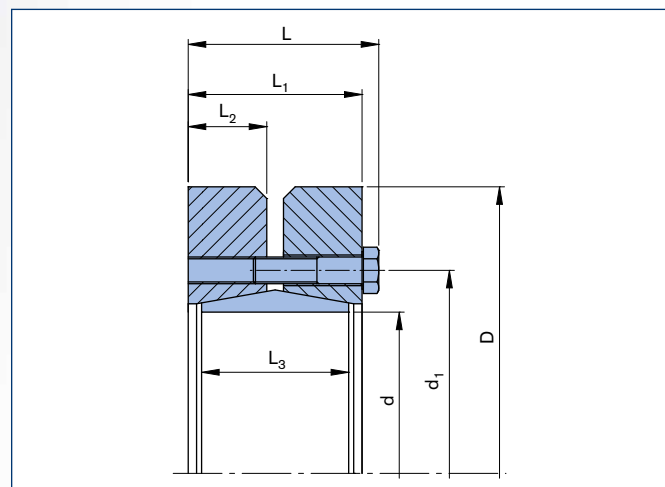
**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.



RINGFEDER® Shrink Disc RfN 4071 GT · Location



RINGFEDER® Shrink Disc RfN 4071 · Dimensions



| Shrink Discs dimensions |   |      |        |      |        |                |                |       |                |                | Transmissible torques or axial forces |                |                              |           | Locking screws <sup>1)</sup> ISO 4014 / 4017 - 10.9 |        |                |          |        |       |                  |
|-------------------------|---|------|--------|------|--------|----------------|----------------|-------|----------------|----------------|---------------------------------------|----------------|------------------------------|-----------|---|--------|----------------|----------|--------|-------|------------------|
| d                       | x | D    | d      | x    | D      | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub>                        | L <sub>B</sub> | T <sub>A</sub> <sup>1)</sup> | T         | F <sub>ax</sub>                                     | P      | σ <sub>v</sub> | Quantity | Thread | Gw    | T <sub>max</sub> |
| mm                      |   | inch | inch   | inch | inch   | inch           | inch           | inch  | inch           | inch           | inch                                  | inch           | ft-lbs                       | ft-lbs    | lbs   | psi    | psi            |          |        | lbs   | ft-lbs           |
| 220                     | x | 370  | 8.661  | x    | 14.567 | 6.299          | 10.630         | 4.488 | 4.094          | 1.850          | 3.465                                 | 2.343          | 185                          | 70,068    | 267,721   | 35,996 | 42,818         | 15       | M16    | 119   | 87,585           |
|                         |   |      |        |      |        | 6.496          |                |       |                |                |                                       |                |                              | 75,231    | 278,745   | 35,996 | 43,253         |          |        |       | 94,039           |
|                         |   |      |        |      |        | 6.693          |                |       |                |                |                                       |                |                              | 81,132    | 290,219   | 35,996 | 43,979         |          |        |       | 101,415          |
| 240                     | x | 405  | 9.449  | x    | 15.945 | 7.087          | 11.614         | 4.803 | 4.291          | 1.929          | 3.622                                 | 2.441          | 361                          | 101,784   | 354,562   | 39,479 | 45,721         | 12       | M20    | 148   | 127,229          |
|                         |   |      |        |      |        | 6.693          |                |       |                |                |                                       |                |                              | 88,507    | 329,365   | 39,479 | 44,850         |          |        |       | 110,634          |
|                         |   |      |        |      |        | 7.480          |                |       |                |                |                                       |                |                              | 115,060   | 376,835   | 39,479 | 48,478         |          |        |       | 143,825          |
| 260                     | x | 430  | 10.236 | x    | 16.929 | 8.268          | 12.638         | 5.236 | 4.724          | 2.126          | 4.055                                 | 2.657          | 361                          | 151,200   | 452,202   | 38,028 | 47,753         | 14       | M20    | 181   | 189,000          |
|                         |   |      |        |      |        | 7.874          |                |       |                |                |                                       |                |                              | 135,711   | 422,955   | 38,028 | 45,576         |          |        |       | 169,639          |
|                         |   |      |        |      |        | 7.480          |                |       |                |                |                                       |                |                              | 120,960   | 395,958   | 38,028 | 44,414         |          |        |       | 151,200          |
| 280                     | x | 460  | 11.024 | x    | 18.110 | 8.268          | 13.622         | 5.787 | 5.276          | 2.362          | 4.488                                 | 3.012          | 361                          | 160,051   | 470,200   | 36,431 | 42,818         | 16       | M20    | 225   | 200,064          |
|                         |   |      |        |      |        | 8.661          |                |       |                |                |                                       |                |                              | 179,965   | 499,447   | 36,431 | 44,414         |          |        |       | 224,956          |
|                         |   |      |        |      |        | 9.055          |                |       |                |                |                                       |                |                              | 199,142   | 528,694   | 36,431 | 47,027         |          |        |       | 248,927          |
| 300                     | x | 485  | 11.811 | x    | 19.094 | 9.646          | 14.331         | 6.102 | 5.591          | 2.520          | 4.803                                 | 3.130          | 361                          | 232,332   | 593,037   | 35,706 | 45,285         | 18       | M20    | 260   | 290,415          |
|                         |   |      |        |      |        | 9.449          |                |       |                |                |                                       |                |                              | 217,581   | 577,513   | 35,706 | 43,979         |          |        |       | 271,976          |
|                         |   |      |        |      |        | 9.055          |                |       |                |                |                                       |                |                              | 202,830   | 546,917   | 35,706 | 42,237         |          |        |       | 253,537          |
| 320                     | x | 520  | 12.598 | x    | 20.472 | 9.449          | 15.197         | 6.102 | 5.591          | 2.520          | 4.803                                 | 3.130          | 361                          | 230,119   | 595,511   | 37,302 | 42,527         | 20       | M20    | 289   | 287,649          |
|                         |   |      |        |      |        | 9.843          |                |       |                |                |                                       |                |                              | 250,771   | 626,783   | 37,302 | 43,689         |          |        |       | 313,464          |
|                         |   |      |        |      |        | 10.236         |                |       |                |                |                                       |                |                              | 275,848   | 652,430   | 37,302 | 46,446         |          |        |       | 344,810          |
| 340                     | x | 570  | 13.386 | x    | 22.441 | 9.843          | 16.063         | 6.654 | 6.142          | 2.795          | 5.276                                 | 3.406          | 361                          | 287,649   | 701,700   | 38,318 | 42,818         | 24       | M20    | 410   | 359,561          |
|                         |   |      |        |      |        | 10.236         |                |       |                |                |                                       |                |                              | 311,620   | 730,947   | 38,318 | 44,560         |          |        |       | 389,525          |
|                         |   |      |        |      |        | 10.630         |                |       |                |                |                                       |                |                              | 339,279   | 764,918   | 38,318 | 46,011         |          |        |       | 424,098          |
| 350                     | x | 580  | 13.780 | x    | 22.835 | 10.630         | 17.008         | 6.890 | 6.378          | 2.874          | 5.512                                 | 3.524          | 361                          | 326,002   | 737,021   | 35,561 | 41,947         | 24       | M20    | 430   | 407,503          |
|                         |   |      |        |      |        | 11.024         |                |       |                |                |                                       |                |                              | 354,030   | 771,668   | 35,561 | 43,544         |          |        |       | 442,537          |
|                         |   |      |        |      |        | 11.220         |                |       |                |                |                                       |                |                              | 368,781   | 787,416   | 35,561 | 44,560         |          |        |       | 460,976          |
| 360                     | x | 590  | 14.173 | x    | 23.228 | 11.024         | 17.008         | 6.890 | 6.378          | 2.874          | 5.512                                 | 3.524          | 361                          | 341,491   | 744,671   | 34,545 | 40,931         | 24       | M20    | 450   | 426,864          |
|                         |   |      |        |      |        | 11.614         |                |       |                |                |                                       |                |                              | 385,007   | 795,515   | 34,545 | 43,253         |          |        |       | 481,259          |
|                         |   |      |        |      |        | 11.417         |                |       |                |                |                                       |                |                              | 370,256   | 778,642   | 34,545 | 42,382         |          |        |       | 462,820          |
| 380                     | x | 645  | 14.961 | x    | 25.394 | 11.417         | 18.031         | 7.205 | 6.614          | 2.992          | 5.669                                 | 3.642          | 620                          | 418,198   | 879,656   | 38,173 | 43,544         | 20       | M24    | 527   | 522,747          |
|                         |   |      |        |      |        | 11.811         |                |       |                |                |                                       |                |                              | 449,913   | 917,902   | 38,173 | 44,560         |          |        |       | 562,391          |
|                         |   |      |        |      |        | 12.205         |                |       |                |                |                                       |                |                              | 485,316   | 955,698   | 38,173 | 46,446         |          |        |       | 606,645          |
| 390                     | x | 660  | 15.354 | x    | 25.984 | 11.811         | 18.425         | 7.205 | 6.614          | 2.992          | 5.669                                 | 3.642          | 620                          | 460,239   | 935,900   | 39,189 | 44,269         | 21       | M24    | 573   | 575,298          |
|                         |   |      |        |      |        | 12.205         |                |       |                |                |                                       |                |                              | 494,904   | 974,146   | 39,189 | 45,576         |          |        |       | 618,630          |
|                         |   |      |        |      |        | 12.598         |                |       |                |                |                                       |                |                              | 529,570   | 1,008,792   | 39,189 | 48,043         |          |        |       | 661,962          |
| 400                     | x | 680  | 15.748 | x    | 26.772 | 12.402         | 18.898         | 7.205 | 6.614          | 2.992          | 5.669                                 | 3.642          | 620                          | 494,167   | 958,398   | 38,173 | 43,834         | 21       | M24    | 617   | 617,708          |
|                         |   |      |        |      |        | 12.598         |                |       |                |                |                                       |                |                              | 512,606   | 977,521   | 38,173 | 44,995         |          |        |       | 640,757          |
|                         |   |      |        |      |        | 12.992         |                |       |                |                |                                       |                |                              | 548,746   | 1,012,392   | 38,173 | 47,027         |          |        |       | 685,933          |
| 420                     | x | 690  | 16.535 | x    | 27.165 | 12.992         | 19.843         | 7.992 | 7.402          | 3.386          | 6.457                                 | 4.193          | 620                          | 575,298   | 1,091,134   | 36,431 | 42,818         | 24       | M24    | 697   | 719,123          |
|                         |   |      |        |      |        | 13.386         |                |       |                |                |                                       |                |                              | 619,552   | 1,133,879   | 36,431 | 44,414         |          |        |       | 774,440          |
|                         |   |      |        |      |        | 13.780         |                |       |                |                |                                       |                |                              | 663,806   | 1,174,375   | 36,431 | 46,737         |          |        |       | 829,757          |
| 440                     | x | 750  | 17.323 | x    | 29.528 | 13.386         | 20.748         | 8.543 | 7.953          | 3.583          | 6.969                                 | 4.469          | 620                          | 594,475   | 1,066,386   | 32,367 | 38,754         | 24       | M24    | 899   | 743,094          |
|                         |   |      |        |      |        | 13.780         |                |       |                |                |                                       |                |                              | 634,303   | 1,104,632   | 32,367 | 39,770         |          |        |       | 792,879          |
|                         |   |      |        |      |        | 14.173         |                |       |                |                |                                       |                |                              | 676,344   | 1,145,128   | 32,367 | 41,366         |          |        |       | 845,430          |
| 460                     | x | 770  | 18.110 | x    | 30.315 | 14.173         | 21.535         | 8.543 | 7.953          | 3.583          | 6.969                                 | 4.469          | 620                          | 737,562   | 1,275,614   | 35,996 | 42,527         | 28       | M24    | 926   | 921,953          |
|                         |   |      |        |      |        | 14.567         |                |       |                |                |                                       |                |                              | 789,191   | 1,318,359   | 35,996 | 43,689         |          |        |       | 986,489          |
|                         |   |      |        |      |        | 14.961         |                |       |                |                |                                       |                |                              | 1,032,587 | 1,361,105   | 35,996 | 45,576         |          |        |       | 1,290,734        |
| 480                     | x | 800  | 18.898 | x    | 31.496 | 15.354         | 22.441         | 8.976 | 8.386          | 3.780          | 7.402                                 | 4.685          | 620                          | 862,948   | 1,383,602   | 34,835 | 40,931         | 30       | M24    | 1,113 | 1,078,684        |
|                         |   |      |        |      |        | 15.748         |                |       |                |                |                                       |                |                              | 914,577   | 1,428,598   | 34,835 | 42,382         |          |        |       | 1,143,221        |
|                         |   |      |        |      |        | 15.748         |                |       |                |                |                                       |                |                              | 966,206   | 1,473,593   | 34,835 | 44,414         |          |        |       | 1,207,758        |
| 500                     | x | 850  | 19.685 | x    | 33.465 | 16.142         | 23.228         | 9.055 | 8.386          | 3.780          | 7.402                                 | 4.685          | 920                          | 967,681   | 1,475,843   | 35,125 | 41,221         | 24       | M27    | 1,268 | 1,209,602        |
|                         |   |      |        |      |        | 16.142         |                |       |                |                |                                       |                |                              | 1,017,836 | 1,514,088   | 35,125 | 43,108         |          |        |       | 1,272,294        |
|                         |   |      |        |      |        | 16.535         |                |       |                |                |                                       |                |                              | 1,073,153 | 1,559,084   | 35,125 | 45,140         |          |        |       | 1,341,441        |

<sup>1)</sup> Shrink disc GT (split) delivered without screws. Tightening torques for screws quantity see table

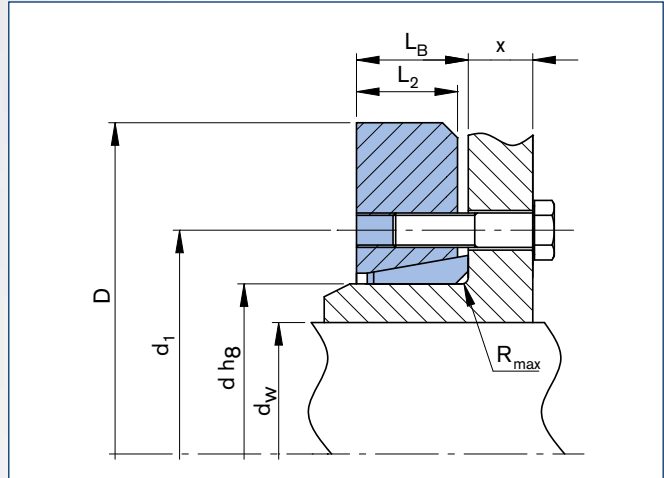
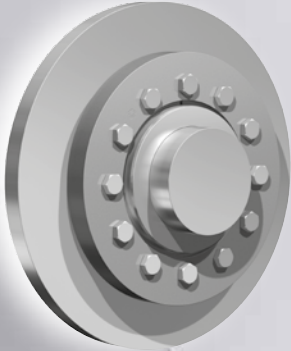
- Surface finishes For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances For shaft see table page 8
- When using a hollow shaft instead of a solid shaft please contact our Engineering-Team

Explanations to tables: Page 9

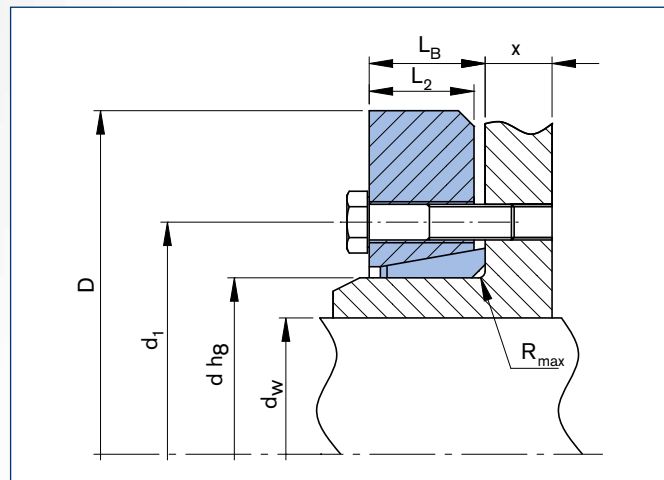
Ordering examples: RfN 4071

| Series   | d      | D      | Version |
|----------|--------|--------|---------|
| RfN 4071 | 15.354 | 25.984 | -       |
| RfN 4071 | 15.354 | 25.984 | GT      |

GT = Split



RINGFEDER® Shrink Disc RfN 4071 HT version



RINGFEDER® Shrink Disc RfN 4071 HC · Dimensions

**Half shrink discs**

Type HT (Threaded holes in thrust ring)

Type HC (Clearance holes in thrust ring)

| Shrink Discs dimensions |   |      |        |      |        |                |                |                | T <sub>A</sub> <sup>1)</sup> | Transmissible torques<br>or axial forces |                 | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |         | Gw | T <sub>max</sub> |     |         |
|-------------------------|---|------|--------|------|--------|----------------|----------------|----------------|------------------------------|--|-----------------|--|---------|----|------------------|-----|---------|
| d                       | x | D    | d      | x    | D      | d <sub>w</sub> | d <sub>1</sub> | L <sub>B</sub> |                              | T  | F <sub>ax</sub> | Quantity   | Thread  |    |                  | lbs | ft-lbs  |
| mm                      |   | inch | inch   | inch | inch   | inch           | inch           | inch           |                              | ft-lbs                                   | lbs             |  |         |    |                  |     |         |
| 220                     | x | 370  | 8.661  | x    | 14.567 | 6.299          | 10.630         | 2.343          | 1.850                        | 0.291                                    | 185             | 35,034   | 133,861 | 15 | M16              | 60  | 43,793  |
|                         |   |      |        |      |        | 6.496          |                |                |                              |  |                 | 37,616   | 139,373 |    |                  |     | 47,020  |
|                         |   |      |        |      |        | 6.693          |                |                |                              |  |                 | 40,566   | 145,110 |    |                  |     | 50,707  |
| 240                     | x | 405  | 9.449  | x    | 15.945 | 7.087          | 11.614         | 2.441          | 1.929                        | 0.291                                    | 361             | 50,892   | 177,281 | 12 | M20              | 74  | 63,615  |
|                         |   |      |        |      |        | 6.693          |                |                |                              |  |                 | 44,254   | 164,682 |    |                  |     | 55,317  |
|                         |   |      |        |      |        | 7.480          |                |                |                              |  |                 | 57,530   | 188,417 |    |                  |     | 71,912  |
| 260                     | x | 430  | 10.236 | x    | 16.929 | 8.268          | 12.638         | 2.657          | 2.126                        | 0.291                                    | 361             | 75,600   | 226,101 | 14 | M20              | 90  | 94,500  |
|                         |   |      |        |      |        | 7.874          |                |                |                              |  |                 | 67,856   | 211,477 |    |                  |     | 84,820  |
|                         |   |      |        |      |        | 7.480          |                |                |                              |  |                 | 60,480   | 197,979 |    |                  |     | 75,600  |
| 280                     | x | 460  | 11.024 | x    | 18.110 | 8.268          | 13.622         | 3.012          | 2.362                        | 0.331                                    | 361             | 80,025   | 235,100 | 16 | M20              | 112 | 100,032 |
|                         |   |      |        |      |        | 8.661          |                |                |                              |  |                 | 89,983   | 249,723 |    |                  |     | 112,478 |
|                         |   |      |        |      |        | 9.055          |                |                |                              |  |                 | 99,571   | 264,347 |    |                  |     | 124,464 |
| 300                     | x | 485  | 11.811 | x    | 19.094 | 9.646          | 14.331         | 3.130          | 2.520                        | 0.331                                    | 361             | 116,166  | 296,518 | 18 | M20              | 130 | 145,208 |
|                         |   |      |        |      |        | 9.449          |                |                |                              |  |                 | 108,790  | 288,757 |    |                  |     | 135,988 |
|                         |   |      |        |      |        | 9.055          |                |                |                              |  |                 | 101,415  | 273,458 |    |                  |     | 126,768 |
| 320                     | x | 520  | 12.598 | x    | 20.472 | 9.449          | 15.197         | 3.130          | 2.520                        | 0.331                                    | 361             | 115,060  | 297,756 | 20 | M20              | 144 | 143,825 |
|                         |   |      |        |      |        | 9.843          |                |                |                              |  |                 | 125,386  | 313,392 |    |                  |     | 156,732 |
|                         |   |      |        |      |        | 10.236         |                |                |                              |  |                 | 137,924  | 326,215 |    |                  |     | 172,405 |
| 340                     | x | 570  | 13.386 | x    | 22.441 | 9.843          | 16.063         | 3.406          | 2.795                        | 0.331                                    | 361             | 143,825  | 350,850 | 24 | M20              | 205 | 179,781 |
|                         |   |      |        |      |        | 10.236         |                |                |                              |  |                 | 155,810  | 365,474 |    |                  |     | 194,762 |
|                         |   |      |        |      |        | 10.630         |                |                |                              |  |                 | 169,639  | 382,459 |    |                  |     | 212,049 |
| 350                     | x | 580  | 13.780 | x    | 22.835 | 10.630         | 17.008         | 3.524          | 2.874                        | 0.331                                    | 361             | 163,001  | 368,511 | 24 | M20              | 215 | 203,752 |
|                         |   |      |        |      |        | 11.024         |                |                |                              |  |                 | 177,015  | 385,834 |    |                  |     | 221,269 |
|                         |   |      |        |      |        | 11.220         |                |                |                              |  |                 | 184,391  | 393,708 |    |                  |     | 230,488 |
| 360                     | x | 590  | 14.173 | x    | 23.228 | 11.024         | 17.008         | 3.524          | 2.874                        | 0.331                                    | 361             | 170,746  | 372,335 | 24 | M20              | 225 | 213,432 |
|                         |   |      |        |      |        | 11.614         |                |                |                              |  |                 | 192,504  | 397,758 |    |                  |     | 240,630 |
|                         |   |      |        |      |        | 11.417         |                |                |                              |  |                 | 185,128  | 389,321 |    |                  |     | 231,410 |
| 380                     | x | 645  | 14.961 | x    | 25.394 | 11.417         | 18.031         | 3.642          | 2.992                        | 0.331                                    | 620             | 209,099  | 439,828 | 20 | M24              | 263 | 261,374 |
|                         |   |      |        |      |        | 11.811         |                |                |                              |  |                 | 224,956  | 458,951 |    |                  |     | 281,196 |
|                         |   |      |        |      |        | 12.205         |                |                |                              |  |                 | 242,658  | 477,849 |    |                  |     | 303,322 |
| 390                     | x | 660  | 15.354 | x    | 25.984 | 11.811         | 18.425         | 3.642          | 2.992                        | 0.331                                    | 620             | 230,119  | 467,950 | 21 | M24              | 287 | 287,649 |
|                         |   |      |        |      |        | 12.205         |                |                |                              |  |                 | 247,452  | 487,073 |    |                  |     | 309,315 |
|                         |   |      |        |      |        | 12.598         |                |                |                              |  |                 | 264,785  | 504,396 |    |                  |     | 330,981 |
| 400                     | x | 680  | 15.748 | x    | 26.772 | 12.402         | 18.898         | 3.642          | 2.992                        | 0.331                                    | 620             | 247,083  | 479,199 | 21 | M24              | 309 | 308,854 |
|                         |   |      |        |      |        | 12.598         |                |                |                              |  |                 | 256,303  | 488,760 |    |                  |     | 320,378 |
|                         |   |      |        |      |        | 12.992         |                |                |                              |  |                 | 274,373  | 506,196 |    |                  |     | 342,966 |
| 420                     | x | 690  | 16.535 | x    | 27.165 | 12.992         | 19.843         | 4.193          | 3.386                        | 0.390                                    | 620             | 287,649  | 545,567 | 24 | M24              | 348 | 359,561 |
|                         |   |      |        |      |        | 13.386         |                |                |                              |  |                 | 309,776  | 566,940 |    |                  |     | 387,220 |
|                         |   |      |        |      |        | 13.780         |                |                |                              |  |                 | 331,903  | 587,187 |    |                  |     | 414,879 |
| 440                     | x | 750  | 17.323 | x    | 29.528 | 13.386         | 20.748         | 4.469          | 3.583                        | 0.390                                    | 620             | 297,237  | 533,193 | 24 | M24              | 450 | 371,547 |
|                         |   |      |        |      |        | 13.780         |                |                |                              |  |                 | 317,152  | 552,316 |    |                  |     | 396,440 |
|                         |   |      |        |      |        | 14.173         |                |                |                              |  |                 | 338,172  | 572,564 |    |                  |     | 422,715 |
| 460                     | x | 770  | 18.110 | x    | 30.315 | 14.173         | 21.535         | 4.469          | 3.583                        | 0.390                                    | 620             | 368,781  | 637,807 | 28 | M24              | 463 | 460,976 |
|                         |   |      |        |      |        | 14.567         |                |                |                              |  |                 | 394,596  | 659,180 |    |                  |     | 493,245 |
|                         |   |      |        |      |        | 14.961         |                |                |                              |  |                 | 516,293  | 680,552 |    |                  |     | 645,367 |
| 480                     | x | 800  | 18.898 | x    | 31.496 | 14.961         | 22.441         | 4.685          | 3.780                        | 0.390                                    | 620             | 431,474  | 691,801 | 30 | M24              | 557 | 539,342 |
|                         |   |      |        |      |        | 15.354         |                |                |                              |  |                 | 457,288  | 714,299 |    |                  |     | 571,611 |
|                         |   |      |        |      |        | 15.748         |                |                |                              |  |                 | 483,103  | 736,796 |    |                  |     | 603,879 |
| 500                     | x | 850  | 19.685 | x    | 33.465 | 15.748         | 23.228         | 4.685          | 3.780                        | 0.390                                    | 920             | 483,841  | 737,921 | 24 | M27              | 634 | 604,801 |
|                         |   |      |        |      |        | 16.142         |                |                |                              |  |                 | 508,918  | 757,044 |    |                  |     | 636,147 |
|                         |   |      |        |      |        | 16.535         |                |                |                              |  |                 | 536,576  | 779,542 |    |                  |     | 670,720 |

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 µm
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

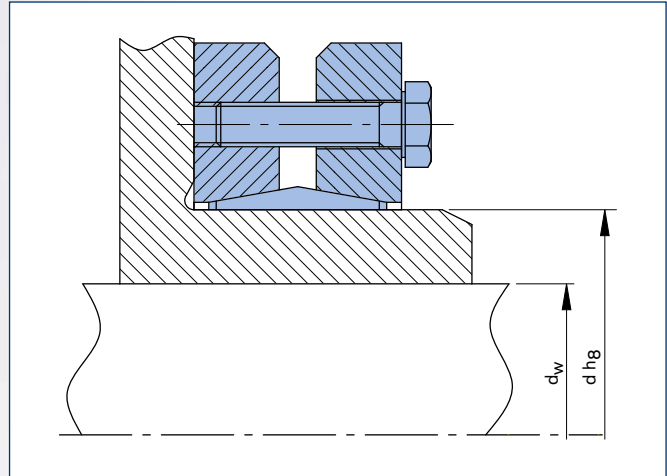
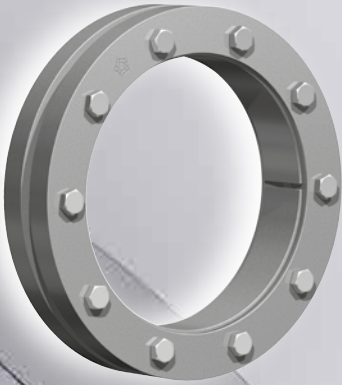
Explanations to tables: Page 9

Ordering examples: RfN 4071

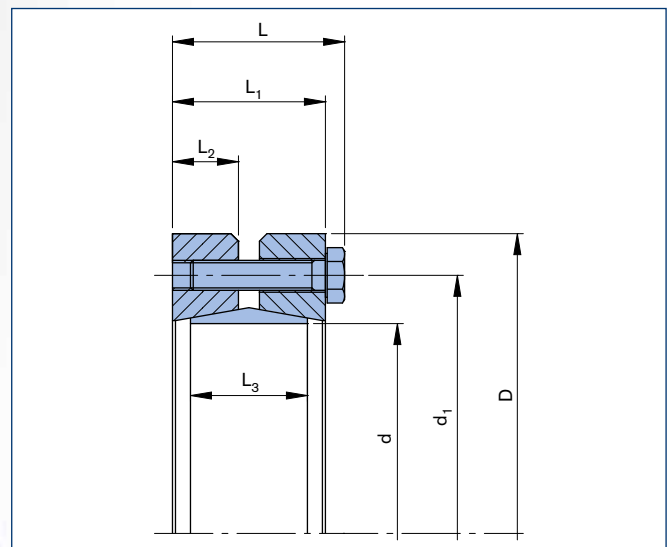
| Series   | d      | D      | Version |
|----------|--------|--------|---------|
| RfN 4071 | 16.535 | 27.165 | HT      |
| RfN 4071 | 16.535 | 27.165 | HC      |

HT = Half shrink disc with threaded holes in thrust ring

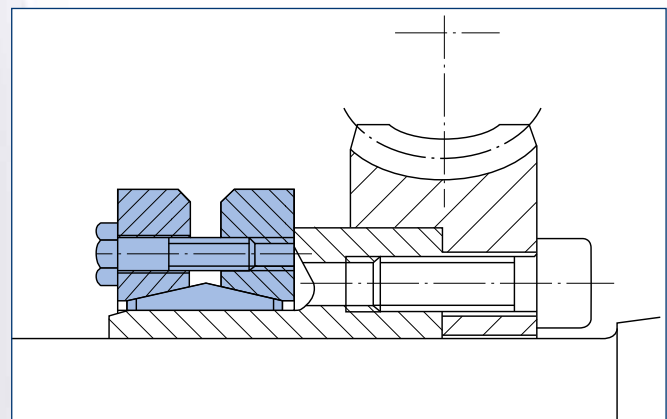
HC = Half shrink disc with clearance holes in thrust ring



RINGFEDER® Shrink Disc RfN 4073 · Location



RINGFEDER® Shrink Disc RfN 4073 · Dimensions



Example of application: Worm gear

| Shrink Discs dimensions |   |      |       |   |       |                |                |       |                | Transmissible torques or axial forces |                |                              |        | Locking screws <sup>1)</sup> ISO 4014 / 4017 - 8.8 |        |                |          |        |      |                  |
|-------------------------|---|------|-------|---|-------|----------------|----------------|-------|----------------|---------------------------------------|----------------|------------------------------|--------|--|--------|----------------|----------|--------|------|------------------|
| d                       | x | D    | d     | x | D     | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub>                        | L <sub>3</sub> | T <sub>A</sub> <sup>1)</sup> | T      | F <sub>ax</sub>                                    | P      | σ <sub>v</sub> | Quantity | Thread | Gw   | T <sub>max</sub> |
| mm                      |   | inch | mm    |   | inch  | inch           | inch           | inch  | inch           | inch                                  | inch           | ft-lbs                       | ft-lbs | lbs  | psi    | psi            |          |        | lbs  | ft-lbs           |
| 14                      | x | 34   | 0.551 | x | 1.339 | 0.354          | 0.945          | 0.551 | 0.472          | 0.197                                 | 0.354          | 2                            | 7      | 562  | 32,222 | 56,461         | 3        | M4*    | 0.22 | 13               |
|                         |   |      |       |   |       | 0.394          |                |       |                |                                       |                |                              | 10     | 787  |        | 59,219         |          |        |      | 19               |
|                         |   |      |       |   |       | 0.433          |                |       |                |                                       |                |                              | 15     | 1,035  |        | 52,397         |          |        |      | 26               |
| 16                      | x | 42   | 0.630 | x | 1.654 | 0.433          | 1.181          | 0.583 | 0.472          | 0.197                                 | 0.354          | 2                            | 24     | 1,620  | 38,318 | 59,219         | 4        | M4*    | 0.22 | 30               |
|                         |   |      |       |   |       | 0.472          |                |       |                |                                       |                |                              | 30     | 1,912  |        | 60,090         |          |        |      | 38               |
|                         |   |      |       |   |       | 0.512          |                |       |                |                                       |                |                              | 38     | 2,227  |        | 63,864         |          |        |      | 47               |
| 20                      | x | 47   | 0.787 | x | 1.850 | 0.551          | 1.339          | 0.689 | 0.551          | 0.236                                 | 0.394          | 2                            | 30     | 1,642  | 28,013 | 44,995         | 4        | M5     | 0.29 | 38               |
|                         |   |      |       |   |       | 0.591          |                |       |                |                                       |                |                              | 38     | 1,890  |        | 45,140         |          |        |      | 47               |
|                         |   |      |       |   |       | 0.630          |                |       |                |                                       |                |                              | 46     | 2,160  |        | 46,446         |          |        |      | 58               |
| 22                      | x | 50   | 0.866 | x | 1.969 | 0.630          | 1.457          | 0.728 | 0.591          | 0.256                                 | 0.394          | 2                            | 50     | 2,362  | 31,787 | 46,446         | 5        | M5     | 0.35 | 63               |
|                         |   |      |       |   |       | 0.669          |                |       |                |                                       |                |                              | 59     | 2,587  |        | 47,317         |          |        |      | 74               |
|                         |   |      |       |   |       | 0.709          |                |       |                |                                       |                |                              | 69     | 2,925  |        | 49,494         |          |        |      | 87               |
| 24                      | x | 50   | 0.945 | x | 1.969 | 0.709          | 1.535          | 0.728 | 0.591          | 0.256                                 | 0.394          | 4                            | 136    | 5,843  | 39,770 | 73,008         | 5        | M5     | 0.35 | 170              |
|                         |   |      |       |   |       | 0.748          |                |       |                |                                       |                |                              | 151    | 6,293  |        | 78,814         |          |        |      | 189              |
|                         |   |      |       |   |       | 0.787          |                |       |                |                                       |                |                              | 173    | 6,742  |        | 84,329         |          |        |      | 216              |
| 28                      | x | 56   | 1.102 | x | 2.205 | 0.787          | 1.693          | 0.728 | 0.591          | 0.256                                 | 0.394          | 2                            | 57     | 2,160  | 24,965 | 39,189         | 5        | M5     | 0.40 | 71               |
|                         |   |      |       |   |       | 0.866          |                |       |                |                                       |                |                              | 76     | 2,587  |        | 39,334         |          |        |      | 95               |
|                         |   |      |       |   |       | 0.945          |                |       |                |                                       |                |                              | 97     | 3,037  |        | 41,947         |          |        |      | 122              |
| 31                      | x | 60   | 1.220 | x | 2.362 | 0.945          | 1.811          | 0.728 | 0.591          | 0.256                                 | 0.394          | 2                            | 81     | 2,475  | 22,643 | 35,415         | 5        | M5     | 0.44 | 102              |
|                         |   |      |       |   |       | 0.984          |                |       |                |                                       |                |                              | 91     | 2,700  |        | 35,706         |          |        |      | 114              |
|                         |   |      |       |   |       | 1.063          |                |       |                |                                       |                |                              | 114    | 3,150  |        | 38,318         |          |        |      | 142              |
| 36                      | x | 66   | 1.417 | x | 2.598 | 1.102          | 2.047          | 0.728 | 0.591          | 0.256                                 | 0.394          | 2                            | 119    | 3,150  | 23,368 | 33,819         | 6        | M5     | 0.53 | 148              |
|                         |   |      |       |   |       | 1.181          |                |       |                |                                       |                |                              | 143    | 3,600  |        | 34,690         |          |        |      | 179              |
|                         |   |      |       |   |       | 1.260          |                |       |                |                                       |                |                              | 159    | 3,712  |        | 47,608         |          |        |      | 198              |
| 40                      | x | 68   | 1.575 | x | 2.677 | 1.299          | 2.165          | 0.728 | 0.591          | 0.256                                 | 0.394          | 3                            | 195    | 4,500  | 28,158 | 47,172         | 6        | M5     | 0.51 | 244              |
|                         |   |      |       |   |       | 1.339          |                |       |                |                                       |                |                              | 214    | 4,724  |        | 47,753         |          |        |      | 268              |
|                         |   |      |       |   |       | 1.378          |                |       |                |                                       |                |                              | 236    | 5,062  |        | 48,769         |          |        |      | 292              |
| 46                      | x | 80   | 1.811 | x | 3.150 | 1.496          | 2.480          | 0.886 | 0.748          | 0.315                                 | 0.551          | 3                            | 295    | 5,849  | 23,223 | 40,350         | 8        | M5     | 0.97 | 371              |
|                         |   |      |       |   |       | 1.575          |                |       |                |                                       |                |                              | 347    | 6,524  |        | 41,802         |          |        |      | 434              |
|                         |   |      |       |   |       | 1.654          |                |       |                |                                       |                |                              | 406    | 7,312  |        | 47,317         |          |        |      | 504              |
| 51                      | x | 86   | 2.008 | x | 3.386 | 1.654          | 2.697          | 0.886 | 0.748          | 0.315                                 | 0.551          | 3                            | 325    | 5,849  | 20,901 | 36,141         | 8        | M5     | 1.08 | 406              |
|                         |   |      |       |   |       | 1.732          |                |       |                |                                       |                |                              | 376    | 6,412  |        | 37,012         |          |        |      | 472              |
|                         |   |      |       |   |       | 1.772          |                |       |                |                                       |                |                              | 406    | 6,749  |        | 37,883         |          |        |      | 502              |
| 56                      | x | 91   | 2.205 | x | 3.583 | 1.811          | 2.874          | 0.886 | 0.748          | 0.315                                 | 0.551          | 3                            | 413    | 6,749  | 21,481 | 34,980         | 9        | M5     | 1.15 | 509              |
|                         |   |      |       |   |       | 1.890          |                |       |                |                                       |                |                              | 465    | 7,312  |        | 35,561         |          |        |      | 583              |
|                         |   |      |       |   |       | 1.969          |                |       |                |                                       |                |                              | 524    | 7,874  |        | 37,447         |          |        |      | 656              |
| 61                      | x | 96   | 2.402 | x | 3.780 | 2.047          | 3.031          | 0.886 | 0.748          | 0.315                                 | 0.551          | 3                            | 524    | 7,649  | 21,917 | 41,366         | 10       | M5     | 1.23 | 656              |
|                         |   |      |       |   |       | 2.126          |                |       |                |                                       |                |                              | 597    | 8,324  |        | 42,237         |          |        |      | 745              |
|                         |   |      |       |   |       | 2.205          |                |       |                |                                       |                |                              | 671    | 8,999  |        | 44,850         |          |        |      | 833              |
| 66                      | x | 100  | 2.598 | x | 3.937 | 2.283          | 3.228          | 0.886 | 0.748          | 0.315                                 | 0.551          | 3                            | 627    | 8,212  | 20,320 | 38,609         | 10       | M5     | 1.26 | 789              |
|                         |   |      |       |   |       | 2.362          |                |       |                |                                       |                |                              | 701    | 8,887  |        | 40,060         |          |        |      | 878              |
|                         |   |      |       |   |       | 2.441          |                |       |                |                                       |                |                              | 782    | 9,561  |        | 44,705         |          |        |      | 974              |
| 70                      | x | 110  | 2.756 | x | 4.331 | 2.441          | 3.543          | 1.083 | 0.945          | 0.394                                 | 0.709          | 4                            | 1,040  | 12,711   | 22,207 | 40,495         | 10       | M5     | 2.05 | 1,305            |
|                         |   |      |       |   |       | 2.520          |                |       |                |                                       |                |                              | 1,151  | 13,611   |        | 43,544         |          |        |      | 1,438            |
|                         |   |      |       |   |       | 2.559          |                |       |                |                                       |                |                              | 1,202  | 14,061   |        | 46,737         |          |        |      | 1,505            |
| 75                      | x | 114  | 2.953 | x | 4.488 | 2.598          | 3.661          | 1.083 | 0.945          | 0.394                                 | 0.709          | 4                            | 1,092  | 12,374   | 20,611 | 37,157         | 10       | M5     | 2.05 | 1,357            |
|                         |   |      |       |   |       | 2.677          |                |       |                |                                       |                |                              | 1,195  | 13,274   |        | 38,899         |          |        |      | 1,490            |
|                         |   |      |       |   |       | 2.756          |                |       |                |                                       |                |                              | 1,305  | 14,173   |        | 43,689         |          |        |      | 1,630            |
| 80                      | x | 120  | 3.150 | x | 4.724 | 2.795          | 3.976          | 1.083 | 0.945          | 0.394                                 | 0.709          | 4                            | 1,475  | 15,748   | 23,368 | 39,044         | 12       | M5     | 2.29 | 1,844            |
|                         |   |      |       |   |       | 2.874          |                |       |                |                                       |                |                              | 1,593  | 16,648   |        | 41,366         |          |        |      | 1,991            |
|                         |   |      |       |   |       | 2.953          |                |       |                |                                       |                |                              | 1,719  | 17,436   |        | 47,753         |          |        |      | 2,154            |
| 85                      | x | 128  | 3.346 | x | 5.039 | 2.992          | 4.134          | 1.260 | 1.102          | 0.453                                 | 0.866          | 9                            | 1,748  | 17,436   | 19,885 | 35,706         | 8        | M6     | 3.11 | 2,183            |
|                         |   |      |       |   |       | 3.071          |                |       |                |                                       |                |                              | 1,888  | 18,448   |        | 38,609         |          |        |      | 2,360            |
|                         |   |      |       |   |       | 3.150          |                |       |                |                                       |                |                              | 2,036  | 19,348   |        | 45,866         |          |        |      | 2,545            |
| 94                      | x | 140  | 3.701 | x | 5.512 | 3.228          | 4.685          | 1.260 | 1.102          | 0.453                                 | 0.866          | 9                            | 1,696  | 15,636   | 17,998 | 36,722         | 8        | M6     | 3.66 | 2,117            |
|                         |   |      |       |   |       | 3.346          |                |       |                |                                       |                |                              | 1,918  | 17,098   |        | 38,028         |          |        |      | 2,397            |
|                         |   |      |       |   |       | 3.465          |                |       |                |                                       |                |                              | 2,154  | 18,673   |        | 41,947         |          |        |      | 2,699            |

<sup>1)</sup> Different quality of screws. ISO 4014/4017 - 8.8

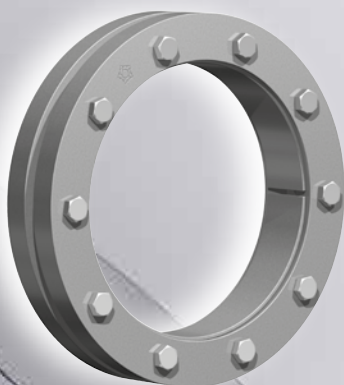
<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

- Surface finishes For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances For shaft see table page 8
- When using a hollow shaft instead of a solid shaft please contact our Engineering-Team

Explanations to tables: Page 9

To continue see next page





## Characteristics

**Mini series** – this range is a very compact design with low inertia values. It is ideally suited for mechanical seal and small gearbox applications.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft.

RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

| Shrink Discs dimensions |   |     |       |   |       |                |                |       |                | Transmissible torques or axial forces |                |                              |        | Locking screws <sup>1)</sup> ISO 4014 / 4017 - 8.8 |        |                |          |        |      |                  |
|-------------------------|---|-----|-------|---|-------|----------------|----------------|-------|----------------|---------------------------------------|----------------|------------------------------|--------|--|--------|----------------|----------|--------|------|------------------|
| d                       | x | D   | d     | x | D     | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub>                        | L <sub>3</sub> | T <sub>A</sub> <sup>1)</sup> | T      | F <sub>ax</sub>                                    | P      | σ <sub>v</sub> | Quantity | Thread | Gw   | T <sub>max</sub> |
| mm                      |   |     | inch  |   |       | inch           | inch           | inch  | inch           | inch                                  | inch           | ft-lbs                       | ft-lbs | lbs  | psi    | psi            |          |        | lbs  | ft-lbs           |
| 105                     | x | 150 | 4.134 | x | 5.906 | 3.622          | 5.039          | 1.260 | 1.102          | 0.453                                 | 0.866          | 9                            | 2,213  | 18,223   | 18,143 | 34,690         | 9        | M6     | 3.90 | 2,766            |
|                         |   |     |       |   |       | 3.740          |                |       |                |                                       |                |                              | 2,456  | 19,573   |        | 35,706         |          |        |      | 3,068            |
|                         |   |     |       |   |       | 3.858          |                |       |                |                                       |                |                              | 2,714  | 21,035   |        | 38,609         |          |        |      | 3,393            |
| 112                     | x | 158 | 4.409 | x | 6.220 | 3.937          | 5.315          | 1.260 | 1.102          | 0.453                                 | 0.866          | 9                            | 2,500  | 19,010   | 16,982 | 32,658         | 9        | M6     | 4.21 | 3,127            |
|                         |   |     |       |   |       | 4.094          |                |       |                |                                       |                |                              | 2,840  | 20,810   |        | 34,980         |          |        |      | 2,633            |
|                         |   |     |       |   |       | 4.173          |                |       |                |                                       |                |                              | 3,024  | 21,598   |        | 38,318         |          |        |      | 3,776            |
| 120                     | x | 164 | 4.724 | x | 6.457 | 4.173          | 5.551          | 1.417 | 1.260          | 0.512                                 | 0.984          | 9                            | 2,876  | 20,585   | 15,531 | 30,190         | 10       | M6     | 4.85 | 3,592            |
|                         |   |     |       |   |       | 4.331          |                |       |                |                                       |                |                              | 3,245  | 22,498   |        | 31,496         |          |        |      | 4,057            |
|                         |   |     |       |   |       | 4.409          |                |       |                |                                       |                |                              | 3,444  | 23,398   |        | 33,383         |          |        |      | 4,300            |
| 130                     | x | 172 | 5.118 | x | 6.772 | 4.528          | 5.945          | 1.417 | 1.260          | 0.512                                 | 0.984          | 9                            | 3,135  | 22,273   | 14,369 | 27,723         | 10       | M6     | 4.87 | 3,924            |
|                         |   |     |       |   |       | 4.724          |                |       |                |                                       |                |                              | 3,607  | 22,835   |        | 29,319         |          |        |      | 4,507            |
|                         |   |     |       |   |       | 4.803          |                |       |                |                                       |                |                              | 3,762  | 23,398   |        | 32,658         |          |        |      | 4,706            |
| 140                     | x | 182 | 5.512 | x | 7.165 | 4.921          | 6.339          | 1.417 | 1.260          | 0.512                                 | 0.984          | 9                            | 4,197  | 30,372   | 15,966 | 30,190         | 12       | M6     | 5.29 | 5,244            |
|                         |   |     |       |   |       | 5.039          |                |       |                |                                       |                |                              | 4,529  | 26,885   |        | 30,916         |          |        |      | 5,657            |
|                         |   |     |       |   |       | 5.118          |                |       |                |                                       |                |                              | 4,757  | 27,897   |        | 31,932         |          |        |      | 5,945            |
| 150                     | x | 194 | 5.906 | x | 7.638 | 5.315          | 6.732          | 1.417 | 1.260          | 0.512                                 | 0.984          | 9                            | 4,632  | 26,097   | 14,950 | 28,158         | 12       | M6     | 5.95 | 5,782            |
|                         |   |     |       |   |       | 5.433          |                |       |                |                                       |                |                              | 4,964  | 27,222   |        | 29,029         |          |        |      | 6,210            |
|                         |   |     |       |   |       | 5.512          |                |       |                |                                       |                |                              | 5,200  | 28,122   |        | 29,900         |          |        |      | 6,498            |
| 160                     | x | 204 | 6.299 | x | 8.031 | 5.591          | 7.126          | 1.417 | 1.260          | 0.512                                 | 0.984          | 9                            | 4,691  | 24,972   | 13,934 | 25,981         | 12       | M6     | 6.17 | 5,856            |
|                         |   |     |       |   |       | 5.709          |                |       |                |                                       |                |                              | 5,015  | 26,322   |        | 26,416         |          |        |      | 6,269            |
|                         |   |     |       |   |       | 5.827          |                |       |                |                                       |                |                              | 5,355  | 27,447   |        | 27,142         |          |        |      | 6,690            |

<sup>1)</sup> Different quality of screws. ISO 4014/4017 - 8.8

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

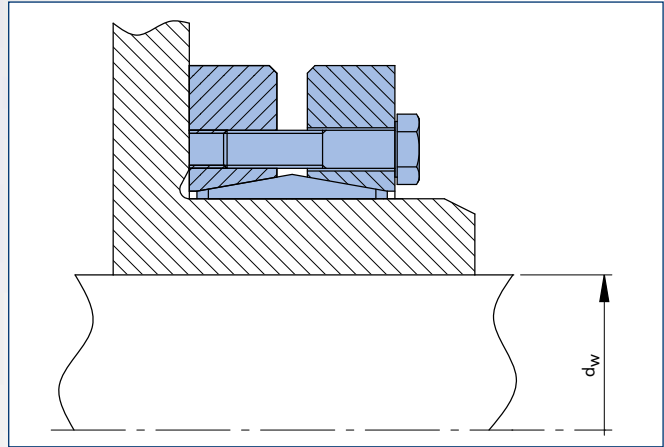
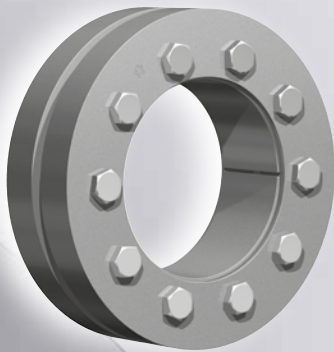
- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

[Explanations to tables: Page 9](#)

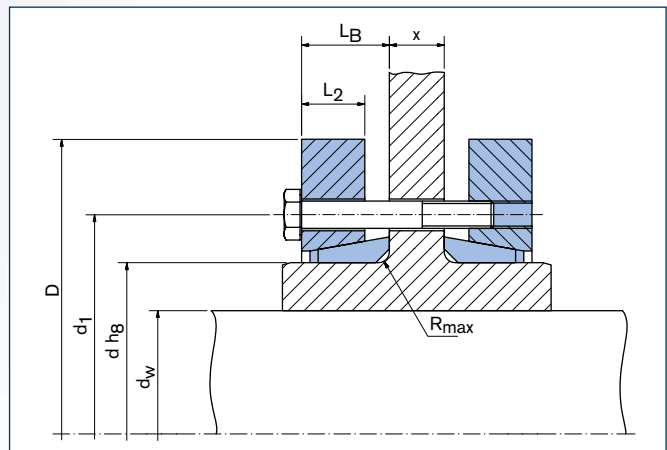
[More sizes on request](#)

Ordering example: RfN 4073

| Series   | d     | D     |
|----------|-------|-------|
| RfN 4073 | 1.811 | 3.150 |



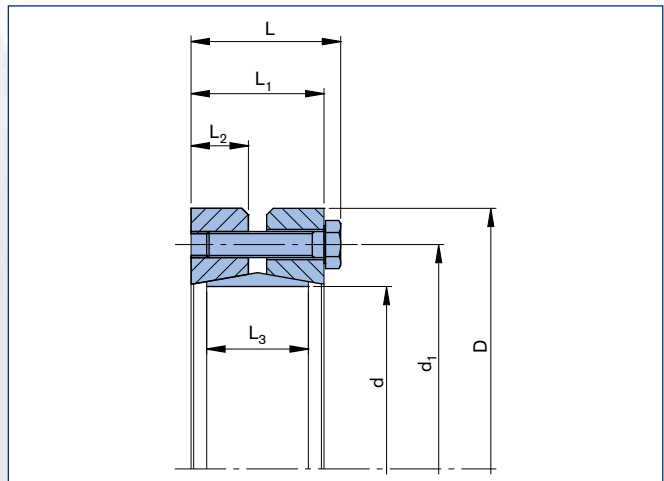
RINGFEDER® Shrink Disc RfN 4091 · Location



RINGFEDER® Shrink Disc RfN 4091 GT · Location

### Shrink discs GT (split)

In the application shown above special screws according to the dimension  $X$  are required, which have to be ordered accordingly. When dimension „ $X$ “ larger than  $2 \cdot L_1$  is chosen, a reduction of the transmissible torque up to 50% has to be considered to the type GT.



RINGFEDER® Shrink Disc RfN 4091 · Dimensions

| Shrink Discs dimensions |   |      |       |   |        |                |                |       |                |                | Transmissible torques or axial forces |                |                              |        | Locking screws <sup>1)</sup> ISO 4014 / 4017 - 10.9 |        |                |          |        |      |                  |
|-------------------------|---|------|-------|---|--------|----------------|----------------|-------|----------------|----------------|---------------------------------------|----------------|------------------------------|--------|---|--------|----------------|----------|--------|------|------------------|
| d                       | x | D    | d     | x | D      | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub>                        | L <sub>B</sub> | T <sub>A</sub> <sup>1)</sup> | T      | F <sub>ax</sub>                                     | P      | σ <sub>v</sub> | Quantity | Thread | Gw   | T <sub>max</sub> |
| mm                      |   | inch | mm    |   | inch   | inch           | inch           | inch  | inch           | inch           | inch                                  | inch           | ft-lbs                       | ft-lbs | lbs   | psi    | psi            |          |        | lbs  | ft-lbs           |
| 50                      | x | 95   | 1.969 | x | 3.740  | 1.496          | 2.874          | 1.752 | 1.535          | 0.669          | 1.181                                 | 0.906          | 18                           | 1,328  | 23,847  | 41,366 | 59,509         | 7        | M8     | 3.1  | 1,660            |
|                         |   |      |       |   |        | 1.575          |                |       |                |                |                                       |                |                              | 1,549  | 25,872  |        | 64,880         |          |        |      | 1,936            |
|                         |   |      |       |   |        | 1.654          |                |       |                |                |                                       |                |                              | 1,770  | 27,897  |        | 74,169         |          |        |      | 2,213            |
|                         |   |      |       |   |        | 1.772          |                |       |                |                |                                       |                |                              | 1,991  | 30,372  |        | 66,331         |          |        |      | 2,489            |
| 55                      | x | 105  | 2.165 | x | 4.134  | 1.654          | 3.071          | 1.752 | 1.535          | 0.669          | 1.181                                 | 0.906          | 21                           | 1,660  | 27,447  | 42,092 | 58,639         | 7        | M8     | 3.8  | 2,075            |
|                         |   |      |       |   |        | 1.890          |                |       |                |                |                                       |                |                              | 2,360  | 33,296  |        | 83,313         |          |        |      | 2,950            |
|                         |   |      |       |   |        | 2.047          |                |       |                |                |                                       |                |                              | 2,655  | 32,622  |        | 66,476         |          |        |      | 3,319            |
|                         |   |      |       |   |        | 1.969          |                |       |                |                |                                       |                |                              | 2,508  | 31,947  |        | 58,203         |          |        |      | 3,135            |
| 62                      | x | 115  | 2.441 | x | 4.528  | 1.890          | 3.346          | 1.752 | 1.535          | 0.669          | 1.181                                 | 0.906          | 22                           | 2,176  | 30,147  | 40,060 | 54,575         | 7        | M8     | 4.4  | 2,720            |
|                         |   |      |       |   |        | 1.969          |                |       |                |                |                                       |                |                              | 2,655  | 33,071  |        | 48,478         |          |        |      | 3,319            |
|                         |   |      |       |   |        | 2.165          |                |       |                |                |                                       |                |                              | 3,393  | 37,796  |        | 52,542         |          |        |      | 4,241            |
|                         |   |      |       |   |        | 2.362          |                |       |                |                |                                       |                |                              | 4,204  | 42,745  |        | 68,944         |          |        |      | 5,255            |
| 68                      | x | 118  | 2.677 | x | 4.646  | 2.559          | 3.661          | 1.929 | 1.732          | 0.748          | 1.339                                 | 1.063          | 22                           | 5,163  | 56,019  | 37,738 | 78,378         | 8        | M8     | 4.6  | 6,454            |
|                         |   |      |       |   |        | 2.362          |                |       |                |                |                                       |                |                              | 4,204  | 42,745  |        | 52,542         |          |        |      | 4,241            |
|                         |   |      |       |   |        | 2.659          |                |       |                |                |                                       |                |                              | 5,163  | 56,019  |        | 78,378         |          |        |      | 6,454            |
|                         |   |      |       |   |        | 2.862          |                |       |                |                |                                       |                |                              | 6,173  | 67,166  |        | 94,940         |          |        |      | 7,744            |
| 75                      | x | 145  | 2.953 | x | 5.709  | 2.362          | 4.134          | 2.087 | 1.811          | 0.787          | 1.417                                 | 1.063          | 45                           | 4,204  | 49,720  | 43,834 | 63,428         | 7        | M10    | 8.4  | 5,255            |
|                         |   |      |       |   |        | 2.165          |                |       |                |                |                                       |                |                              | 3,393  | 43,420  |        | 58,493         |          |        |      | 4,241            |
|                         |   |      |       |   |        | 2.622          |                |       |                |                |                                       |                |                              | 4,204  | 44,995  |        | 55,010         |          |        |      | 5,255            |
|                         |   |      |       |   |        | 2.862          |                |       |                |                |                                       |                |                              | 5,163  | 50,845  |        | 59,945         |          |        |      | 6,454            |
| 80                      | x | 145  | 3.150 | x | 5.709  | 2.756          | 4.134          | 2.087 | 1.811          | 0.787          | 1.417                                 | 1.063          | 45                           | 6,196  | 56,919  | 41,076 | 74,024         | 7        | M10    | 7.9  | 7,744            |
|                         |   |      |       |   |        | 2.559          |                |       |                |                |                                       |                |                              | 4,942  | 48,820  |        | 49,204         |          |        |      | 6,177            |
|                         |   |      |       |   |        | 2.756          |                |       |                |                |                                       |                |                              | 5,974  | 54,669  |        | 51,091         |          |        |      | 7,468            |
|                         |   |      |       |   |        | 2.953          |                |       |                |                |                                       |                |                              | 7,081  | 60,519  |        | 57,332         |          |        |      | 8,851            |
| 90                      | x | 160  | 3.543 | x | 6.299  | 2.756          | 4.567          | 2.244 | 1.969          | 0.866          | 1.575                                 | 1.142          | 45                           | 6,491  | 59,619  | 37,593 | 48,478         | 8        | M10    | 10.6 | 8,113            |
|                         |   |      |       |   |        | 2.953          |                |       |                |                |                                       |                |                              | 7,376  | 65,918  |        | 49,640         |          |        |      | 9,220            |
|                         |   |      |       |   |        | 3.150          |                |       |                |                |                                       |                |                              | 8,998  | 72,217  |        | 53,413         |          |        |      | 11,248           |
|                         |   |      |       |   |        | 2.953          |                |       |                |                |                                       |                |                              | 8,113  | 69,293  |        | 45,866         |          |        |      | 10,141           |
| 100                     | x | 170  | 3.937 | x | 6.693  | 2.953          | 4.961          | 2.402 | 2.126          | 0.906          | 1.732                                 | 1.260          | 45                           | 7,376  | 65,918  | 38,463 | 48,478         | 10       | M10    | 12.3 | 9,220            |
|                         |   |      |       |   |        | 3.150          |                |       |                |                |                                       |                |                              | 8,998  | 72,217  |        | 53,413         |          |        |      | 11,248           |
|                         |   |      |       |   |        | 2.953          |                |       |                |                |                                       |                |                              | 8,113  | 69,293  |        | 45,866         |          |        |      | 10,141           |
|                         |   |      |       |   |        | 3.346          |                |       |                |                |                                       |                |                              | 10,842 | 79,192  |        | 52,252         |          |        |      | 13,553           |
| 110                     | x | 185  | 4.331 | x | 7.283  | 3.346          | 5.433          | 2.638 | 2.362          | 1.024          | 1.969                                 | 1.378          | 45                           | 11,063 | 79,866  | 36,867 | 48,043         | 12       | M10    | 16.8 | 13,829           |
|                         |   |      |       |   |        | 3.543          |                |       |                |                |                                       |                |                              | 12,907 | 87,291  |        | 48,043         |          |        |      | 16,134           |
|                         |   |      |       |   |        | 3.740          |                |       |                |                |                                       |                |                              | 14,751 | 94,940  |        | 48,914         |          |        |      | 18,439           |
|                         |   |      |       |   |        | 3.740          |                |       |                |                |                                       |                |                              | 15,931 | 102,589   |        | 47,753         |          |        |      | 19,914           |
| 125                     | x | 215  | 4.921 | x | 8.465  | 3.543          | 6.299          | 2.874 | 2.559          | 1.102          | 2.165                                 | 1.476          | 75                           | 13,866 | 94,490  | 35,996 | 47,898         | 10       | M12    | 24.3 | 16,595           |
|                         |   |      |       |   |        | 4.134          |                |       |                |                |                                       |                |                              | 20,504 | 119,462   |        | 49,059         |          |        |      | 25,630           |
|                         |   |      |       |   |        | 4.331          |                |       |                |                |                                       |                |                              | 24,657 | 129,877   |        | 52,252         |          |        |      | 28,851           |
|                         |   |      |       |   |        | 4.331          |                |       |                |                |                                       |                |                              | 27,069 | 143,805   |        | 51,396         |          |        |      | 30,817           |
| 135                     | x | 212  | 5.315 | x | 8.346  | 4.134          | 6.772          | 3.346 | 3.031          | 1.260          | 2.362                                 | 1.772          | 75                           | 43,295 | 246,574   | 36,431 | 68,218         | 12       | M12    | 23.6 | 54,100           |
|                         |   |      |       |   |        | 4.331          |                |       |                |                |                                       |                |                              | 34,665 | 211,927   |        | 62,848         |          |        |      | 43,332           |
|                         |   |      |       |   |        | 4.331          |                |       |                |                |                                       |                |                              | 37,069 | 183,805   |        | 61,396         |          |        |      | 46,743           |
|                         |   |      |       |   |        | 4.331          |                |       |                |                |                                       |                |                              | 21,316 | 123,962   |        | 44,995         |          |        |      | 26,626           |
| 140                     | x | 300  | 5.512 | x | 11.811 | 4.331          | 8.661          | 4.173 | 3.780          | 1.654          | 3.150                                 | 2.126          | 185                          | 23,897 | 132,736   | 52,252 | 45,140         | 12       | M16    | 78.3 | 43,332           |
|                         |   |      |       |   |        | 4.528          |                |       |                |                |                                       |                |                              | 26,700 | 141,735   |        | 45,576         |          |        |      | 33,375           |
|                         |   |      |       |   |        | 4.921          |                |       |                |                |                                       |                |                              | 37,394 | 183,355   |        | 49,930         |          |        |      | 46,743           |
|                         |   |      |       |   |        | 4.921          |                |       |                |                |                                       |                |                              | 33,928 | 176,606   |        | 47,608         |          |        |      | 42,410           |
| 155                     | x | 263  | 6.102 | x | 10.354 | 4.921          | 7.756          | 3.602 | 3.307          | 1.378          | 2.598                                 | 1.772          | 75                           | 30,240 | 166,482   | 39,189 | 47,027         | 10       | M16    | 57.3 | 37,800           |
|                         |   |      |       |   |        | 4.921          |                |       |                |                |                                       |                |                              | 53,695 | 262,097   |        | 53,268         |          |        |      | 67,118           |
|                         |   |      |       |   |        | 4.921          |                |       |                |                |                                       |                |                              | 58,931 | 276,720   |        | 54,284         |          |        |      | 73,646           |
|                         |   |      |       |   |        | 5.118          |                |       |                |                |                                       |                |                              | 64,389 | 291,119   |        | 56,026         |          |        |      | 80,468           |
| 165                     | x | 290  | 6.496 | x | 11.417 | 5.315          | 8.268          | 3.858 | 3.465          | 1.496          | 2.835                                 | 1.929          | 185                          | 53,104 | 247,474   | 43,689 | 47,462         | 15       | M16    | 80.5 | 66,381           |
|                         |   |      |       |   |        | 5.315          |                |       |                |                |                                       |                |                              | 57,530 | 258,722   |        | 48,478         |          |        |      | 71,912           |
|                         |   |      |       |   |        | 5.512          |                |       |                |                |                                       |                |                              | 63,430 | 269,971   |        | 50,075         |          |        |      | 79,288           |
|                         |   |      |       |   |        | 5.709          |                |       |                |                |                                       |                |                              | 70,142 | 316,991   |        | 56,026         |          |        |      | 87,659           |
| 175                     | x | 300  | 6.890 | x | 11.811 | 5.512          | 8.661          | 4.882 | 4.488          | 1.969          | 3.622                                 | 2.323          | 185                          | 76,264 | 332,515   | 48,043 | 56,897         | 12       | M20    | 121  | 95,330           |
|                         |   |      |       |   |        | 6.102          |                |       |                |                |                                       |                |                              | 96,326 | 379,085   |        | 63,864         |          |        |      | 120,407          |
|                         |   |      |       |   |        | 5.512          |                |       |                |                |                                       |                |                              | 55,317 | 241,849   |        | 44,995         |          |        |      | 69,146           |
|                         |   |      |       |   |        | 5.906          |                |       |                |                |                                       |                |                              | 64,905 | 265,472   |        | 46,301         |          |        |      | 81,132           |
| 185                     | x | 330  | 7.283 | x | 12.992 | 6.102          | 9.685          | 4.803 | 4.409          | 1.969          | 3.622                                 | 2.500          | 185                          | 70,806 | 277,845   | 36,286 | 47,898         | 14       | M16    | 117  | 88,507           |
|                         |   |      |       |   |        | 5.709          |                |       |                |                |                                       |                |                              | 62,693 | 263,222   |        | 46,011         |          |        |      | 78,366           |
|                         |   |      |       |   |        | 5.315          |                |       |                |                |                                       |                |                              | 68,224 | 276,720   |        | 46,737         |          |        |      | 85,281           |
|                         |   |      |       |   |        | 5.512          |                |       |                |                |                                       |                |                              | 73,756 | 290,219   |        | 47,898         |          |        |      | 92,195           |
| 190                     | x | 350  | 7.480 | x | 13.780 | 5.906          | 9.409          | 5.079 | 4.587          | 1.969          | 3.622                                 | 2.441          | 350                          | 76,264 | 332,515   | 48,043 | 56,897         | 12       | M20    | 121  | 95,330           |
|                         |   |      |       |   |        | 6.102          |                |       |                |                |                                       |                |                              | 96,326 | 379,085   |        | 63,864         |          |        |      | 120,407          |
|                         |   |      |       |   |        | 5.512          |                |       |                |                |                                       |                |                              | 55,317 | 241,849   |        | 44,995         |          |        |      | 69,146           |
|                         |   |      |       |   |        | 5.906          |                |       |                |                |                                       |                |                              | 64,905 | 265,472   |        | 46,301         |          |        |      | 81,132           |
| 195                     | x | 350  | 7.677 | x | 13.780 | 6.102          | 9.685          | 4.803 | 4.409          | 1.969          | 3.622                                 | 2.500          | 185                          | 70,806 | 277,845   | 36,286 | 47,898         | 14       | M16    | 117  | 88,507           |
|                         |   |      |       |   |        | 5.709          |                |       |                |                |                                       |                |                              | 62,693 | 263,222   |        | 46,011         |          |        |      | 78,366           |
|                         |   |      |       |   |        | 5.906          |                |       |                |                |                                       |                |                              | 68,224 | 276,720   |        | 46,737         |          |        |      | 85,281           |
|                         |   |      |       |   |        | 6.102          |                |       |                |                |                                       |                |                              | 73,756 | 290,219   |        | 47,898         |          |        |      | 92,195           |
| 200                     | x | 350  | 7.874 | x | 13.780 | 5.906          | 9.685          | 4.803 | 4.409          | 1.969          | 3.622                                 | 2.500          | 185                          | 76,264 | 332,515   | 48,043 | 56,897         | 12       | M20    | 121  | 95,330           |
|                         |   |      |       |   |        | 6.102          |                |       |                |                |                                       |                |                              | 96,326 | 379,085   |        | 63,864         |          |        |      | 120,407          |
|                         |   |      |       |   |        | 5.512          |                |       |                |                |                                       |                |                              | 55,317 | 241,849   |        | 44,995         |          |        |      | 69,146           |
|                         |   |      |       |   |        | 5.906          |                |       |                |                |                                       |                |                              | 64,905 | 265,472   |        | 46,301         |          |        |      | 81,132           |

<sup>1)</sup> Shrink disc GT (split) delivered without screws. Tightening torques for screws quantity see table

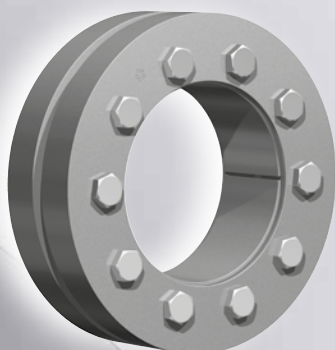
■ Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm

■ Tolerances  
For shaft see table page 8

Explanations to tables: Page 9

To continue see next page

■ When using a hollow shaft instead of a solid shaft please contact our Engineering-Team



## Characteristics

**Heavy design** – for highest transmission values.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft.

RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.



| Shrink Discs dimensions |   |      |        |   |        |                                  |                |        |                |                |                | Transmissible torques<br>or axial forces |                              |   |  | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |                                      |          |        |       |  |
|-------------------------|---|------|--------|---|--------|----------------------------------|----------------|--------|----------------|----------------|----------------|--|------------------------------|---|--|--|--------------------------------------|----------|--------|-------|--|
| d                       | x | D    | d      | x | D      | d <sub>w</sub>                   | d <sub>1</sub> | L      | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>B</sub>                           | T <sub>A</sub> <sup>1)</sup> | T                                       | F <sub>ax</sub>                          | P  | σ <sub>v</sub>                       | Quantity | Thread | Gw    | T <sub>max</sub>                         |
| mm                      |   | inch | mm     |   | inch   | inch                             | inch           | inch   | inch           | inch           | inch           | inch                                     | ft-lbs                       | ft-lbs                                  | lbs                                      | psi  | psi                                  |          |        | lbs   | ft-lbs                                   |
| 220                     | x | 370  | 8.661  | x | 14.567 | 6.496<br>6.299<br>6.693<br>7.480 | 10.630         | 5.669  | 5.276          | 2.362          | 4.488          | 2.933                                    | 185                          | 100,308<br>93,670<br>108,053<br>146,037 | 371,210<br>357,712<br>386,959<br>467,950 | 37,012   | 45,866<br>44,850<br>47,172<br>49,494 | 20       | M16    | 143   | 125,386<br>117,088<br>135,066<br>182,547 |
| 240                     | x | 405  | 9.449  | x | 15.945 | 7.087<br>6.693<br>7.480          | 11.614         | 6.181  | 5.669          | 2.559          | 4.724          | 3.130                                    | 361                          | 129,811<br>114,322<br>157,101           | 440,953<br>409,456<br>508,446            | 37,883   | 45,721<br>44,269<br>44,705           | 15       | M20    | 192   | 162,264<br>142,903<br>196,376            |
| 260                     | x | 430  | 10.236 | x | 16.929 | 7.874<br>8.268<br>9.055          | 12.638         | 6.811  | 6.299          | 2.835          | 5.354          | 3.445                                    | 361                          | 177,015<br>197,667<br>261,835           | 544,442<br>580,438<br>695,176            | 37,012   | 46,737<br>50,220<br>51,672           | 18       | M20    | 220   | 221,269<br>247,083<br>327,293            |
| 280                     | x | 460  | 11.024 | x | 18.110 | 8.661<br>8.268<br>9.055          | 13.622         | 7.283  | 6.772          | 3.071          | 5.827          | 3.780                                    | 361                          | 236,020<br>210,205<br>251,509           | 654,680<br>616,434<br>665,929            | 36,867   | 47,462<br>44,995<br>43,253           | 21       | M20    | 291   | 295,025<br>262,756<br>314,386            |
| 300                     | x | 485  | 11.811 | x | 19.094 | 9.449<br>9.646<br>9.449          | 14.331         | 7.441  | 6.929          | 3.150          | 5.984          | 3.858                                    | 361                          | 277,323<br>290,599<br>278,798           | 704,175<br>723,298<br>708,674            | 35,125   | 45,866<br>47,462<br>40,931           | 22       | M20    | 309   | 346,654<br>363,249<br>348,498            |
| 320                     | x | 520  | 12.598 | x | 20.472 | 9.843<br>10.236<br>9.843         | 15.197         | 7.736  | 7.244          | 3.228          | 6.299          | 4.016                                    | 361                          | 306,088<br>332,640<br>361,037           | 748,045<br>780,667<br>879,656            | 34,109   | 42,673<br>46,156<br>42,818           | 24       | M20    | 364   | 382,610<br>415,801<br>451,296            |
| 340                     | x | 570  | 13.386 | x | 22.441 | 10.236<br>10.630<br>10.630       | 16.535         | 8.465  | 7.874          | 3.622          | 6.929          | 4.331                                    | 620                          | 390,908<br>426,311<br>410,084           | 916,777<br>961,772<br>927,351            | 36,722   | 44,995<br>47,317<br>44,124           | 21       | M24    | 529   | 488,635<br>532,889<br>512,606            |
| 350                     | x | 580  | 13.780 | x | 22.835 | 11.024<br>11.220<br>11.024       | 16.732         | 8.465  | 7.874          | 3.622          | 6.929          | 4.331                                    | 620                          | 445,487<br>463,926<br>451,388           | 971,896<br>993,269<br>983,145            | 35,851   | 46,446<br>48,043<br>43,979           | 21       | M24    | 545   | 556,859<br>579,908<br>564,235            |
| 360                     | x | 590  | 14.173 | x | 23.228 | 11.417<br>11.614<br>11.811       | 17.008         | 8.622  | 8.031          | 3.622          | 7.087          | 4.508                                    | 620                          | 489,004<br>508,180<br>492,691           | 1,028,140<br>1,050,638<br>1,002,268      | 35,561   | 46,446<br>48,188<br>42,092           | 22       | M24    | 551   | 611,255<br>635,225<br>615,864            |
| 380                     | x | 645  | 14.961 | x | 25.394 | 11.417<br>12.205<br>12.598       | 18.031         | 8.622  | 8.031          | 3.622          | 7.087          | 4.508                                    | 620                          | 455,813<br>530,307<br>600,744           | 960,648<br>1,045,014<br>1,145,128        | 33,819   | 40,495<br>44,560<br>46,156           | 22       | M24    | 705   | 569,767<br>662,884<br>750,930            |
| 390                     | x | 660  | 15.354 | x | 25.984 | 12.205<br>11.811<br>12.402       | 18.425         | 8.937  | 8.346          | 3.780          | 7.402          | 4.665                                    | 620                          | 562,022<br>522,194<br>564,235           | 1,104,632<br>1,060,762<br>1,092,258      | 34,254   | 43,108<br>41,221<br>41,366           | 24       | M24    | 772   | 702,528<br>652,742<br>705,294            |
| 400                     | x | 680  | 15.748 | x | 26.772 | 12.598<br>12.992<br>12.992       | 18.898         | 8.937  | 8.346          | 3.780          | 7.402          | 4.665                                    | 620                          | 581,199<br>623,240<br>736,824           | 1,108,457<br>1,153,002<br>1,362,230      | 33,528   | 42,673<br>45,285<br>43,834           | 24       | M24    | 816   | 726,499<br>779,050<br>921,031            |
| 420                     | x | 690  | 16.535 | x | 27.165 | 13.780<br>13.386<br>13.386       | 19.843         | 9.961  | 9.370          | 4.370          | 8.425          | 5.177                                    | 620                          | 840,821<br>787,716<br>780,341           | 1,465,719<br>1,413,974<br>1,401,604      | 34,980   | 49,640<br>46,156<br>41,076           | 30       | M24    | 904   | 1,051,026<br>984,645<br>975,426          |
| 440                     | x | 750  | 17.323 | x | 29.528 | 13.780<br>14.173<br>14.173       | 20.748         | 10.591 | 9.921          | 4.528          | 8.819          | 5.453                                    | 920                          | 833,445<br>888,025<br>973,582           | 1,453,345<br>1,505,089<br>1,673,821      | 33,528   | 42,818<br>45,285<br>45,285           | 24       | M27    | 1,190 | 1,041,806<br>1,110,031<br>1,216,977      |
| 460                     | x | 770  | 18.110 | x | 30.315 | 14.567<br>14.961<br>14.961       | 21.535         | 10.591 | 9.921          | 4.528          | 8.819          | 5.551                                    | 920                          | 1,047,338<br>1,106,343<br>1,132,158     | 1,732,315<br>1,788,559<br>1,817,806      | 37,302   | 47,317<br>50,220<br>43,834           | 28       | M27    | 1,190 | 1,309,173<br>1,382,929<br>1,415,197      |
| 480                     | x | 800  | 18.898 | x | 31.496 | 15.354<br>15.748<br>15.748       | 22.835         | 11.457 | 10.787         | 5.039          | 9.685          | 5.984                                    | 920                          | 1,199,276<br>1,268,607<br>1,290,734     | 1,876,300<br>1,934,794<br>1,968,540      | 34,980   | 46,156<br>49,349<br>44,850           | 30       | M27    | 1,433 | 1,499,095<br>1,585,758<br>1,613,417      |
| 500                     | x | 850  | 19.685 | x | 33.465 | 16.142<br>16.535                 | 23.622         | 11.457 | 10.787         | 5.039          | 9.685          | 5.984                                    | 920                          | 1,357,114<br>1,430,870                  | 2,020,284<br>2,081,028                   | 35,706   | 47,608<br>50,801                     | 32       | M27    | 1,653 | 1,696,393<br>1,788,588                   |

<sup>1)</sup> Shrink disc GT (split) delivered without screws. Tightening torques for screws quantity see table

- Surface finishes For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances For shaft see table page 8
- When using a hollow shaft instead of a solid shaft please contact our Engineering-Team

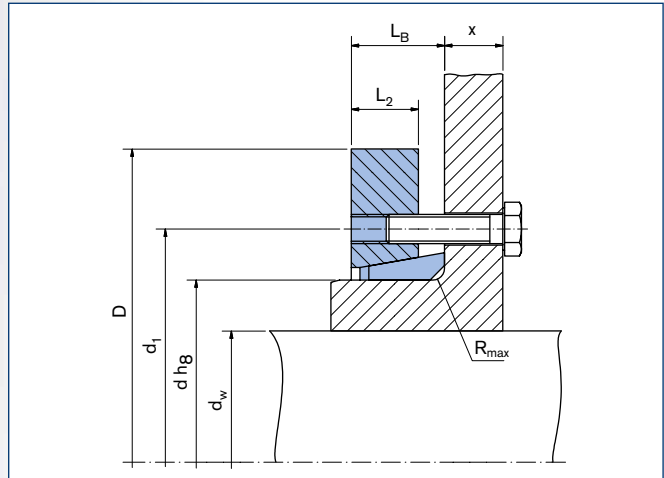
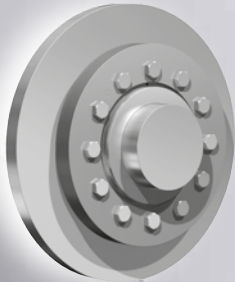
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More sizes on request

Ordering examples: RfN 4091

| Series   | d     | D      | Version |
|----------|-------|--------|---------|
| RfN 4091 | 8.661 | 14.567 | -       |
| RfN 4091 | 8.661 | 14.567 | GT      |

GT = Split

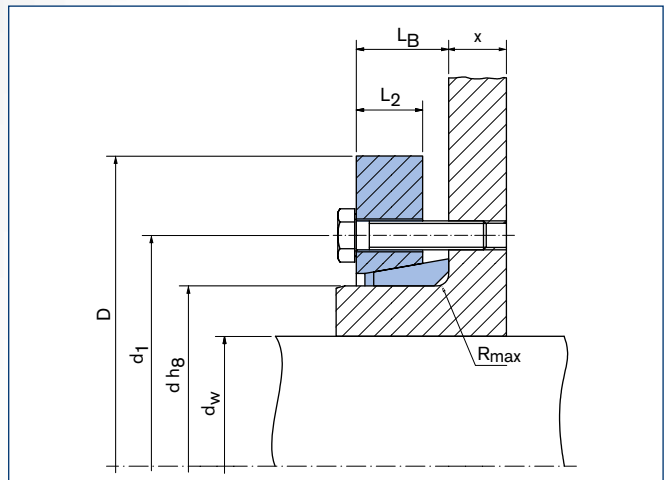


RINGFEDER® Shrink Disc RfN 4091 HT

**Half shrink discs**

Type HT (Threaded holes in thrust ring)

Type HC (Clearance holes in thrust ring)



RINGFEDER® Shrink Disc RfN 4091 HC · Dimensions

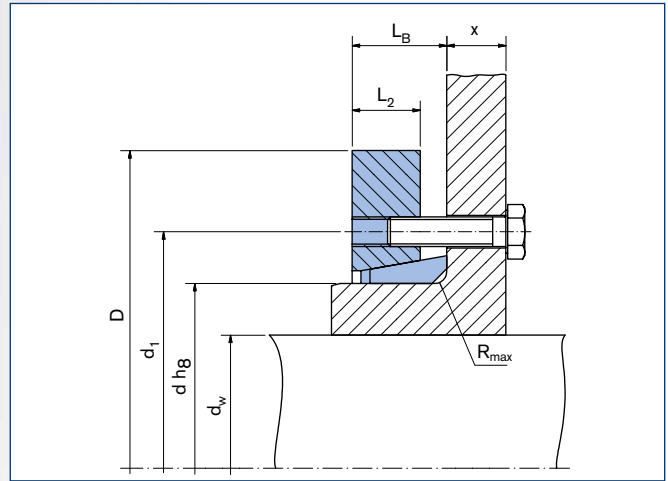
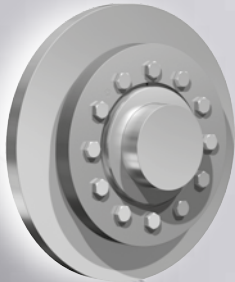
| Shrink Discs dimensions |   |     |       |   |        |                | T <sub>A</sub> <sup>1)</sup> | Transmissible torques<br>or axial forces |                | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |      | G <sub>w</sub> | T <sub>max</sub> |        |                 |          |        |
|-------------------------|---|-----|-------|---|--------|----------------|------------------------------|--|----------------|--|------|----------------|------------------|--------|-----------------|----------|--------|
| d                       | x | D   | d     | x | D      | d <sub>w</sub> |                              | d <sub>1</sub>                           | L <sub>B</sub> | L <sub>2</sub>   | R    |                |                  | T      | F <sub>ax</sub> | Quantity | Thread |
| mm                      |   |     | inch  |   |        | inch           |                              | inch                                     | inch           | inch   | inch |                |                  | ft-lbs | lbs             |          |        |
| 50                      | x | 95  | 1.969 | x | 3.740  | 1.575          | 2.874                        | 0.906                                    | 0.669          | 0.071  | 18   | 774            | 12,936           | 7      | M8              | 1.54     | 968    |
|                         |   |     |       |   |        | 1.654          |                              |  |                |  |      | 885            | 13,949           |        |                 |          | 1,106  |
|                         |   |     |       |   |        | 1.496          |                              |  |                |  |      | 664            | 11,924           |        |                 |          | 830    |
| 55                      | x | 105 | 2.165 | x | 4.134  | 1.654          | 3.071                        | 0.906                                    | 0.669          | 0.071  | 21   | 830            | 13,724           | 7      | M8              | 1.87     | 1,037  |
|                         |   |     |       |   |        | 1.772          |                              |  |                |  |      | 996            | 15,186           |        |                 |          | 1,245  |
|                         |   |     |       |   |        | 1.890          |                              |  |                |  |      | 1,180          | 16,648           |        |                 |          | 1,475  |
| 62                      | x | 115 | 2.441 | x | 4.528  | 1.890          | 3.346                        | 0.906                                    | 0.669          | 0.071  | 22   | 1,088          | 15,073           | 7      | M8              | 2.20     | 1,360  |
|                         |   |     |       |   |        | 1.969          |                              |  |                |  |      | 1,254          | 15,973           |        |                 |          | 1,567  |
|                         |   |     |       |   |        | 2.047          |                              |  |                |  |      | 1,328          | 16,311           |        |                 |          | 1,660  |
| 68                      | x | 118 | 2.677 | x | 4.646  | 1.969          | 3.661                        | 1.063                                    | 0.748          | 0.110  | 22   | 1,328          | 16,536           | 8      | M8              | 2.31     | 1,660  |
|                         |   |     |       |   |        | 2.165          |                              |  |                |  |      | 1,696          | 18,898           |        |                 |          | 2,120  |
|                         |   |     |       |   |        | 2.362          |                              |  |                |  |      | 2,102          | 21,373           |        |                 |          | 2,628  |
| 75                      | x | 145 | 2.953 | x | 5.709  | 2.165          | 4.134                        | 1.063                                    | 0.787          | 0.110  | 45   | 1,586          | 21,710           | 7      | M10             | 4.19     | 2,120  |
|                         |   |     |       |   |        | 2.362          |                              |  |                |  |      | 2,102          | 24,860           |        |                 |          | 2,628  |
|                         |   |     |       |   |        | 2.559          |                              |  |                |  |      | 2,581          | 28,010           |        |                 |          | 3,227  |
| 80                      | x | 145 | 3.150 | x | 5.709  | 2.362          | 4.134                        | 1.063                                    | 0.787          | 0.110  | 45   | 2,102          | 22,498           | 7      | M10             | 3.97     | 2,628  |
|                         |   |     |       |   |        | 2.559          |                              |  |                |  |      | 2,581          | 25,422           |        |                 |          | 3,227  |
|                         |   |     |       |   |        | 2.756          |                              |  |                |  |      | 3,098          | 28,459           |        |                 |          | 3,872  |
| 90                      | x | 160 | 3.543 | x | 6.299  | 2.559          | 4.567                        | 1.142                                    | 0.866          | 0.110  | 45   | 2,471          | 24,410           | 8      | M10             | 5.29     | 3,089  |
|                         |   |     |       |   |        | 2.756          |                              |  |                |  |      | 2,987          | 27,335           |        |                 |          | 3,734  |
|                         |   |     |       |   |        | 2.953          |                              |  |                |  |      | 3,540          | 30,259           |        |                 |          | 4,425  |
| 100                     | x | 170 | 3.937 | x | 6.693  | 2.756          | 4.961                        | 1.260                                    | 0.906          | 0.130  | 45   | 3,245          | 29,809           | 10     | M10             | 6.17     | 4,057  |
|                         |   |     |       |   |        | 2.953          |                              |  |                |  |      | 3,688          | 32,959           |        |                 |          | 4,610  |
|                         |   |     |       |   |        | 3.150          |                              |  |                |  |      | 4,499          | 36,109           |        |                 |          | 5,624  |
| 110                     | x | 185 | 4.331 | x | 7.283  | 2.953          | 5.433                        | 1.378                                    | 1.024          | 0.130  | 45   | 4,057          | 34,646           | 12     | M10             | 8.38     | 5,071  |
|                         |   |     |       |   |        | 3.150          |                              |  |                |  |      | 4,757          | 38,021           |        |                 |          | 5,947  |
|                         |   |     |       |   |        | 3.346          |                              |  |                |  |      | 5,421          | 39,596           |        |                 |          | 6,776  |
| 125                     | x | 215 | 4.921 | x | 8.465  | 3.543          | 6.299                        | 1.476                                    | 1.102          | 0.130  | 75   | 6,454          | 43,645           | 10     | M12             | 12.1     | 8,067  |
|                         |   |     |       |   |        | 3.740          |                              |  |                |  |      | 7,376          | 47,470           |        |                 |          | 9,220  |
|                         |   |     |       |   |        | 3.946          |                              |  |                |  |      | 5,532          | 39,933           |        |                 |          | 6,915  |
| 135                     | x | 212 | 5.315 | x | 8.346  | 3.543          | 6.772                        | 1.772                                    | 1.260          | 0.189  | 75   | 6,933          | 47,245           | 12     | M12             | 11.6     | 8,298  |
|                         |   |     |       |   |        | 3.740          |                              |  |                |  |      | 7,966          | 51,295           |        |                 |          | 9,957  |
|                         |   |     |       |   |        | 4.134          |                              |  |                |  |      | 10,252         | 59,731           |        |                 |          | 12,815 |
| 140                     | x | 300 | 5.512 | x | 11.811 | 3.543          | 8.661                        | 2.126                                    | 1.654          | 0.189  | 185  | 13,534         | 91,903           | 12     | M16             | 38.6     | 18,347 |
|                         |   |     |       |   |        | 3.937          |                              |  |                |  |      | 17,333         | 105,964          |        |                 |          | 23,556 |
|                         |   |     |       |   |        | 4.331          |                              |  |                |  |      | 21,647         | 123,287          |        |                 |          | 29,318 |
| 155                     | x | 263 | 6.102 | x | 10.354 | 4.134          | 7.795                        | 1.772                                    | 1.378          | 0.189  | 75   | 9,957          | 61,418           | 15     | M12             | 21.5     | 12,446 |
|                         |   |     |       |   |        | 4.331          |                              |  |                |  |      | 11,432         | 65,805           |        |                 |          | 14,290 |
|                         |   |     |       |   |        | 4.528          |                              |  |                |  |      | 12,539         | 70,193           |        |                 |          | 15,673 |
| 165                     | x | 290 | 6.496 | x | 11.417 | 4.528          | 8.268                        | 1.929                                    | 1.496          | 0.189  | 185  | 15,120         | 83,241           | 10     | M16             | 28.7     | 18,900 |
|                         |   |     |       |   |        | 4.724          |                              |  |                |  |      | 16,964         | 88,303           |        |                 |          | 21,205 |
|                         |   |     |       |   |        | 4.921          |                              |  |                |  |      | 18,697         | 91,678           |        |                 |          | 23,371 |
| 175                     | x | 300 | 6.890 | x | 11.811 | 4.921          | 8.661                        | 2.323                                    | 1.969          | 0.189  | 185  | 26,847         | 131,049          | 10     | M16             | 32.0     | 33,559 |
|                         |   |     |       |   |        | 5.118          |                              |  |                |  |      | 29,466         | 138,360          |        |                 |          | 36,823 |
|                         |   |     |       |   |        | 5.315          |                              |  |                |  |      | 32,195         | 145,559          |        |                 |          | 40,234 |
| 185                     | x | 330 | 7.283 | x | 12.992 | 5.315          | 9.291                        | 2.402                                    | 1.969          | 0.189  | 185  | 26,552         | 123,737          | 14     | M16             | 51.8     | 33,190 |
|                         |   |     |       |   |        | 5.512          |                              |  |                |  |      | 28,765         | 129,361          |        |                 |          | 35,956 |
|                         |   |     |       |   |        | 5.709          |                              |  |                |  |      | 31,715         | 134,986          |        |                 |          | 39,644 |
| 190                     | x | 350 | 7.480 | x | 13.780 | 5.315          | 9.409                        | 2.441                                    | 1.969          | 0.189  | 350  | 35,071         | 158,496          | 12     | M20             | 57.3     | 43,830 |
|                         |   |     |       |   |        | 5.512          |                              |  |                |  |      | 38,132         | 166,257          |        |                 |          | 47,665 |
|                         |   |     |       |   |        | 6.102          |                              |  |                |  |      | 48,163         | 189,542          |        |                 |          | 60,203 |
| 195                     | x | 350 | 7.677 | x | 13.780 | 5.512          | 9.685                        | 2.500                                    | 1.969          | 0.189  | 185  | 27,659         | 120,925          | 14     | M16             | 58.4     | 34,573 |
|                         |   |     |       |   |        | 5.906          |                              |  |                |  |      | 32,453         | 132,736          |        |                 |          | 40,566 |
|                         |   |     |       |   |        | 6.102          |                              |  |                |  |      | 35,403         | 138,923          |        |                 |          | 44,254 |

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

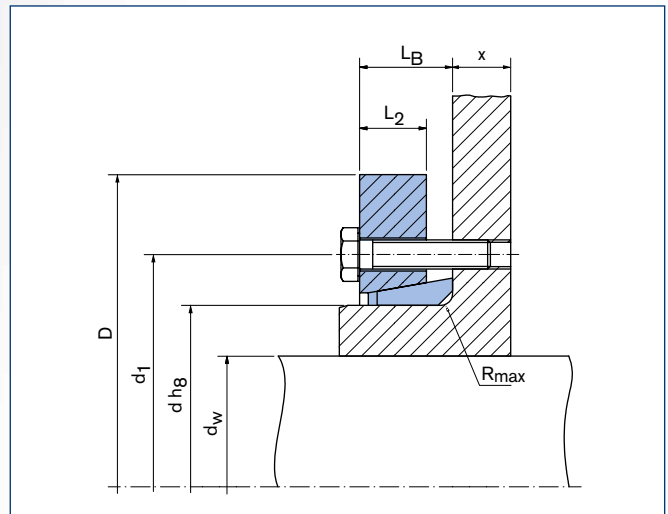
- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Explanations to tables: Page 9

To continue see next page



RINGFEDER® Shrink Disc RfN 4091 HT



RINGFEDER® Shrink Disc RfN 4091 HC · Dimensions

| Shrink Discs dimensions |   |      |        |      |        |                |                |                |                |       | Transmissible torques<br>or axial forces |         | Locking screws <sup>1)</sup><br>ISO 4014 / 4017 - 10.9 |          |        |      |                  |
|-------------------------|---|------|--------|------|--------|----------------|----------------|----------------|----------------|-------|--|---------|--|----------|--------|------|------------------|
| d                       | x | D    | d      | x    | D      | d <sub>w</sub> | d <sub>1</sub> | L <sub>B</sub> | L <sub>2</sub> | R     | T <sub>A</sub> <sup>1)</sup>             | T       | F <sub>ax</sub>  | Quantity | Thread | Gw   | T <sub>max</sub> |
| mm                      |   | inch | inch   | inch | inch   | inch           | inch           | inch           | inch           | inch  | ft-lbs                                   | ft-lbs  | lbs  |          |        | lbs  | ft-lbs           |
| 200                     | x | 350  | 7.874  | x    | 13.780 | 5.906          | 9.685          | 2.500          | 1.969          | 0.189 | 185                                      | 34,112  | 138,360  | 15       | M16    | 55.1 | 42,640           |
|                         |   |      |        |      |        | 6.102          |                |                |                |       |  | 36,878  | 145,110  |          |        |      | 46,098           |
|                         |   |      |        |      |        | 5.709          |                |                |                |       |  | 31,346  | 131,611  |          |        |      | 39,183           |
| 220                     | x | 370  | 8.661  | x    | 14.567 | 6.299          | 10.630         | 2.933          | 2.362          | 0.252 | 185                                      | 46,835  | 178,856  | 20       | M16    | 71.7 | 58,544           |
|                         |   |      |        |      |        | 6.496          |                |                |                |       |  | 50,154  | 185,605  |          |        |      | 62,693           |
|                         |   |      |        |      |        | 6.693          |                |                |                |       |  | 54,026  | 193,479  |          |        |      | 67,533           |
| 240                     | x | 405  | 9.449  | x    | 15.945 | 6.693          | 11.614         | 3.130          | 2.559          | 0.252 | 361                                      | 57,161  | 204,728  | 15       | M20    | 96.0 | 71,451           |
|                         |   |      |        |      |        | 7.087          |                |                |                |       |  | 64,905  | 220,476  |          |        |      | 81,132           |
|                         |   |      |        |      |        | 7.480          |                |                |                |       |  | 73,019  | 233,975  |          |        |      | 91,273           |
| 260                     | x | 430  | 10.236 | x    | 16.929 | 7.480          | 12.638         | 3.445          | 2.835          | 0.252 | 361                                      | 78,550  | 254,223  | 18       | M20    | 110  | 98,188           |
|                         |   |      |        |      |        | 7.874          |                |                |                |       |  | 88,507  | 272,221  |          |        |      | 110,634          |
|                         |   |      |        |      |        | 8.268          |                |                |                |       |  | 98,833  | 290,219  |          |        |      | 123,542          |
| 280                     | x | 460  | 11.024 | x    | 18.110 | 8.268          | 13.622         | 3.780          | 3.071          | 0.331 | 361                                      | 105,103 | 308,217  | 21       | M20    | 146  | 131,378          |
|                         |   |      |        |      |        | 8.661          |                |                |                |       |  | 118,010 | 327,340  |          |        |      | 147,512          |
|                         |   |      |        |      |        | 9.055          |                |                |                |       |  | 130,917 | 347,588  |          |        |      | 163,647          |
| 300                     | x | 485  | 11.811 | x    | 19.094 | 9.055          | 14.331         | 3.858          | 3.150          | 0.331 | 361                                      | 125,754 | 332,964  | 22       | M20    | 154  | 157,193          |
|                         |   |      |        |      |        | 9.449          |                |                |                |       |  | 138,662 | 352,087  |          |        |      | 173,327          |
|                         |   |      |        |      |        | 9.646          |                |                |                |       |  | 145,300 | 361,649  |          |        |      | 181,625          |
| 320                     | x | 520  | 12.598 | x    | 20.472 | 9.449          | 15.197         | 4.016          | 3.228          | 0.331 | 361                                      | 139,399 | 354,337  | 24       | M20    | 182  | 174,323          |
|                         |   |      |        |      |        | 9.843          |                |                |                |       |  | 153,044 | 374,023  |          |        |      | 191,305          |
|                         |   |      |        |      |        | 10.236         |                |                |                |       |  | 166,320 | 390,333  |          |        |      | 207,900          |
| 340                     | x | 570  | 13.386 | x    | 22.441 | 9.843          | 16.535         | 4.331          | 3.622          | 0.331 | 620                                      | 180,518 | 439,828  | 21       | M24    | 265  | 225,648          |
|                         |   |      |        |      |        | 10.236         |                |                |                |       |  | 195,454 | 458,389  |          |        |      | 244,317          |
|                         |   |      |        |      |        | 10.630         |                |                |                |       |  | 213,155 | 480,886  |          |        |      | 266,444          |
| 350                     | x | 580  | 13.780 | x    | 22.835 | 10.630         | 16.732         | 4.331          | 3.622          | 0.331 | 620                                      | 205,042 | 463,676  | 21       | M24    | 272  | 256,303          |
|                         |   |      |        |      |        | 11.024         |                |                |                |       |  | 222,744 | 485,948  |          |        |      | 278,430          |
|                         |   |      |        |      |        | 11.220         |                |                |                |       |  | 231,963 | 496,635  |          |        |      | 289,954          |
| 360                     | x | 590  | 14.173 | x    | 23.228 | 11.417         | 17.008         | 4.508          | 3.622          | 0.390 | 620                                      | 244,502 | 514,070  | 22       | M24    | 276  | 305,627          |
|                         |   |      |        |      |        | 11.614         |                |                |                |       |  | 254,090 | 525,319  |          |        |      | 317,613          |
|                         |   |      |        |      |        | 11.024         |                |                |                |       |  | 225,694 | 491,573  |          |        |      | 282,117          |
| 380                     | x | 645  | 14.961 | x    | 25.394 | 11.417         | 18.031         | 4.508          | 3.622          | 0.390 | 620                                      | 227,907 | 480,324  | 22       | M24    | 353  | 284,883          |
|                         |   |      |        |      |        | 11.811         |                |                |                |       |  | 246,346 | 501,134  |          |        |      | 307,932          |
|                         |   |      |        |      |        | 12.205         |                |                |                |       |  | 265,154 | 522,507  |          |        |      | 331,442          |
| 390                     | x | 660  | 15.354 | x    | 25.984 | 11.811         | 18.425         | 4.665          | 3.780          | 0.390 | 620                                      | 261,097 | 530,381  | 24       | M24    | 386  | 326,371          |
|                         |   |      |        |      |        | 12.205         |                |                |                |       |  | 281,011 | 552,316  |          |        |      | 351,264          |
|                         |   |      |        |      |        | 12.598         |                |                |                |       |  | 300,372 | 572,564  |          |        |      | 375,465          |
| 400                     | x | 680  | 15.748 | x    | 26.772 | 12.402         | 18.898         | 4.665          | 3.780          | 0.390 | 620                                      | 282,117 | 546,129  | 24       | M24    | 408  | 352,647          |
|                         |   |      |        |      |        | 12.598         |                |                |                |       |  | 290,599 | 554,228  |          |        |      | 363,249          |
|                         |   |      |        |      |        | 12.992         |                |                |                |       |  | 311,620 | 576,501  |          |        |      | 389,525          |
| 420                     | x | 690  | 16.535 | x    | 27.165 | 12.992         | 19.843         | 5.177          | 4.370          | 0.390 | 620                                      | 368,412 | 681,115  | 30       | M24    | 452  | 460,515          |
|                         |   |      |        |      |        | 13.386         |                |                |                |       |  | 393,858 | 706,987  |          |        |      | 492,323          |
|                         |   |      |        |      |        | 13.780         |                |                |                |       |  | 420,410 | 732,859  |          |        |      | 525,513          |
| 440                     | x | 750  | 17.323 | x    | 29.528 | 13.386         | 20.748         | 5.453          | 4.528          | 0.390 | 920                                      | 390,170 | 700,800  | 24       | M27    | 595  | 487,713          |
|                         |   |      |        |      |        | 13.780         |                |                |                |       |  | 416,723 | 726,672  |          |        |      | 520,903          |
|                         |   |      |        |      |        | 14.173         |                |                |                |       |  | 444,012 | 752,545  |          |        |      | 555,015          |
| 460                     | x | 770  | 18.110 | x    | 30.315 | 14.173         | 21.535         | 5.551          | 4.528          | 0.488 | 920                                      | 486,791 | 836,911  | 28       | M27    | 595  | 608,489          |
|                         |   |      |        |      |        | 14.567         |                |                |                |       |  | 523,669 | 866,158  |          |        |      | 654,586          |
|                         |   |      |        |      |        | 14.961         |                |                |                |       |  | 553,172 | 894,280  |          |        |      | 691,464          |
| 480                     | x | 800  | 18.898 | x    | 31.496 | 14.961         | 22.835         | 5.984          | 5.039          | 0.488 | 920                                      | 566,079 | 908,903  | 30       | M27    | 717  | 707,599          |
|                         |   |      |        |      |        | 15.354         |                |                |                |       |  | 599,638 | 938,150  |          |        |      | 749,547          |
|                         |   |      |        |      |        | 15.748         |                |                |                |       |  | 634,303 | 967,397  |          |        |      | 792,879          |
| 500                     | x | 850  | 19.685 | x    | 33.465 | 15.748         | 23.622         | 5.984          | 5.039          | 0.488 | 920                                      | 645,367 | 984,270  | 32       | M27    | 827  | 806,708          |
|                         |   |      |        |      |        | 16.142         |                |                |                |       |  | 678,557 | 1,010,142  |          |        |      | 848,196          |
|                         |   |      |        |      |        | 16.535         |                |                |                |       |  | 715,435 | 1,040,514  |          |        |      | 894,294          |

<sup>1)</sup> Shrink disc delivered without screws. Tightening torques for screws quantity see table

■ Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$

■ Tolerances  
For shaft see table page 8

Explanations to tables: Page 9

■ When using a hollow shaft instead of a solid shaft please contact our Engineering-Team

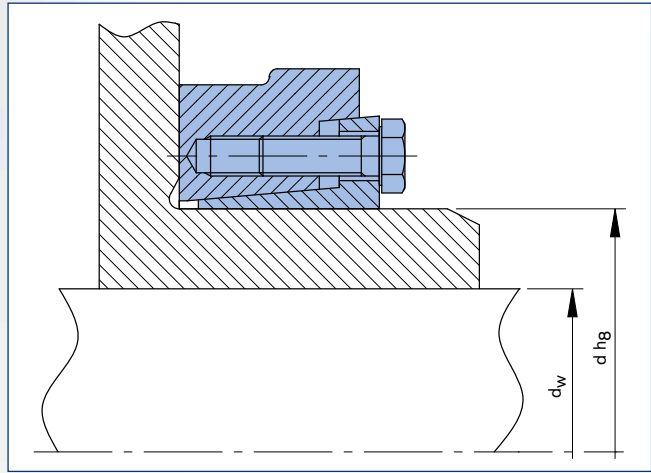
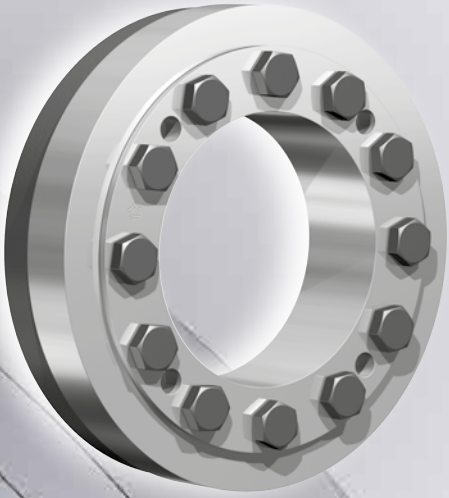
Ordering examples: RfN 4091

| Series   | d      | D      | Version |
|----------|--------|--------|---------|
| RfN 4091 | 18.110 | 30.315 | HT      |
| RfN 4091 | 18.110 | 30.315 | HC      |

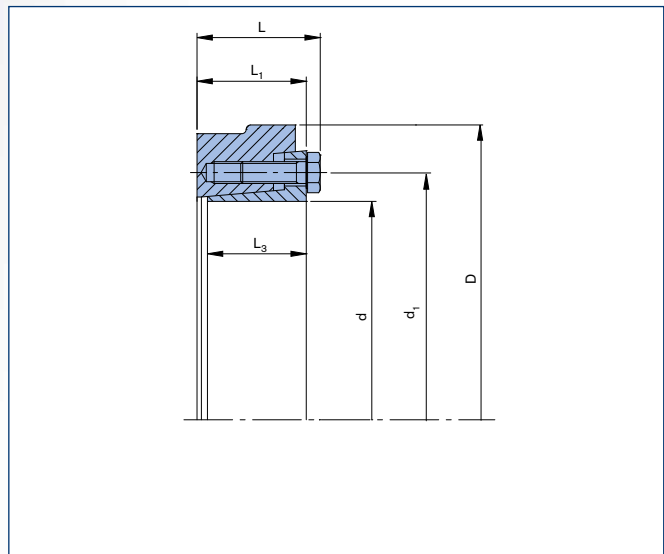
HT = Half shrink disc with threaded holes in thrust ring

HC = Half shrink disc with clearance holes in thrust ring





RINGFEDER® Shrink Disc RfN 4161 · Location



RINGFEDER® Shrink Disc RfN 4161 · Dimensions

| Shrink Discs dimensions |   |      |       |   |       |                |                |       |                | Transmissible torques or axial forces |                |        | Locking screws ISO 4014 / 4017 - 12.9 |        |                |                  |
|-------------------------|---|------|-------|---|-------|----------------|----------------|-------|----------------|---------------------------------------|----------------|--------|---------------------------------------|--------|----------------|------------------|
| d                       | x | D    | d     | x | D     | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>3</sub>                        | T <sub>A</sub> | T      | F <sub>ax</sub>                       | Thread | G <sub>w</sub> | T <sub>max</sub> |
| mm                      |   |      | inch  |   |       | inch           |                | inch  |                |                                       | ft-lbs         | ft-lbs | lbs                                   |        | lbs            | ft-lbs           |
| 18                      | x | 44   | 0.709 | x | 1.732 | 0.591          | 1.181          | 0.748 | 0.591          | 0.512                                 | 9              | 59     | 2,473                                 | M6     | 0.44           | 65               |
|                         |   |      |       |   |       | 0.630          | 1.181          |       |                | 0.512                                 |                | 81     | 3,147                                 |        |                | 89               |
|                         |   |      |       |   |       | --             | --             |       |                | --                                    |                | --     | --                                    |        |                | --               |
| 20                      | x | 47   | 0.787 | x | 1.850 | 0.669          | 1.260          | 0.768 | 0.610          | 0.531                                 | 9              | 111    | 4,047                                 | M6     | 0.44           | 122              |
|                         |   |      |       |   |       | 0.709          | 1.260          |       |                | 0.531                                 |                | 133    | 4,496                                 |        |                | 146              |
|                         |   |      |       |   |       | --             | --             |       |                | --                                    |                | --     | --                                    |        |                | --               |
| 24                      | x | 50   | 0.945 | x | 1.969 | 0.748          | 1.417          | 0.866 | 0.709          | 0.591                                 | 9              | 118    | 3,822                                 | M6     | 0.44           | 130              |
|                         |   |      |       |   |       | 0.787          | 1.417          |       |                | 0.591                                 |                | 155    | 4,496                                 |        |                | 170              |
|                         |   |      |       |   |       | 0.866          | 1.417          |       |                | 0.591                                 |                | 207    | 5,620                                 |        |                | 227              |
| 26                      | x | 51.5 | 1.024 | x | 2.028 | 0.787          | 1.496          | 0.866 | 0.709          | 0.630                                 | 9              | 170    | 5,171                                 | M6     | 0.44           | 187              |
|                         |   |      |       |   |       | 0.866          | 1.496          |       |                | 0.630                                 |                | 221    | 6,070                                 |        |                | 243              |
|                         |   |      |       |   |       | 0.945          | 1.496          |       |                | 0.630                                 |                | 229    | 6,519                                 |        |                | 252              |
| 30                      | x | 60   | 1.181 | x | 2.362 | 0.945          | 1.732          | 0.945 | 0.787          | 0.669                                 | 9              | 199    | 5,171                                 | M6     | 0.66           | 219              |
|                         |   |      |       |   |       | 0.984          | 1.732          |       |                | 0.669                                 |                | 236    | 5,620                                 |        |                | 260              |
|                         |   |      |       |   |       | 1.024          | 1.732          |       |                | 0.669                                 |                | 266    | 6,295                                 |        |                | 292              |
| 36                      | x | 72   | 1.417 | x | 2.835 | 1.063          | 2.047          | 1.083 | 0.866          | 0.728                                 | 26             | 376    | 8,318                                 | M8     | 1.10           | 414              |
|                         |   |      |       |   |       | 1.181          | 2.047          |       |                | 0.728                                 |                | 524    | 10,566                                |        |                | 576              |
|                         |   |      |       |   |       | 1.299          | 2.047          |       |                | 0.728                                 |                | 701    | 13,039                                |        |                | 771              |
| 38                      | x | 72   | 1.496 | x | 2.835 | 1.299          | 2.126          | 1.083 | 0.866          | 0.728                                 | 26             | 634    | 11,690                                | M8     | 1.10           | 698              |
|                         |   |      |       |   |       | 1.063          | 2.126          |       |                | 0.728                                 |                | 354    | 8,093                                 |        |                | 389              |
|                         |   |      |       |   |       | 1.181          | 2.126          |       |                | 0.728                                 |                | 479    | 9,667                                 |        |                | 527              |
| 40                      | x | 80   | 1.575 | x | 3.150 | 1.339          | 2.402          | 1.161 | 0.945          | 0.807                                 | 26             | 597    | 10,791                                | M8     | 1.54           | 657              |
|                         |   |      |       |   |       | 1.378          | 2.402          |       |                | 0.807                                 |                | 649    | 11,240                                |        |                | 714              |
|                         |   |      |       |   |       | 1.457          | 2.402          |       |                | 0.807                                 |                | 708    | 11,690                                |        |                | 779              |
| 44                      | x | 80   | 1.732 | x | 3.150 | 1.378          | 2.402          | 1.161 | 0.945          | 0.807                                 | 26             | 590    | 11,690                                | M8     | 1.32           | 649              |
|                         |   |      |       |   |       | 1.417          | 2.402          |       |                | 0.807                                 |                | 656    | 12,814                                |        |                | 722              |
|                         |   |      |       |   |       | 1.457          | 2.402          |       |                | 0.807                                 |                | 774    | 13,489                                |        |                | 852              |
| 50                      | x | 90   | 1.969 | x | 3.543 | 1.496          | 2.677          | 1.240 | 1.024          | 0.866                                 | 26             | 1,106  | 17,760                                | M8     | 1.76           | 1,217            |
|                         |   |      |       |   |       | 1.575          | 2.677          |       |                | 0.866                                 |                | 1,254  | 19,558                                |        |                | 1,379            |
|                         |   |      |       |   |       | 1.654          | 2.677          |       |                | 0.866                                 |                | 1,475  | 21,132                                |        |                | 1,623            |
| 55                      | x | 100  | 2.165 | x | 3.937 | 1.654          | 2.835          | 1.358 | 1.142          | 0.984                                 | 26             | 1,180  | 17,535                                | M8     | 2.42           | 1,298            |
|                         |   |      |       |   |       | 1.772          | 2.835          |       |                | 0.984                                 |                | 1,475  | 19,783                                |        |                | 1,623            |
|                         |   |      |       |   |       | 1.890          | 2.835          |       |                | 0.984                                 |                | 1,770  | 22,256                                |        |                | 1,947            |
| 60                      | x | 110  | 2.362 | x | 4.331 | 2.047          | 3.150          | 1.358 | 1.142          | 0.965                                 | 26             | 1,991  | 23,605                                | M8     | 2.87           | 2,191            |
|                         |   |      |       |   |       | 1.890          | 3.150          |       |                | 0.965                                 |                | 1,623  | 20,682                                |        |                | 1,785            |
|                         |   |      |       |   |       | 1.969          | 3.150          |       |                | 0.965                                 |                | 1,844  | 22,031                                |        |                | 2,028            |
| 62                      | x | 110  | 2.441 | x | 4.331 | 1.890          | 3.150          | 1.358 | 1.142          | 0.965                                 | 26             | 1,623  | 20,682                                | M8     | 2.87           | 1,785            |
|                         |   |      |       |   |       | 1.969          | 3.150          |       |                | 0.965                                 |                | 1,844  | 22,031                                |        |                | 2,028            |
|                         |   |      |       |   |       | 2.047          | 3.150          |       |                | 0.965                                 |                | 1,991  | 23,605                                |        |                | 2,191            |
| 68                      | x | 115  | 2.677 | x | 4.528 | 1.969          | 3.386          | 1.358 | 1.142          | 0.965                                 | 26             | 1,770  | 21,132                                | M8     | 3.09           | 1,947            |
|                         |   |      |       |   |       | 2.165          | 3.386          |       |                | 0.965                                 |                | 2,213  | 24,954                                |        |                | 2,434            |
|                         |   |      |       |   |       | 2.362          | 3.386          |       |                | 0.965                                 |                | 2,803  | 28,776                                |        |                | 3,083            |
| 75                      | x | 138  | 2.953 | x | 5.433 | 2.165          | 3.937          | 1.476 | 1.220          | 1.035                                 | 52             | 2,729  | 30,349                                | M10    | 5.07           | 3,002            |
|                         |   |      |       |   |       | 2.362          | 3.937          |       |                | 1.035                                 |                | 3,467  | 35,070                                |        |                | 3,813            |
|                         |   |      |       |   |       | 2.559          | 3.937          |       |                | 1.035                                 |                | 4,278  | 39,791                                |        |                | 4,706            |
| 80                      | x | 141  | 3.150 | x | 5.551 | 2.362          | 4.094          | 1.476 | 1.220          | 1.024                                 | 52             | 3,098  | 31,698                                | M10    | 5.07           | 3,408            |
|                         |   |      |       |   |       | 2.559          | 4.094          |       |                | 1.024                                 |                | 3,835  | 35,969                                |        |                | 4,219            |
|                         |   |      |       |   |       | 2.756          | 4.094          |       |                | 1.024                                 |                | 4,647  | 40,466                                |        |                | 5,111            |
| 85                      | x | 155  | 3.346 | x | 6.102 | 2.559          | 4.488          | 1.752 | 1.496          | 1.339                                 | 52             | 4,352  | 41,814                                | M10    | 7.72           | 4,787            |
|                         |   |      |       |   |       | 2.756          | 4.488          |       |                | 1.339                                 |                | 5,310  | 45,861                                |        |                | 5,841            |
|                         |   |      |       |   |       | 2.953          | 4.488          |       |                | 1.339                                 |                | 6,269  | 51,032                                |        |                | 6,896            |
| 90                      | x | 155  | 3.543 | x | 6.102 | 2.559          | 4.488          | 1.752 | 1.496          | 1.299                                 | 52             | 4,352  | 40,915                                | M10    | 7.72           | 4,787            |
|                         |   |      |       |   |       | 2.756          | 4.488          |       |                | 1.299                                 |                | 5,310  | 45,861                                |        |                | 5,841            |
|                         |   |      |       |   |       | 2.953          | 4.488          |       |                | 1.299                                 |                | 6,269  | 51,032                                |        |                | 6,896            |
| 95                      | x | 170  | 3.740 | x | 6.693 | 2.756          | 4.882          | 1.949 | 1.693          | 1.476                                 | 52             | 5,458  | 47,884                                | M10    | 11.0           | 6,004            |
|                         |   |      |       |   |       | 2.953          | 4.882          |       |                | 1.476                                 |                | 6,564  | 53,055                                |        |                | 7,221            |
|                         |   |      |       |   |       | 3.150          | 4.882          |       |                | 1.476                                 |                | 7,671  | 58,450                                |        |                | 8,438            |
| 100                     | x | 185  | 3.937 | x | 7.283 | 3.150          | 5.472          | 2.224 | 1.929          | 1.693                                 | 90             | 11,063 | 83,179                                | M12    | 14.8           | 12,170           |
|                         |   |      |       |   |       | 3.346          | 5.472          |       |                | 1.693                                 |                | 12,760 | 89,924                                |        |                | 14,036           |
|                         |   |      |       |   |       | 3.543          | 5.472          |       |                | 1.693                                 |                | 14,456 | 96,668                                |        |                | 15,902           |

■ Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$

■ Tolerances  
For shaft see table page 8

■ When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

■ Hub with yield strength  $R_{p0,2} \geq 360 \text{ N/mm}^2$

Explanations to tables: Page 9

To continue see next page



## Characteristics

**Standard design** – for high transmission values.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft.

RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Short installation time** – cost savings particularly in serial production.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

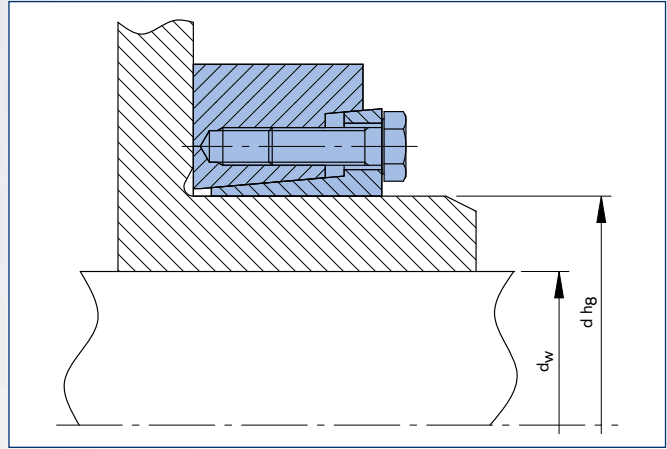
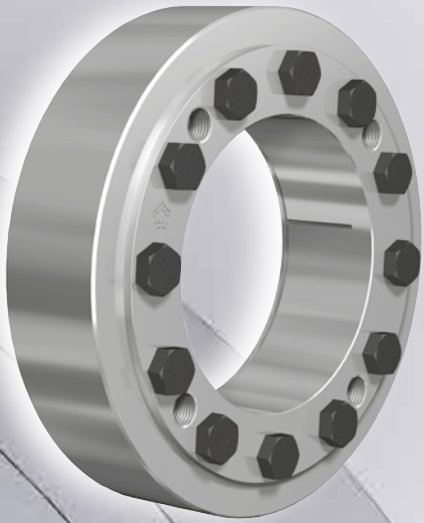
| Shrink Discs dimensions |   |      |       |      |        |                |                |       |                | Transmissible torques or axial forces |                |        | Locking screws ISO 4014 / 4017 - 12.9 |        |      |                  |
|-------------------------|---|------|-------|------|--------|----------------|----------------|-------|----------------|---------------------------------------|----------------|--------|---------------------------------------|--------|------|------------------|
| d                       | x | D    | d     | x    | D      | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>3</sub>                        | T <sub>A</sub> | T      | F <sub>ax</sub>                       | Thread | Gw   | T <sub>max</sub> |
| mm                      |   | inch |       | inch |        | inch           |                |       | ft-lbs         | ft-lbs                                | lbs            |        | lbs                                   | ft-lbs |      |                  |
| 105                     | x | 185  | 4.134 | x    | 7.283  | 3.543          | 5.472          | 2.224 | 1.929          | 1.693                                 | 90             | 13,719 | 97,567                                | M12    | 14.1 | 15,091           |
|                         |   |      |       |      |        | 3.150          | 5.472          |       |                | 1.693                                 |                | 10,252 | 78,233                                |        |      | 11,277           |
|                         |   |      |       |      |        | 3.346          | 5.472          |       |                | 1.693                                 |                | 11,875 | 85,427                                |        |      | 13,062           |
| 110                     | x | 185  | 4.331 | x    | 7.283  | 3.150          | 5.472          | 2.224 | 1.929          | 1.693                                 | 90             | 11,432 | 85,427                                | M12    | 13.5 | 12,575           |
|                         |   |      |       |      |        | 3.346          | 5.472          |       |                | 1.693                                 |                | 13,129 | 92,172                                |        |      | 14,441           |
|                         |   |      |       |      |        | 3.543          | 5.472          |       |                | 1.693                                 |                | 14,751 | 98,916                                |        |      | 16,226           |
| 115                     | x | 200  | 4.528 | x    | 7.874  | 3.346          | 5.906          | 2.461 | 2.165          | 1.890                                 | 90             | 12,686 | 91,048                                | M12    | 17.6 | 13,955           |
|                         |   |      |       |      |        | 3.543          | 5.906          |       |                | 1.890                                 |                | 14,677 | 99,590                                |        |      | 16,145           |
|                         |   |      |       |      |        | 3.740          | 5.906          |       |                | 1.890                                 |                | 16,890 | 108,358                               |        |      | 18,579           |
| 120                     | x | 200  | 4.724 | x    | 7.874  | 3.346          | 5.906          | 2.461 | 2.165          | 1.890                                 | 90             | 12,686 | 91,048                                | M12    | 17.0 | 13,955           |
|                         |   |      |       |      |        | 3.543          | 5.906          |       |                | 1.890                                 |                | 14,677 | 99,590                                |        |      | 16,145           |
|                         |   |      |       |      |        | 3.740          | 5.906          |       |                | 1.890                                 |                | 16,890 | 108,358                               |        |      | 18,579           |
| 125                     | x | 215  | 4.921 | x    | 8.465  | 3.543          | 6.181          | 2.382 | 2.087          | 1.831                                 | 90             | 14,161 | 94,420                                | M12    | 19.6 | 15,577           |
|                         |   |      |       |      |        | 3.740          | 6.181          |       |                | 1.831                                 |                | 16,005 | 101,164                               |        |      | 17,606           |
|                         |   |      |       |      |        | 3.937          | 6.181          |       |                | 1.831                                 |                | 17,997 | 107,908                               |        |      | 19,796           |
| 130                     | x | 230  | 5.118 | x    | 9.055  | 4.331          | 6.772          | 2.579 | 2.283          | 2.008                                 | 90             | 26,552 | 146,126                               | M12    | 25.4 | 28,470           |
|                         |   |      |       |      |        | 3.740          | 6.772          |       |                | 2.008                                 |                | 19,103 | 121,397                               |        |      | 21,013           |
|                         |   |      |       |      |        | 3.937          | 6.772          |       |                | 2.008                                 |                | 21,389 | 130,389                               |        |      | 23,528           |
| 135                     | x | 230  | 5.315 | x    | 9.055  | 3.740          | 6.772          | 2.638 | 2.283          | 2.008                                 | 140            | 15,821 | 101,614                               | M14    | 24.5 | 17,403           |
|                         |   |      |       |      |        | 3.937          | 6.772          |       |                | 2.008                                 |                | 17,923 | 109,257                               |        |      | 19,715           |
|                         |   |      |       |      |        | 4.331          | 6.772          |       |                | 2.008                                 |                | 22,496 | 124,769                               |        |      | 24,708           |
| 140                     | x | 230  | 5.512 | x    | 9.055  | 3.937          | 6.772          | 2.638 | 2.283          | 2.008                                 | 140            | 18,660 | 112,404                               | M14    | 23.6 | 20,526           |
|                         |   |      |       |      |        | 4.134          | 6.772          |       |                | 2.008                                 |                | 20,652 | 119,149                               |        |      | 22,717           |
|                         |   |      |       |      |        | 4.528          | 6.772          |       |                | 2.008                                 |                | 26,257 | 137,133                               |        |      | 28,883           |
| 150                     | x | 263  | 5.906 | x    | 10.354 | 4.331          | 7.480          | 2.795 | 2.441          | 2.165                                 | 140            | 27,290 | 151,296                               | M14    | 35.9 | 30,019           |
|                         |   |      |       |      |        | 4.724          | 7.480          |       |                | 2.165                                 |                | 33,412 | 169,506                               |        |      | 36,753           |
|                         |   |      |       |      |        | 4.921          | 7.480          |       |                | 2.165                                 |                | 36,657 | 178,723                               |        |      | 40,323           |
| 155                     | x | 263  | 6.102 | x    | 10.354 | 4.331          | 7.480          | 2.795 | 2.441          | 2.165                                 | 140            | 24,340 | 134,885                               | M14    | 34.8 | 26,774           |
|                         |   |      |       |      |        | 4.528          | 7.480          |       |                | 2.165                                 |                | 26,995 | 143,203                               |        |      | 29,694           |
|                         |   |      |       |      |        | 4.724          | 7.480          |       |                | 2.165                                 |                | 29,871 | 151,521                               |        |      | 32,858           |
| 160                     | x | 290  | 6.299 | x    | 11.417 | 5.315          | 7.874          | 3.071 | 2.677          | 2.402                                 | 215            | 53,473 | 240,546                               | M16    | 49.2 | 58,821           |
|                         |   |      |       |      |        | 4.724          | 7.874          |       |                | 2.402                                 |                | 42,262 | 213,568                               |        |      | 46,489           |
|                         |   |      |       |      |        | 5.118          | 7.874          |       |                | 2.402                                 |                | 49,195 | 229,305                               |        |      | 54,115           |
| 165                     | x | 290  | 6.496 | x    | 11.417 | 5.315          | 7.874          | 3.071 | 2.677          | 2.402                                 | 215            | 53,473 | 240,546                               | M16    | 47.8 | 58,821           |
|                         |   |      |       |      |        | 4.921          | 7.874          |       |                | 2.402                                 |                | 45,360 | 220,313                               |        |      | 49,896           |
|                         |   |      |       |      |        | 4.724          | 7.874          |       |                | 2.402                                 |                | 41,672 | 211,320                               |        |      | 45,839           |
| 170                     | x | 300  | 6.693 | x    | 11.811 | 5.709          | 8.268          | 3.083 | 2.689          | 2.402                                 | 215            | 57,825 | 243,018                               | M16    | 49.2 | 63,607           |
|                         |   |      |       |      |        | 5.118          | 8.268          |       |                | 2.402                                 |                | 44,991 | 210,871                               |        |      | 49,490           |
|                         |   |      |       |      |        | 5.512          | 8.268          |       |                | 2.402                                 |                | 53,326 | 229,980                               |        |      | 58,658           |
| 175                     | x | 300  | 6.890 | x    | 11.811 | 5.512          | 8.268          | 3.083 | 2.689          | 2.402                                 | 215            | 53,473 | 231,553                               | M16    | 47.8 | 58,821           |
|                         |   |      |       |      |        | 5.118          | 8.268          |       |                | 2.402                                 |                | 45,360 | 202,328                               |        |      | 49,896           |
|                         |   |      |       |      |        | 5.315          | 8.268          |       |                | 2.402                                 |                | 49,417 | 222,561                               |        |      | 54,358           |
| 180                     | x | 320  | 7.087 | x    | 12.598 | 6.102          | 8.819          | 3.819 | 3.386          | 3.051                                 | 215            | 80,616 | 314,957                               | M16    | 75.0 | 88,677           |
|                         |   |      |       |      |        | 5.906          | 8.819          |       |                | 3.051                                 |                | 74,789 | 303,942                               |        |      | 82,268           |
|                         |   |      |       |      |        | 5.512          | 8.819          |       |                | 3.051                                 |                | 63,799 | 278,089                               |        |      | 70,179           |
| 185                     | x | 320  | 7.283 | x    | 12.598 | 5.512          | 8.819          | 3.819 | 3.386          | 3.051                                 | 215            | 70,806 | 281,011                               | M16    | 73.0 | 77,887           |
|                         |   |      |       |      |        | 5.709          | 8.819          |       |                | 3.051                                 |                | 76,706 | 303,492                               |        |      | 84,377           |
|                         |   |      |       |      |        | 6.102          | 8.819          |       |                | 3.051                                 |                | 88,507 | 348,454                               |        |      | 97,358           |
| 190                     | x | 340  | 7.480 | x    | 13.386 | 6.299          | 9.370          | 3.764 | 3.370          | 3.031                                 | 215            | 83,713 | 314,732                               | M16    | 79.2 | 92,085           |
|                         |   |      |       |      |        | 5.906          | 9.370          |       |                | 3.031                                 |                | 67,856 | 281,011                               |        |      | 74,641           |
|                         |   |      |       |      |        | 6.102          | 9.370          |       |                | 3.031                                 |                | 73,019 | 292,252                               |        |      | 80,321           |
| 195                     | x | 340  | 7.677 | x    | 13.386 | 6.299          | 9.370          | 3.764 | 3.370          | 3.031                                 | 215            | 87,991 | 335,190                               | M16    | 77.2 | 96,790           |
|                         |   |      |       |      |        | 6.496          | 9.370          |       |                | 3.031                                 |                | 93,007 | 343,733                               |        |      | 102,307          |
|                         |   |      |       |      |        | 5.906          | 9.370          |       |                | 3.031                                 |                | 75,969 | 308,887                               |        |      | 83,566           |
| 200                     | x | 340  | 7.874 | x    | 13.386 | 5.906          | 9.370          | 3.768 | 3.374          | 3.031                                 | 215            | 79,657 | 325,973                               | M16    | 75.0 | 87,622           |
|                         |   |      |       |      |        | 6.102          | 9.370          |       |                | 3.031                                 |                | 85,557 | 337,213                               |        |      | 94,113           |
|                         |   |      |       |      |        | 6.299          | 9.370          |       |                | 3.031                                 |                | 91,458 | 348,454                               |        |      | 100,603          |

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team
- Hub with yield strength Rp0,2 ≥ 360 N/mm<sup>2</sup>

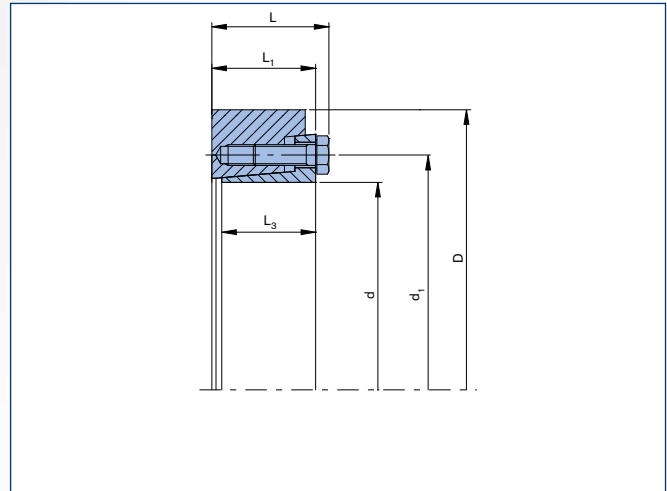
Explanations to tables: Page 9

Ordering example: RfN 4161

| Series   | d     | D      |
|----------|-------|--------|
| RfN 4161 | 5.906 | 10.354 |



RINGFEDER® Shrink Disc RfN 4181 · Location



RINGFEDER® Shrink Disc RfN 4181 · Dimensions



| Shrink Discs dimensions |   |     |        |   |        |                |        |                |                | Transmissible torques or axial forces |           |                 | Locking screws ISO 4014 / 4017 - 12.9 |       |                  |
|-------------------------|---|-----|--------|---|--------|----------------|--------|----------------|----------------|---------------------------------------|-----------|-----------------|---------------------------------------|-------|------------------|
| d                       | x | D   | d      | x | D      | d <sub>w</sub> | L      | L <sub>1</sub> | L <sub>3</sub> | T <sub>A</sub>                        | T         | F <sub>ax</sub> | Thread                                | Gw    | T <sub>max</sub> |
| mm                      |   |     | inch   |   |        | inch           | inch   |                |                | ft-lbs                                | ft-lbs    | lbs             |                                       | lbs   | ft-lbs           |
| 220                     | x | 370 | 8.661  | x | 14.567 | 6.299          | 4.567  | 4.055          | 3.425          | 428                                   | 118,010   | 449,952         | M20                                   | 117   | 129,811          |
|                         |   |     |        |   |        | 6.693          |        |                | 3.425          |                                       | 134,236   | 483,698         |                                       |       | 147,660          |
|                         |   |     |        |   |        | 7.087          |        |                | 3.425          |                                       | 151,938   | 517,445         |                                       |       | 167,132          |
| 240                     | x | 405 | 9.449  | x | 15.945 | 6.693          | 4.803  | 4.291          | 3.622          | 428                                   | 140,137   | 506,196         | M20                                   | 148   | 154,150          |
|                         |   |     |        |   |        | 7.087          |        |                | 3.622          |                                       | 158,576   | 539,942         |                                       |       | 174,433          |
|                         |   |     |        |   |        | 7.874          |        |                | 3.622          |                                       | 198,404   | 697,435         |                                       |       | 218,245          |
| 260                     | x | 430 | 10.236 | x | 16.929 | 7.480          | 5.079  | 4.567          | 4.016          | 428                                   | 182,178   | 584,938         | M20                                   | 171   | 200,396          |
|                         |   |     |        |   |        | 7.874          |        |                | 4.016          |                                       | 204,305   | 618,684         |                                       |       | 224,735          |
|                         |   |     |        |   |        | 8.661          |        |                | 4.016          |                                       | 250,771   | 697,426         |                                       |       | 275,848          |
| 280                     | x | 460 | 11.024 | x | 18.110 | 8.268          | 5.276  | 4.764          | 4.606          | 428                                   | 207,992   | 604,286         | M20                                   | 219   | 228,792          |
|                         |   |     |        |   |        | 8.661          |        |                | 4.606          |                                       | 230,857   | 640,057         |                                       |       | 253,943          |
|                         |   |     |        |   |        | 9.449          |        |                | 4.606          |                                       | 280,274   | 712,499         |                                       |       | 308,301          |
| 300                     | x | 485 | 11.811 | x | 19.094 | 8.661          | 6.181  | 5.591          | 4.803          | 725                                   | 283,961   | 787,416         | M24                                   | 263   | 312,358          |
|                         |   |     |        |   |        | 9.055          |        |                | 4.803          |                                       | 313,464   | 832,411         |                                       |       | 344,810          |
|                         |   |     |        |   |        | 9.843          |        |                | 4.803          |                                       | 372,469   | 911,153         |                                       |       | 409,716          |
| 320                     | x | 520 | 12.598 | x | 20.472 | 9.449          | 6.165  | 5.575          | 4.882          | 725                                   | 327,478   | 832,411         | M24                                   | 291   | 360,225          |
|                         |   |     |        |   |        | 9.843          |        |                | 4.882          |                                       | 359,930   | 878,306         |                                       |       | 395,923          |
|                         |   |     |        |   |        | 10.630         |        |                | 4.882          |                                       | 427,786   | 966,497         |                                       |       | 470,565          |
| 340                     | x | 570 | 13.386 | x | 22.441 | 9.843          | 6.693  | 6.102          | 5.315          | 725                                   | 415,985   | 1,012,392       | M24                                   | 411   | 457,583          |
|                         |   |     |        |   |        | 10.236         |        |                | 5.315          |                                       | 451,388   | 1,057,387       |                                       |       | 496,527          |
|                         |   |     |        |   |        | 11.024         |        |                | 5.315          |                                       | 530,307   | 1,158,826       |                                       |       | 583,338          |
| 350                     | x | 580 | 13.780 | x | 22.835 | 10.630         | 7.008  | 6.417          | 5.512          | 725                                   | 435,162   | 983,145         | M24                                   | 417   | 478,678          |
|                         |   |     |        |   |        | 11.024         |        |                | 5.512          |                                       | 479,415   | 1,044,564       |                                       |       | 527,357          |
|                         |   |     |        |   |        | 11.417         |        |                | 5.512          |                                       | 516,293   | 1,086,184       |                                       |       | 567,923          |
| 360                     | x | 590 | 14.173 | x | 23.228 | 10.630         | 6.732  | 6.142          | 5.236          | 725                                   | 485,316   | 1,091,134       | M24                                   | 428   | 533,847          |
|                         |   |     |        |   |        | 11.024         |        |                | 5.236          |                                       | 525,144   | 1,147,378       |                                       |       | 577,659          |
|                         |   |     |        |   |        | 11.811         |        |                | 5.236          |                                       | 608,489   | 1,237,368       |                                       |       | 669,338          |
| 380                     | x | 640 | 14.961 | x | 25.197 | 11.417         | 7.283  | 6.614          | 5.827          | 1,070                                 | 542,108   | 1,140,403       | M27                                   | 546   | 596,319          |
|                         |   |     |        |   |        | 11.811         |        |                | 5.827          |                                       | 582,674   | 1,184,724       |                                       |       | 640,941          |
|                         |   |     |        |   |        | 12.205         |        |                | 5.827          |                                       | 623,240   | 1,226,569       |                                       |       | 685,564          |
| 390                     | x | 650 | 15.354 | x | 25.591 | 11.417         | 7.323  | 6.614          | 5.669          | 1,400                                 | 666,018   | 1,406,100       | M30                                   | 570   | 732,620          |
|                         |   |     |        |   |        | 11.811         |        |                | 5.669          |                                       | 715,435   | 1,451,095       |                                       |       | 786,979          |
|                         |   |     |        |   |        | 12.598         |        |                | 5.669          |                                       | 818,694   | 1,563,583       |                                       |       | 900,563          |
| 400                     | x | 660 | 15.748 | x | 25.984 | 11.811         | 7.992  | 7.323          | 6.614          | 1,070                                 | 590,050   | 1,199,797       | M27                                   | 697   | 649,055          |
|                         |   |     |        |   |        | 12.205         |        |                | 6.614          |                                       | 641,679   | 1,262,790       |                                       |       | 705,847          |
|                         |   |     |        |   |        | 12.598         |        |                | 6.614          |                                       | 663,806   | 1,265,490       |                                       |       | 730,186          |
| 420                     | x | 670 | 16.535 | x | 26.378 | 12.598         | 8.071  | 7.323          | 6.535          | 1,400                                 | 714,698   | 1,362,455       | M30                                   | 655   | 786,167          |
|                         |   |     |        |   |        | 12.992         |        |                | 6.535          |                                       | 765,589   | 1,415,324       |                                       |       | 842,148          |
|                         |   |     |        |   |        | 13.780         |        |                | 6.535          |                                       | 872,536   | 1,521,288       |                                       |       | 959,789          |
| 440                     | x | 740 | 17.323 | x | 29.134 | 13.386         | 8.386  | 7.638          | 7.126          | 1,400                                 | 893,925   | 1,603,854       | M30                                   | 848   | 983,318          |
|                         |   |     |        |   |        | 13.780         |        |                | 7.126          |                                       | 952,930   | 1,660,998       |                                       |       | 1,048,223        |
|                         |   |     |        |   |        | 14.567         |        |                | 7.126          |                                       | 1,076,841 | 1,775,511       |                                       |       | 1,184,525        |
| 460                     | x | 770 | 18.110 | x | 30.315 | 14.173         | 8.780  | 7.953          | 6.772          | 1,070                                 | 1,129,945 | 1,914,771       | M27                                   | 1,047 | 1,242,939        |
|                         |   |     |        |   |        | 14.567         |        |                | 6.772          |                                       | 1,199,276 | 1,977,314       |                                       |       | 1,319,203        |
|                         |   |     |        |   |        | 15.354         |        |                | 6.772          |                                       | 1,346,788 | 2,106,675       |                                       |       | 1,481,467        |
| 480                     | x | 800 | 18.898 | x | 31.496 | 14.961         | 9.173  | 8.425          | 7.402          | 1,400                                 | 1,343,838 | 2,157,295       | M30                                   | 1,092 | 1,478,222        |
|                         |   |     |        |   |        | 15.354         |        |                | 7.402          |                                       | 1,422,757 | 2,225,463       |                                       |       | 1,565,033        |
|                         |   |     |        |   |        | 16.142         |        |                | 7.402          |                                       | 1,586,496 | 2,360,673       |                                       |       | 1,745,145        |
| 500                     | x | 850 | 19.685 | x | 33.465 | 15.748         | 9.213  | 8.465          | 7.480          | 1,400                                 | 1,530,441 | 2,334,126       | M30                                   | 1,381 | 1,683,485        |
|                         |   |     |        |   |        | 16.142         |        |                | 7.480          |                                       | 1,615,998 | 2,404,543       |                                       |       | 1,777,598        |
|                         |   |     |        |   |        | 16.929         |        |                | 7.480          |                                       | 1,793,751 | 2,544,929       |                                       |       | 1,973,126        |
| 520                     | x | 850 | 20.472 | x | 33.465 | 16.535         | 9.803  | 9.094          | 7.795          | 1,400                                 | 1,375,553 | 1,998,012       | M30                                   | 1,420 | 1,512,740        |
|                         |   |     |        |   |        | 16.929         |        |                | 7.795          |                                       | 1,408,006 | 1,997,562       |                                       |       | 1,548,880        |
|                         |   |     |        |   |        | 17.323         |        |                | 7.795          |                                       | 1,475,124 | 2,045,032       |                                       |       | 1,622,636        |
| 530                     | x | 850 | 20.866 | x | 33.465 | 16.929         | 10.236 | 9.449          | 8.110          | 1,400                                 | 1,767,936 | 2,508,482       | M30                                   | 1,440 | 1,944,730        |
|                         |   |     |        |   |        | 17.323         |        |                | 8.110          |                                       | 1,859,040 | 2,577,550       |                                       |       | 2,044,944        |
|                         |   |     |        |   |        | 18.110         |        |                | 8.110          |                                       | 2,048,517 | 2,716,810       |                                       |       | 2,253,369        |

- Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team
- Hub with yield strength  $Rp0,2 \geq 360 \text{ N/mm}^2$

Explanations to tables: Page 9  
To continue see next page

Ordering example: RfN 4181

| Series   | d      | D      |
|----------|--------|--------|
| RfN 4181 | 10.236 | 16.929 |

## Characteristics

**Two part shrink disc heavy duty series** – with additional guide mechanism for the inner ring. For the transmission of maximum torques.

**Highest reliability** – applicable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Fully replaceable** – the RINGFEDER® Shrink Discs work without any positive locking.

**Visual check of the tightening status** – minimisation of faults during assembly.

**Easy mounting** – RINGFEDER® Shrink Discs use standard screws and tightened using standard tools. No additional machining or fitting work is required.

**Short assembly times** – cost savings particularly in the case of series production.

**Low susceptibility to contamination** – when the locking screws are tightened the contact (functional) surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

**Easy adjustability** – no stops, steps, keyways, splines etc. are required therefore, hubs can be located and locked at any point or angle on the shaft.

| Shrink Discs dimensions |   |      |        |   |        |                |        |                | T <sub>A</sub> | Transmissible torques<br>or axial forces |           | Locking screws<br>ISO 4014 / 4017 - 12.9 |        | T <sub>max</sub> |           |
|-------------------------|---|------|--------|---|--------|----------------|--------|----------------|----------------|--|-----------|--|--------|------------------|-----------|
| d                       | x | D    | d      | x | D      | d <sub>w</sub> | L      | L <sub>1</sub> |                | L <sub>3</sub>                           | T         | F <sub>ax</sub>                          | Thread |                  | Gw        |
| mm                      |   |      | inch   |   |        | inch           | inch   |                |                |  | ft-lbs    | lbs                                      |        |                  | lbs       |
| 540                     | x | 910  | 17.323 | x | 35.827 | 17.717         | 10.276 | 9.528          | 8.386          | 1,400                                    | 1,445,622 | 2,002,286                                | M30    | 1,765            | 1,792,276 |
|                         |   |      | 18.110 |   |        | 8.386          |        |                | 1,519,378      |  | 2,058,530 | 1,880,783                                |        |                  |           |
|                         |   |      | 17.717 |   |        | 8.386          |        |                | 1,593,134      |  | 2,114,774 | 1,976,666                                |        |                  |           |
| 560                     | x | 940  | 17.717 | x | 37.008 | 18.110         | 10.236 | 9.449          | 8.110          | 1,400                                    | 1,877,095 | 2,544,704                                | M30    | 1,651            | 2,064,805 |
|                         |   |      | 18.898 |   |        | 8.110          |        |                | 1,969,295      |  | 2,611,746 | 2,166,224                                |        |                  |           |
|                         |   |      | 18.110 |   |        | 8.110          |        |                | 2,160,703      |  | 2,746,057 | 2,376,774                                |        |                  |           |
| 580                     | x | 960  | 18.110 | x | 37.795 | 18.504         | 10.984 | 10.236         | 8.976          | 1,400                                    | 2,141,880 | 2,840,547                                | M30    | 2,068            | 2,356,511 |
|                         |   |      | 18.898 |   |        | 8.976          |        |                | 2,189,084      |  | 3,128,516 | 2,408,140                                |        |                  |           |
|                         |   |      | 18.504 |   |        | 8.976          |        |                | 2,291,605      |  | 2,912,314 | 2,520,987                                |        |                  |           |
| 590                     | x | 960  | 18.504 | x | 37.795 | 18.898         | 14.961 | 14.213         | 11.260         | 1,400                                    | 2,959,099 | 3,840,790                                | M30    | 2,588            | 3,255,009 |
|                         |   |      | 19.685 |   |        | 11.260         |        |                | 3,097,161      |  | 3,936,405 | 3,406,877                                |        |                  |           |
|                         |   |      | 19.685 |   |        | 11.260         |        |                | 3,383,229      |  | 4,127,860 | 3,721,551                                |        |                  |           |
| 620                     | x | 970  | 19.685 | x | 38.189 | 20.472         | 11.969 | 11.220         | 9.606          | 1,400                                    | 2,509,186 | 3,061,473                                | M30    | 1,955            | 2,760,105 |
|                         |   |      | 20.472 |   |        | 9.606          |        |                | 2,734,880      |  | 3,208,383 | 3,008,368                                |        |                  |           |
|                         |   |      | 21.260 |   |        | 9.606          |        |                | 2,970,900      |  | 3,356,192 | 3,267,990                                |        |                  |           |
| 640                     | x | 1040 | 20.472 | x | 40.945 | 21.260         | 12.874 | 12.047         | 10.827         | 1,990                                    | 2,816,749 | 3,304,447                                | M33    | 2,795            | 3,097,760 |
|                         |   |      | 22.047 |   |        | 10.827         |        |                | 2,924,433      |  | 3,304,447 | 3,217,245                                |        |                  |           |
|                         |   |      | 20.866 |   |        | 10.827         |        |                | 3,033,593      |  | 3,304,447 | 3,336,730                                |        |                  |           |
| 660                     | x | 1040 | 20.866 | x | 40.945 | 21.654         | 16.457 | 15.591         | 12.205         | 2,580                                    | 4,246,882 | 4,893,228                                | M36    | 3,193            | 4,671,570 |
|                         |   |      | 22.441 |   |        | 12.205         |        |                | 4,600,100      |  | 5,102,456 | 5,060,110                                |        |                  |           |
|                         |   |      | 22.047 |   |        | 12.205         |        |                | 4,968,158      |  | 5,317,308 | 5,464,973                                |        |                  |           |
| 700                     | x | 1140 | 22.047 | x | 44.882 | 22.835         | 12.402 | 11.575         | 10.236         | 1,990                                    | 3,332,821 | 3,630,663                                | M33    | 3,235            | 3,666,104 |
|                         |   |      | 23.622 |   |        | 10.236         |        |                | 3,599,303      |  | 3,785,896 | 3,959,233                                |        |                  |           |
|                         |   |      | 23.622 |   |        | 10.236         |        |                | 3,878,101      |  | 3,943,154 | 4,265,911                                |        |                  |           |
| 750                     | x | 1150 | 23.622 | x | 45.276 | 24.409         | 13.386 | 16.850         | 14.173         | 2,580                                    | 5,656,363 | 5,751,061                                | M36    | 4,073            | 6,221,999 |
|                         |   |      | 25.197 |   |        | 14.173         |        |                | 6,069,134      |  | 5,971,763 | 6,676,048                                |        |                  |           |
|                         |   |      | 25.984 |   |        | 14.173         |        |                | 6,716,900      |  | 6,304,052 | 7,388,589                                |        |                  |           |
| 800                     | x | 1230 | 25.197 | x | 48.425 | 25.984         | 14.685 | 13.858         | 11.654         | 1,990                                    | 5,087,673 | 4,775,341                                | M33    | 4,176            | 5,596,440 |
|                         |   |      | 27.559 |   |        | 11.654         |        |                | 5,441,732      |  | 5,030,013 | 5,985,906                                |        |                  |           |
|                         |   |      | 27.559 |   |        | 11.654         |        |                | 6,188,514      |  | 5,393,350 | 6,807,365                                |        |                  |           |

- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team
- Hub with yield strength Rp0,2 ≥ 360 N/mm<sup>2</sup>

**Explanations to tables: Page 9**  
More sizes on request

Ordering example: RfN 4181

| Series   | d      | D      |
|----------|--------|--------|
| RfN 4181 | 10.236 | 16.929 |



RINGFEDER® Stainless steel products

**STAINLESS STEEL**



## Shrink Discs



**RfN 4061**  
Standard Series,  
stainless steel





## Characteristics

**Standard series** – High transmission values are possible and by varying the screw tightening torque the shrink disc can be adapted to the design specification.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

## Explanations to tables

### Basic dimensions when screws are not tightened

|                  |   |  |
|------------------|---|--|
| d                | = | Inner diameter   |
| D                | = | Outer diameter   |
| d <sub>w</sub>   | = | Solid shaft diameter   |
| d <sub>1</sub>   | = | Pitch circle diameter  |
| L                | = | Overall length   |
| L <sub>1</sub>   | = | Overall length without screws  |
| L <sub>2</sub>   | = | Thrust ring width  |
| L <sub>3</sub>   | = | Width of ring  |
| T <sub>A</sub>   | = | Max. tightened torque of the screws  |
| T                | = | Transmissible torque at given T <sub>A</sub>   |
| F <sub>ax</sub>  | = | Transmissible axial force  |
| G <sub>w</sub>   | = | Weight   |
| P                | = | Hub surface pressure   |
| σ <sub>v</sub>   | = | Equivalent stress in the hub   |
| n <sub>Sc</sub>  | = | Quantity of screws   |
| T <sub>max</sub> | = | Max. transmissible torque  |
| σ <sub>v</sub>   | = | Calculated combined stress in the hub extension (d/d <sub>w</sub> ) under consideration of the tangential, radial and torsional stresses following the equation: |

$$\sigma_v = \sqrt{\frac{1}{2} [(\sigma_x - \sigma_y)^2 + (\sigma_y - \sigma_z)^2 + (\sigma_z - \sigma_x)^2] + 3\tau^2}$$

Additional loads, e.g. tension, thrust or bending have to be taken into consideration accordingly.

### Function values

The functional characteristics are valid with the screw tightening torque listed in the tables and the following assumed conditions:

The locking screws are lubricated using MoS<sub>2</sub> (μ<sub>tot</sub> = 0,1).

The tapered cones are lubricated using MoS<sub>2</sub> (μ = 0,05).

The contact surfaces (d<sub>w</sub>) are in lightly oiled condition with coefficient of friction μ = 0,12.

The hub and shaft materials have a modulus of elasticity of 210,000 N/mm<sup>2</sup>. (Lower values result in increased values for T and F<sub>ax</sub> with reduced tangential stress.)

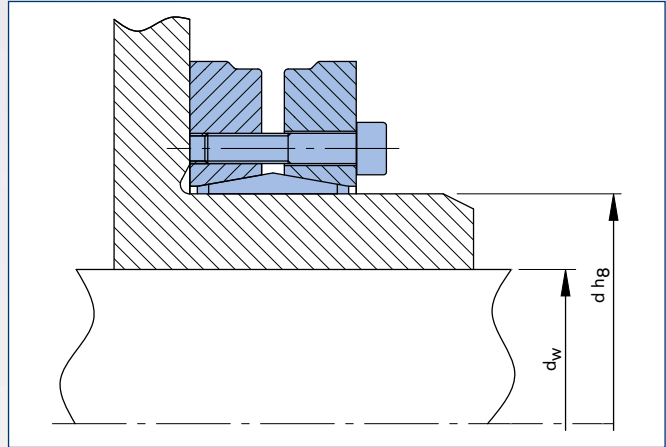
The maximum clearance S is being fully utilized.

The shaft being used is solid, for hollow shaft applications the functional values will change.

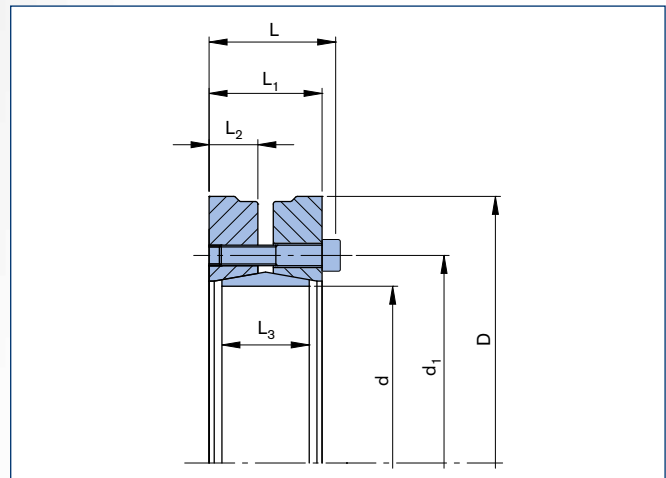
In cases where the assumed conditions do not apply then contact our Technical Department where we will be happy to assist you with your application.



**STAINLESS STEEL**



RINGFEDER® Shrink Disc RfN 4061 stainless steel · Location



RINGFEDER® Shrink Disc RfN 4061 stainless steel · Dimensions

| Shrink Discs dimensions |      |      |                |                |       |                |                |                | Transmissible torques or axial forces |        |                 |        |                | High-strength special screws ISO 4762 |        |     |                  |
|-------------------------|------|------|----------------|----------------|-------|----------------|----------------|----------------|---------------------------------------|--------|-----------------|--------|----------------|---------------------------------------|--------|-----|------------------|
| d                       | x    | D    | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | T <sub>A</sub>                        | T      | F <sub>ax</sub> | P      | σ <sub>v</sub> | Quantity                              | Thread | Gw  | T <sub>max</sub> |
| mm                      | inch | inch | inch           |                |       |                |                |                | ft-lbs                                | ft-lbs | lbs             | psi    | psi            |                                       |        | lbs | ft-lbs           |
| 14                      | x    | 37   | 0.551          | x              | 1.457 | 0.583          | 0.472          | 0.197          | 0.354                                 | 2      | 22              | 1,800  | 60,235         | 3                                     | M4     | 0.2 | 28               |
|                         |      |      |                |                |       |                |                |                |                                       |        | 27              | 1,800  | 68,799         |                                       |        |     | 34               |
|                         |      |      |                |                |       |                |                |                |                                       |        | 35              | 2,250  | 80,846         |                                       |        |     | 44               |
| 16                      | x    | 41   | 0.630          | x              | 1.614 | 0.728          | 0.591          | 0.246          | 0.472                                 | 3      | 52              | 3,375  | 73,879         | 4                                     | M5     | 0.2 | 66               |
|                         |      |      |                |                |       |                |                |                |                                       |        | 66              | 4,050  | 83,458         |                                       |        |     | 81               |
|                         |      |      |                |                |       |                |                |                |                                       |        | 81              | 4,500  | 112,342        |                                       |        |     | 96               |
| 18                      | x    | 44   | 0.709          | x              | 1.732 | 0.728          | 0.591          | 0.246          | 0.472                                 | 3      | 66              | 3,600  | 66,622         | 4                                     | M5     | 0.4 | 81               |
|                         |      |      |                |                |       |                |                |                |                                       |        | 74              | 4,050  | 75,911         |                                       |        |     | 96               |
|                         |      |      |                |                |       |                |                |                |                                       |        | 89              | 4,500  | 102,327        |                                       |        |     | 118              |
| 20                      | x    | 46   | 0.787          | x              | 1.811 | 0.827          | 0.689          | 0.276          | 0.472                                 | 3      | 81              | 4,500  | 67,057         | 5                                     | M5     | 0.4 | 103              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 103             | 4,949  | 72,137         |                                       |        |     | 125              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 118             | 5,399  | 84,184         |                                       |        |     | 148              |
| 21                      | x    | 50   | 0.827          | x              | 1.969 | 0.886          | 0.748          | 0.315          | 0.591                                 | 4      | 148             | 6,974  | 77,507         | 6                                     | M5     | 0.4 | 184              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 170             | 7,649  | 87,377         |                                       |        |     | 214              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 192             | 8,324  | 108,278        |                                       |        |     | 243              |
| 24                      | x    | 50   | 0.945          | x              | 1.969 | 0.886          | 0.748          | 0.315          | 0.591                                 | 4      | 177             | 7,199  | 71,847         | 6                                     | M5     | 0.4 | 221              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 199             | 7,874  | 80,410         |                                       |        |     | 251              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 221             | 8,549  | 98,553         |                                       |        |     | 288              |
| 30                      | x    | 60   | 1.181          | x              | 2.362 | 1.024          | 0.886          | 0.374          | 0.709                                 | 4      | 258             | 8,549  | 56,607         | 7                                     | M5     | 0.4 | 332              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 295             | 9,224  | 61,832         |                                       |        |     | 369              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 325             | 9,674  | 71,411         |                                       |        |     | 413              |
| 36                      | x    | 72   | 1.417          | x              | 2.835 | 1.083          | 0.925          | 0.394          | 0.709                                 | 9      | 435             | 11,924 | 56,607         | 5                                     | M6     | 1.1 | 538              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 509             | 13,049 | 63,574         |                                       |        |     | 634              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 516             | 13,049 | 77,798         |                                       |        |     | 656              |
| 38                      | x    | 72   | 1.496          | x              | 2.835 | 1.181          | 1.024          | 0.413          | 0.827                                 | 9      | 516             | 13,949 | 54,865         | 6                                     | M6     | 1.1 | 656              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 568             | 14,623 | 57,187         |                                       |        |     | 715              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 575             | 14,173 | 68,799         |                                       |        |     | 723              |
| 40                      | x    | 72   | 1.575          | x              | 2.835 | 1.122          | 0.965          | 0.413          | 0.748                                 | 9      | 531             | 13,724 | 54,429         | 6                                     | M6     | 1.1 | 664              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 538             | 13,274 | 65,315         |                                       |        |     | 671              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 583             | 13,949 | 66,767         |                                       |        |     | 730              |
| 44                      | x    | 80   | 1.732          | x              | 3.150 | 1.181          | 1.024          | 0.433          | 0.787                                 | 9      | 590             | 14,173 | 62,267         | 7                                     | M6     | 1.1 | 738              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 738             | 16,423 | 64,444         |                                       |        |     | 922              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 774             | 17,098 | 66,476         |                                       |        |     | 996              |
| 48                      | x    | 80   | 1.890          | x              | 3.150 | 1.181          | 1.024          | 0.433          | 0.866                                 | 9      | 664             | 14,623 | 53,849         | 7                                     | M6     | 1.3 | 848              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 774             | 16,198 | 55,155         |                                       |        |     | 996              |
|                         |      |      |                |                |       |                |                |                |                                       |        | 885             | 17,548 | 58,493         |                                       |        |     | 1,143            |
| 50                      | x    | 90   | 1.969          | x              | 3.543 | 1.240          | 1.083          | 0.472          | 0.886                                 | 9      | 996             | 20,023 | 60,671         | 9                                     | M6     | 2.0 | 1,217            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 1,106           | 21,598 | 62,848         |                                       |        |     | 1,401            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 1,254           | 23,173 | 67,783         |                                       |        |     | 1,586            |
| 55                      | x    | 100  | 2.165          | x              | 3.937 | 1.358          | 1.201          | 0.512          | 0.906                                 | 9      | 959             | 17,548 | 49,785         | 8                                     | M6     | 2.4 | 1,180            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 1,143           | 19,573 | 52,107         |                                       |        |     | 1,438            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 1,328           | 21,598 | 59,509         |                                       |        |     | 1,696            |
| 62                      | x    | 110  | 2.441          | x              | 4.331 | 1.358          | 1.201          | 0.512          | 0.906                                 | 9      | 1,770           | 28,347 | 59,074         | 12                                    | M6     | 2.9 | 2,213            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 1,955           | 29,922 | 60,816         |                                       |        |     | 2,434            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 2,065           | 30,597 | 69,960         |                                       |        |     | 2,581            |
| 68                      | x    | 115  | 2.677          | x              | 4.528 | 1.358          | 1.201          | 0.512          | 0.925                                 | 9      | 1,401           | 21,373 | 45,576         | 10                                    | M6     | 3.1 | 1,733            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 1,660           | 23,398 | 53,268         |                                       |        |     | 2,102            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 2,102           | 27,222 | 59,655         |                                       |        |     | 2,655            |
| 75                      | x    | 138  | 2.953          | x              | 5.433 | 1.488          | 1.280          | 0.551          | 0.984                                 | 22     | 1,955           | 27,222 | 54,720         | 7                                     | M8     | 5.1 | 2,434            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 2,434           | 31,272 | 55,445         |                                       |        |     | 3,061            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 2,987           | 35,546 | 60,380         |                                       |        |     | 3,762            |
| 80                      | x    | 145  | 3.150          | x              | 5.709 | 1.488          | 1.280          | 0.551          | 0.984                                 | 22     | 2,360           | 28,347 | 51,236         | 7                                     | M8     | 5.5 | 2,950            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 2,876           | 32,172 | 51,962         |                                       |        |     | 3,614            |
|                         |      |      |                |                |       |                |                |                |                                       |        | 3,393           | 35,996 | 56,897         |                                       |        |     | 4,241            |

- Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$
- Tolerances  
For shaft see table page 8
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Explanations to tables: Page 63

To continue see next page

Ordering example: RfN 4061

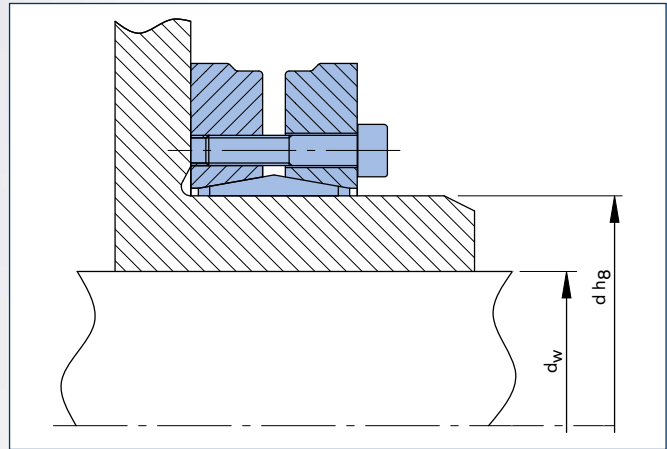
| Series   | d     | D     | Version |
|----------|-------|-------|---------|
| RfN 4061 | 2.953 | 5.433 | SST     |

SST = Stainless steel

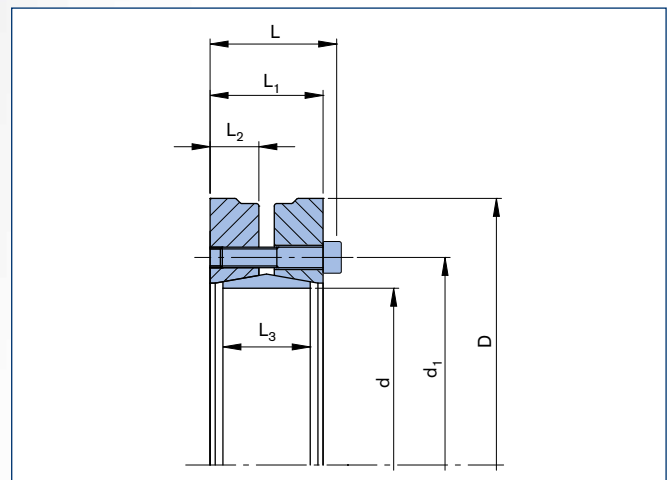




**STAINLESS STEEL**



RINGFEDER® Shrink Disc RfN 4061 stainless steel · Location



RINGFEDER® Shrink Disc RfN 4061 stainless steel · Dimensions



| Shrink Discs dimensions |   |      |       |   |        |                |                |       | Transmissible torques or axial forces |                |                |                |        | High-strength special screws ISO 4762 |        |                |          |        |     |                  |        |        |
|-------------------------|---|------|-------|---|--------|----------------|----------------|-------|---------------------------------------|----------------|----------------|----------------|--------|---------------------------------------|--------|----------------|----------|--------|-----|------------------|--------|--------|
| d                       | x | D    | d     | x | D      | d <sub>w</sub> | d <sub>1</sub> | L     | L <sub>1</sub>                        | L <sub>2</sub> | L <sub>3</sub> | T <sub>A</sub> | T      | F <sub>ax</sub>                       | P      | σ <sub>v</sub> | Quantity | Thread | Gw  | T <sub>max</sub> |        |        |
| mm                      |   | inch | inch  |   |        |                |                | inch  |                                       |                |                | ft-lbs         | ft-lbs | lbs                                   | psi    | psi            |          |        | lbs | ft-lbs           |        |        |
| 85                      | x | 155  | 3.346 | x | 6.102  | 2.362          | 4.488          | 1.803 | 1.594                                 | 0.630          | 1.181          | 22             | 3,577  | 42,520                                | 47,172 | 59,074         | 58,639   | 11     | M8  | 7.7              | 4,462  |        |
|                         |   |      |       |   |        | 2.559          | 4.488          |       |                                       |                |                |                | 4,278  | 47,695                                |        |                |          |        |     |                  | 61,977 | 5,347  |
|                         |   |      |       |   |        | 2.756          | 4.488          |       |                                       |                |                |                | 5,015  | 52,869                                |        |                |          |        |     |                  | 62,669 | 6,269  |
| 90                      | x | 155  | 3.543 | x | 6.102  | 2.559          | 4.488          | 1.752 | 1.535                                 | 0.669          | 1.181          | 22             | 3,540  | 39,146                                | 39,770 | 51,236         | 50,656   | 10     | M8  | 7.3              | 4,425  |        |
|                         |   |      |       |   |        | 2.756          | 4.488          |       |                                       |                |                |                | 4,462  | 43,870                                |        |                |          |        |     |                  | 51,672 | 5,569  |
|                         |   |      |       |   |        | 2.953          | 4.488          |       |                                       |                |                |                | 5,384  | 48,370                                |        |                |          |        |     |                  | 53,994 | 6,749  |
| 95                      | x | 170  | 3.740 | x | 6.693  | 2.559          | 5.000          | 2.067 | 1.858                                 | 0.748          | 1.339          | 22             | 3,946  | 43,870                                | 39,915 | 50,656         | 50,656   | 12     | M8  | 10.4             | 4,942  |        |
|                         |   |      |       |   |        | 2.756          | 5.000          |       |                                       |                |                |                | 4,979  | 48,820                                |        |                |          |        |     |                  | 50,656 | 6,232  |
|                         |   |      |       |   |        | 2.953          | 5.000          |       |                                       |                |                |                | 6,011  | 53,994                                |        |                |          |        |     |                  | 51,526 | 7,523  |
| 100                     | x | 170  | 3.937 | x | 6.693  | 2.756          | 5.000          | 2.067 | 1.858                                 | 0.748          | 1.339          | 22             | 5,126  | 45,445                                | 37,883 | 48,043         | 48,043   | 12     | M8  | 9.9              | 6,417  |        |
|                         |   |      |       |   |        | 2.953          | 5.000          |       |                                       |                |                |                | 5,605  | 50,170                                |        |                |          |        |     |                  | 48,043 | 7,007  |
|                         |   |      |       |   |        | 3.150          | 5.000          |       |                                       |                |                |                | 6,712  | 55,119                                |        |                |          |        |     |                  | 49,059 | 8,371  |
| 110                     | x | 185  | 4.331 | x | 7.283  | 2.953          | 5.709          | 2.339 | 2.087                                 | 0.906          | 1.654          | 44             | 6,011  | 58,269                                | 36,867 | 45,866         | 45,866   | 10     | M10 | 13.9             | 7,486  |        |
|                         |   |      |       |   |        | 3.150          | 5.709          |       |                                       |                |                |                | 7,449  | 64,118                                |        |                |          |        |     |                  | 51,817 | 9,293  |
|                         |   |      |       |   |        | 3.346          | 5.709          |       |                                       |                |                |                | 8,998  | 66,593                                |        |                |          |        |     |                  | 51,817 | 11,248 |
| 115                     | x | 185  | 4.528 | x | 7.283  | 3.150          | 5.709          | 2.457 | 2.205                                 | 0.906          | 1.654          | 44             | 7,007  | 60,069                                | 35,270 | 43,834         | 43,834   | 10     | M10 | 13.4             | 8,740  |        |
|                         |   |      |       |   |        | 3.543          | 5.709          |       |                                       |                |                |                | 8,925  | 67,943                                |        |                |          |        |     |                  | 49,640 | 11,137 |
|                         |   |      |       |   |        | 3.740          | 5.709          |       |                                       |                |                |                | 10,363 | 74,017                                |        |                |          |        |     |                  | 51,236 | 12,944 |
| 125                     | x | 215  | 4.921 | x | 8.465  | 3.346          | 6.299          | 2.378 | 2.126                                 | 0.906          | 1.654          | 44             | 8,150  | 67,493                                | 39,044 | 51,381         | 51,381   | 12     | M10 | 19.2             | 10,178 |        |
|                         |   |      |       |   |        | 3.543          | 6.299          |       |                                       |                |                |                | 9,662  | 73,567                                |        |                |          |        |     |                  | 51,091 | 12,059 |
|                         |   |      |       |   |        | 3.740          | 6.299          |       |                                       |                |                |                | 11,174 | 79,866                                |        |                |          |        |     |                  | 51,091 | 13,977 |
| 140                     | x | 230  | 5.512 | x | 9.055  | 3.740          | 6.890          | 2.677 | 2.382                                 | 1.024          | 1.811          | 74             | 11,137 | 82,116                                | 38,173 | 48,769         | 48,769   | 10     | M12 | 23.4             | 13,903 |        |
|                         |   |      |       |   |        | 3.937          | 6.890          |       |                                       |                |                |                | 12,944 | 88,866                                |        |                |          |        |     |                  | 48,624 | 16,153 |
|                         |   |      |       |   |        | 4.134          | 6.890          |       |                                       |                |                |                | 14,751 | 95,390                                |        |                |          |        |     |                  | 48,624 | 18,439 |
| 165                     | x | 290  | 6.496 | x | 11.417 | 4.528          | 8.268          | 3.189 | 2.795                                 | 1.220          | 2.205          | 184            | 23,159 | 135,211                               | 40,641 | 48,478         | 48,478   | 8      | M16 | 47.8             | 28,986 |        |
|                         |   |      |       |   |        | 4.724          | 8.268          |       |                                       |                |                |                | 26,183 | 143,310                               |        |                |          |        |     |                  | 48,624 | 32,748 |
|                         |   |      |       |   |        | 4.921          | 8.268          |       |                                       |                |                |                | 29,060 | 149,384                               |        |                |          |        |     |                  | 50,510 | 36,325 |
| 185                     | x | 330  | 7.283 | x | 12.992 | 5.315          | 9.291          | 3.795 | 3.402                                 | 1.504          | 2.795          | 184            | 38,722 | 176,831                               | 35,706 | 44,560         | 44,560   | 10     | M16 | 79.4             | 48,384 |        |
|                         |   |      |       |   |        | 5.512          | 9.291          |       |                                       |                |                |                | 42,299 | 186,280                               |        |                |          |        |     |                  | 44,995 | 52,846 |
|                         |   |      |       |   |        | 5.709          | 9.291          |       |                                       |                |                |                | 46,024 | 195,729                               |        |                |          |        |     |                  | 45,576 | 57,530 |
| 195                     | x | 350  | 7.677 | x | 13.780 | 5.512          | 9.685          | 3.780 | 3.386                                 | 1.504          | 2.795          | 184            | 48,642 | 212,152                               | 40,641 | 48,188         | 48,188   | 12     | M16 | 88.2             | 60,812 |        |
|                         |   |      |       |   |        | 5.906          | 9.685          |       |                                       |                |                |                | 57,235 | 232,850                               |        |                |          |        |     |                  | 49,059 | 71,544 |
|                         |   |      |       |   |        | 6.102          | 9.685          |       |                                       |                |                |                | 61,771 | 243,199                               |        |                |          |        |     |                  | 50,075 | 77,223 |
| 200                     | x | 350  | 7.874 | x | 13.780 | 5.906          | 9.685          | 3.780 | 3.386                                 | 1.504          | 2.795          | 184            | 55,317 | 224,976                               | 39,625 | 47,317         | 47,317   | 12     | M16 | 86.0             | 69,146 |        |
|                         |   |      |       |   |        | 6.102          | 9.685          |       |                                       |                |                |                | 59,743 | 235,100                               |        |                |          |        |     |                  | 47,898 | 74,641 |
|                         |   |      |       |   |        | 6.299          | 9.685          |       |                                       |                |                |                | 64,315 | 245,449                               |        |                |          |        |     |                  | 48,914 | 80,394 |

- Surface finishes For shaft  $R_a \leq 3,2 \mu\text{m}$
- Tolerances For shaft see table page 8
- When using a hollow shaft instead of a solid shaft please contact our Engineering-Team

Explanations to tables: Page 63 [More sizes on request](#)

Ordering example: RfN 4061

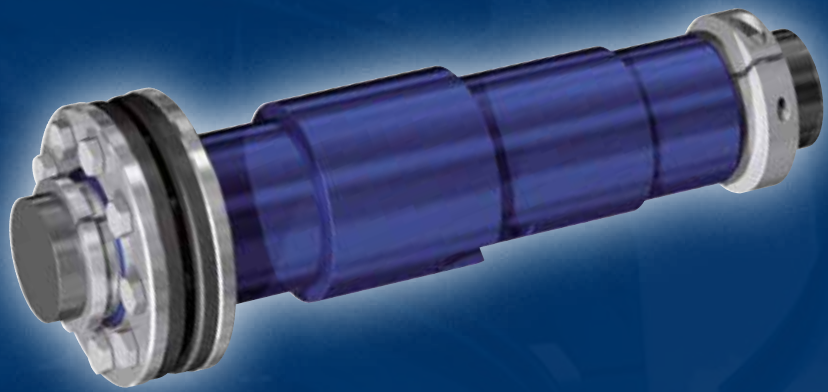
| Series   | d     | D     | Version |
|----------|-------|-------|---------|
| RfN 4061 | 3.740 | 6.693 | SST     |

SST = Stainless steel

**RINGFEDER® Smart-Lock**







**Smart-Lock-Set RfN 4001**

## Smart-Lock-Set: the connection of the future

For the perfect hollow shaft connection, the solid shaft is always manufactured to a high degree of precision, normally with a dimensional tolerance of h6/H6. This close tolerance, high-finish shaft is inserted into the equally close tolerance hollow bore of the gearbox and secured in place by the compressive force of the shrink disc. Only by maintaining the strict dimensional tolerances the full torque capacity can be reliability achieved. Smart-Lock puts an end to all the precision machining involved and guarantees an optimum connection even with clearances up to 0.2 mm/0.007 in.

The flexibility offered by using interchangeable bushings between the solid shaft and the hollow shaft of the gearbox makes the Smart-Lock-Set an invaluable aid to the marketplace. Thanks to the availability of shaft adapter bushings with various inside diameters. One gearbox can be used with a range of shaft sizes without a change out to the shaft or shrink disc. The ease of selecting and using the Smart-Lock-Set is child's play.

The Smart-Lock-Set is an efficient design that makes economic sense to the user. Not only can it compensate larger dimensional tolerances (up to 0.2 mm/0.007 in.), it also offers significant cost savings by requiring a minimal number of spare parts needed in inventory. Furthermore, inexpensive, cold drawn, commercial available shafting up to quality grade h11 can be utilized without additional machining. The export market also benefits from using Smart-Lock-Set; adapter bushings in inch size standards are readily available from local inventories for countries that don't use metric measurements. Expensive specials and large spare part inventories are a thing of the past.

## Characteristics

Flexible, cost-saving, easy to maintain: Smart-Lock-Set is the new Shaft/Hollow Shaft connection from RINGFEDER®. Cylindrical bushings allow the attachment of hollow shaft gear reducers and other hollow shaft connections to any metric and inch size solid shaft diameter.

### ▪ **Reliable:**

Tension-optimized and virtually indestructible shrink discs guarantee the highest possible degree of safety.

### ▪ **Uncompromising:**

Cylindrical bushings for a wide range of shaft diameters provide the perfect connection.

### ▪ **Economical:**

The Smart-Lock-Set requires minimal labor at installation and reduces spare part inventory costs up to 70%.

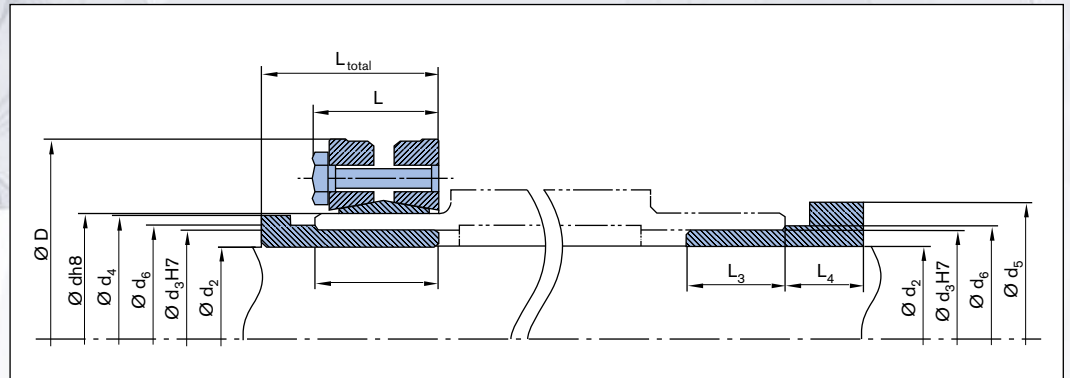
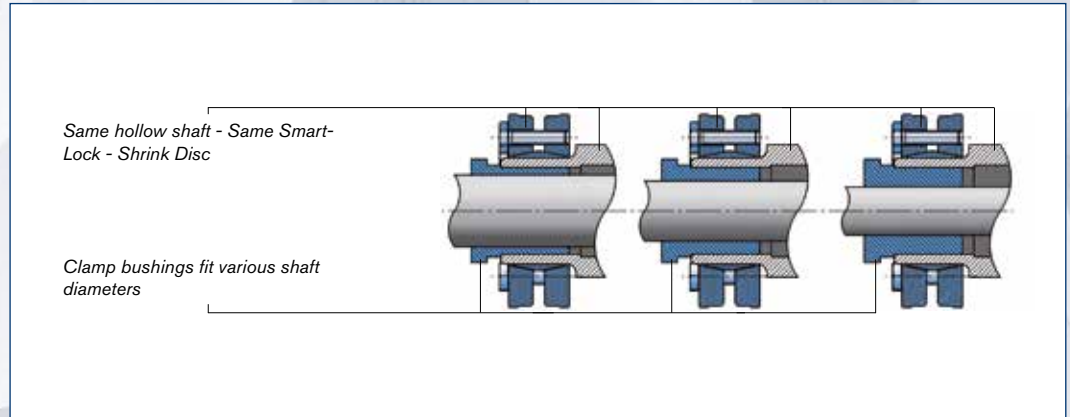
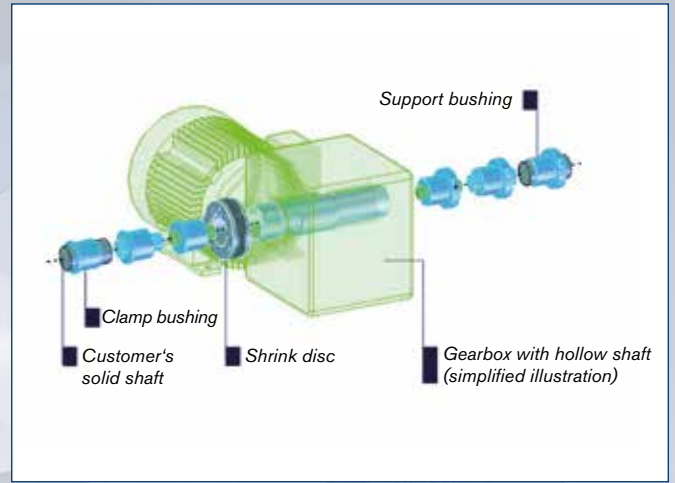
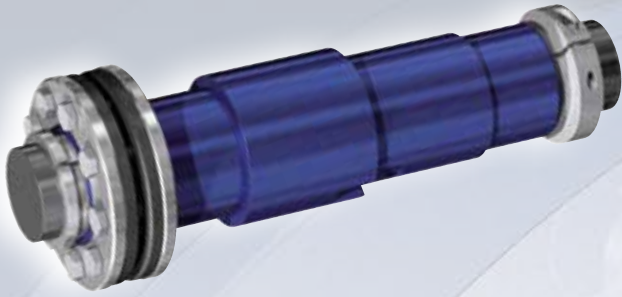
## Technical details of the Smart-Lock-Set

### For gearbox manufacturers:

- Eight standard sizes of adaptor bushings are available for hollow shaft outside diameters from 44 to 90 mm.
- Commercially available solid shafting without any machining can be used. Diameters from 25 to 70 mm are possible.
- The range of transmissible torque is 580 Nm–5600 Nm.

### For users of gearboxes:

- The torque to be transmitted is the criterion used to select the shaft diameter.
- The optimum shaft size for an individual gearbox can be used in connection with the Smart-Lock-Set.
- It is possible to standardize on a certain gearbox size for a range of shaft diameters. The results are lower costs for maintenance and spare parts.



RINGFEDER® Smart-Lock RfN 4001 · Dimensions



| Dimensions |                 |                 |                 |                 |                 |       |                    |       |                |                | Max. allowable clearance | Technical data       |             |        |                    |        |      |
|------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------|-------|----------------|----------------|--------------------------|----------------------|-------------|--------|--------------------|--------|------|
| Ød         | Ød <sub>2</sub> | Ød <sub>3</sub> | Ød <sub>4</sub> | Ød <sub>5</sub> | Ød <sub>6</sub> | ØD    | L <sub>total</sub> | L     | L <sub>3</sub> | L <sub>4</sub> |                          | Transmissible torque | Axial force | Screws | Tightening torque  | Weight |      |
| mm/in.     | in.             | in.             | in.             | in.             | in.             | in.   | in.                | in.   | in.            | in.            | in.                      | lb-in.               | lb-ft.      | lbs    | ISO 4014/4017-10.9 | lbs-ft | lbs  |
| 44         | 1<br>1 1/8      |                 |                 |                 |                 |       |                    |       |                |                |                          | 5.222                | 435         |        |                    |        |      |
| 1.732      | 1 3/16          | 1.417           | 1.693           | 1.949           | 1.496           | 3.150 | 1.614              | 1.220 | 1.181          | 0.709          | 0.005                    | 5.841                | 487         | 10.566 | M6                 | 8.85   | 1.65 |
|            | 1 1/4           |                 |                 |                 |                 |       |                    |       |                |                |                          | 6.019                | 502         |        |                    |        |      |
|            | 1 3/16          |                 |                 |                 |                 |       |                    |       |                |                |                          | 6.196                | 516         |        |                    |        |      |
| 50         | 1 1/4           | 1.654           | 1.929           | 2.343           | 1.732           | 3.543 | 1.772              | 1.339 | 1.339          | 0.709          | 0.006                    | 7.612                | 634         | 12.814 | M6                 | 8.85   | 2.20 |
| 1.969      | 1 3/8           |                 |                 |                 |                 |       |                    |       |                |                |                          | 8.054                | 671         |        |                    |        |      |
|            | 1 7/16          |                 |                 |                 |                 |       |                    |       |                |                |                          | 8.851                | 738         |        |                    |        |      |
|            | 1 3/16          |                 |                 |                 |                 |       |                    |       |                |                |                          | 9.205                | 767         |        |                    |        |      |
| 55         | 1 1/4           | 1.890           | 2.126           | 2.539           | 1.969           | 3.937 | 1.811              | 1.378 | 1.378          | 0.709          | 0.006                    | 7.966                | 664         | 13.489 | M6                 | 8.85   | 2.87 |
| 2.165      | 1 3/8           |                 |                 |                 |                 |       |                    |       |                |                |                          | 8.408                | 701         |        |                    |        |      |
|            | 1 7/16          |                 |                 |                 |                 |       |                    |       |                |                |                          | 9.293                | 774         |        |                    |        |      |
|            | 1 1/2           |                 |                 |                 |                 |       |                    |       |                |                |                          | 9.647                | 804         |        |                    |        |      |
|            | 1 3/8           |                 |                 |                 |                 |       |                    |       |                |                |                          | 10.090               | 841         |        |                    |        |      |
| 62         | 1 7/16          | 2.047           | 2.362           | 2.736           | 2.126           | 4.331 | 1.850              | 1.417 | 1.417          | 0.109          | 0.006                    | 14.869               | 1.239       | 21.806 | M6                 | 8.85   | 3.31 |
| 2.441      | 1 1/2           |                 |                 |                 |                 |       |                    |       |                |                |                          | 15.622               | 1.302       |        |                    |        |      |
|            | 1 5/8           |                 |                 |                 |                 |       |                    |       |                |                |                          | 16.285               | 1.357       |        |                    |        |      |
|            | 1 3/4           |                 |                 |                 |                 |       |                    |       |                |                |                          | 17.613               | 1.468       |        |                    |        |      |
|            | 1 5/8           |                 |                 |                 |                 |       |                    |       |                |                |                          | 18.941               | 1.578       |        |                    |        |      |
| 68         | 1 3/4           | 2.362           | 2.638           | 2.933           | 2.441           | 4.528 | 1.890              | 1.457 | 1.457          | 0.709          | 0.006                    | 17.879               | 1.490       | 22.031 | M6                 | 8.85   | 3.86 |
| 2.441      | 1 15/16         |                 |                 |                 |                 |       |                    |       |                |                |                          | 19.295               | 1.608       |        |                    |        |      |
|            | 2               |                 |                 |                 |                 |       |                    |       |                |                |                          | 21.357               | 1.780       |        |                    |        |      |
|            | 1 15/16         |                 |                 |                 |                 |       |                    |       |                |                |                          | 19.560               | 1.630       | 20.008 |                    |        |      |
| 75         | 2               | 2.559           | 2.874           | 3.130           | 2.638           | 5.433 | 1.969              | 1.535 | 1.535          | 0.709          | 0.006                    | 16.374               | 1.364       | 16.861 | M8                 | 22.13  | 5.95 |
| 2.953      | 1 15/16         |                 |                 |                 |                 |       |                    |       |                |                |                          | 16.462               | 1.372       |        |                    |        |      |
|            | 2               |                 |                 |                 |                 |       |                    |       |                |                |                          | 31.155               | 2.596       | 32.148 |                    |        |      |
| 80         | 2               | 2.756           | 3.071           | 3.327           | 2.835           | 5.709 | 1.969              | 1.535 | 1.535          | 0.709          | 0.007                    | 29.384               | 2.449       | 31.923 | M8                 | 22.13  | 6.39 |
| 3.150      | 2 3/8           |                 |                 |                 |                 |       |                    |       |                |                |                          | 34.872               | 2.906       |        |                    |        |      |
|            | 2 7/16          |                 |                 |                 |                 |       |                    |       |                |                |                          | 35.846               | 2.987       |        |                    |        |      |
| 90         | 2 3/8           | 2.953           | 3.465           | 3.524           | 3.031           | 6.102 | 2.244              | 1.811 | 1.811          | 0.709          | 0.007                    | 42.041               | 3.503       | 35.520 | M8                 | 22.13  | 8.60 |
| 3.543      | 2 7/16          |                 |                 |                 |                 |       |                    |       |                |                |                          | 43.192               | 3.599       |        |                    |        |      |
|            | 2 3/4           |                 |                 |                 |                 |       |                    |       |                |                |                          | 48.679               | 4.057       |        |                    |        |      |

Larger dimensions available upon request. Technical data subject to change without notice. The Smart-Lock-Set is supplied with a Shrink Disc RfN 4061. The bushings are only suitable for one-time use.

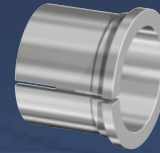
Ordering example: RfN 4001

| Series   | d     | d <sub>2</sub> |
|----------|-------|----------------|
| RfN 4001 | 1.969 | 1 1/4          |

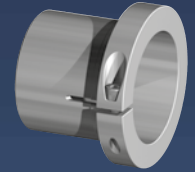
■ When using a hollow shaft instead of a solid shaft please contact our Engineering-Team



Shrink Disc



CB · Clamp bushing



SB · Support bushing

Smart-Lock-Set-Part numbers for inch size spare parts

| Shrink Disc     | Ød | Ød <sub>2</sub> | Ød <sub>3</sub> | Clamp bushing   | Support bushing |
|-----------------|----|-----------------|-----------------|-----------------|-----------------|
|                 | mm | mm              | mm              | Inch sizes      | Inch sizes      |
| RfN 4061-44x80  | 44 | 1.0             | 36              | 44 CB 1.0/36    | 44 SB 1.0/36    |
|                 |    | 1.125           |                 | 44 CB 1.125/36  | 44 SB 1.125/36  |
|                 |    | 1.1875          |                 | 44 CB 1.1875/36 | 44 SB 1.1875/36 |
|                 |    | 1.25            |                 | 44 CB 1.25/36   | 44 SB 1.25/36   |
| RfN 4061-50x90  | 50 | 1.1875          | 42              | 50 CB 1.875/42  | 50 SB 1.875/42  |
|                 |    | 1.25            |                 | 50 CB 1.25/42   | 50 SB 1.25/42   |
|                 |    | 1.375           |                 | 50 CB 1.375/42  | 50 SB 1.375/42  |
|                 |    | 1.4375          |                 | 50 CB 1.4375/42 | 50 SB 1.4375/42 |
| RfN 4061-55x100 | 55 | 1.1875          | 48              | 55 CB 1.875/48  | 55 SB 1.875/48  |
|                 |    | 1.25            |                 | 55 CB 1.25/4    | 55 SB 1.875/48  |
|                 |    | 1.375           |                 | 55 CB 1.375/48  | 55 SB 1.875/48  |
|                 |    | 1.4375          |                 | 55 CB 1.4375/48 | 55 SB 1.875/48  |
| RfN 4061-62x110 | 62 | 1.5             | 52              | 55 CB 1.5/48    | 55 SB 1.5/48    |
|                 |    | 1.375           |                 | 62 CB 1.375/52  | 62 SB 1.375/52  |
|                 |    | 1.4375          |                 | 62 CB 1.4375/52 | 62 SB 1.4375/52 |
|                 |    | 1.5             |                 | 62 CB 1.5/52    | 62 SB 1.5/52    |
|                 |    | 1.625           |                 | 62 CB 1.625/52  | 62 SB 1.625/52  |
| RfN 4061-68x115 | 68 | 1.75            | 60              | 62 CB 1.75/52   | 62 SB 1.75/52   |
|                 |    | 1.9375          |                 | 62 CB 1.9375/52 | 62 SB 1.9375/52 |
|                 |    | 1.625           |                 | 68 CB 1.625/60  | 68 SB 1.625/60  |
|                 |    | 1.75            |                 | 68 CB 1.75/60   | 68 SB 1.75/60   |
| RfN 4061-75x138 | 75 | 1.9375          | 65              | 68 CB 1.9375/60 | 68 SB 1.9375/60 |
|                 |    | 2.0             |                 | 68 CB 2.0/60    | 68 SB 2.0/60    |
|                 |    | 1.9375          |                 | 75 CB 1.9375/65 | 75 SB 1.9375/65 |
| RfN 4061-80x145 | 80 | 2.0             | 70              | 75 CB 2.0/65    | 75 SB 2.0/65    |
|                 |    | 2.375           |                 | 80 CB 1.9375/70 | 80 SB 1.9375/70 |
|                 |    | 2.4375          |                 | 80 CB 2.0/70    | 80 SB 2.0/70    |
| RfN 4061-90x155 | 90 | 2.375           | 75              | 80 CB 2.375/70  | 80 SB 2.375/70  |
|                 |    | 2.4375          |                 | 80 CB 2.4375/70 | 80 SB 2.4375/70 |
|                 |    | 2.375           |                 | 90 CB 2.375/75  | 90 SB 2.375/75  |
|                 |    | 2.75            |                 | 90 CB 2.4375/75 | 90 SB 2.4375/75 |
|                 |    |                 |                 | 90 CB 2.75/75   | 90 SB 2.75/75   |

\* Ordering examples metric sizes. All spare parts can be ordered individually.

Ordering example Shrink Disc: RfN 4061

| Shrink Disc        |
|--------------------|
| RfN 4061 – 44 x 80 |

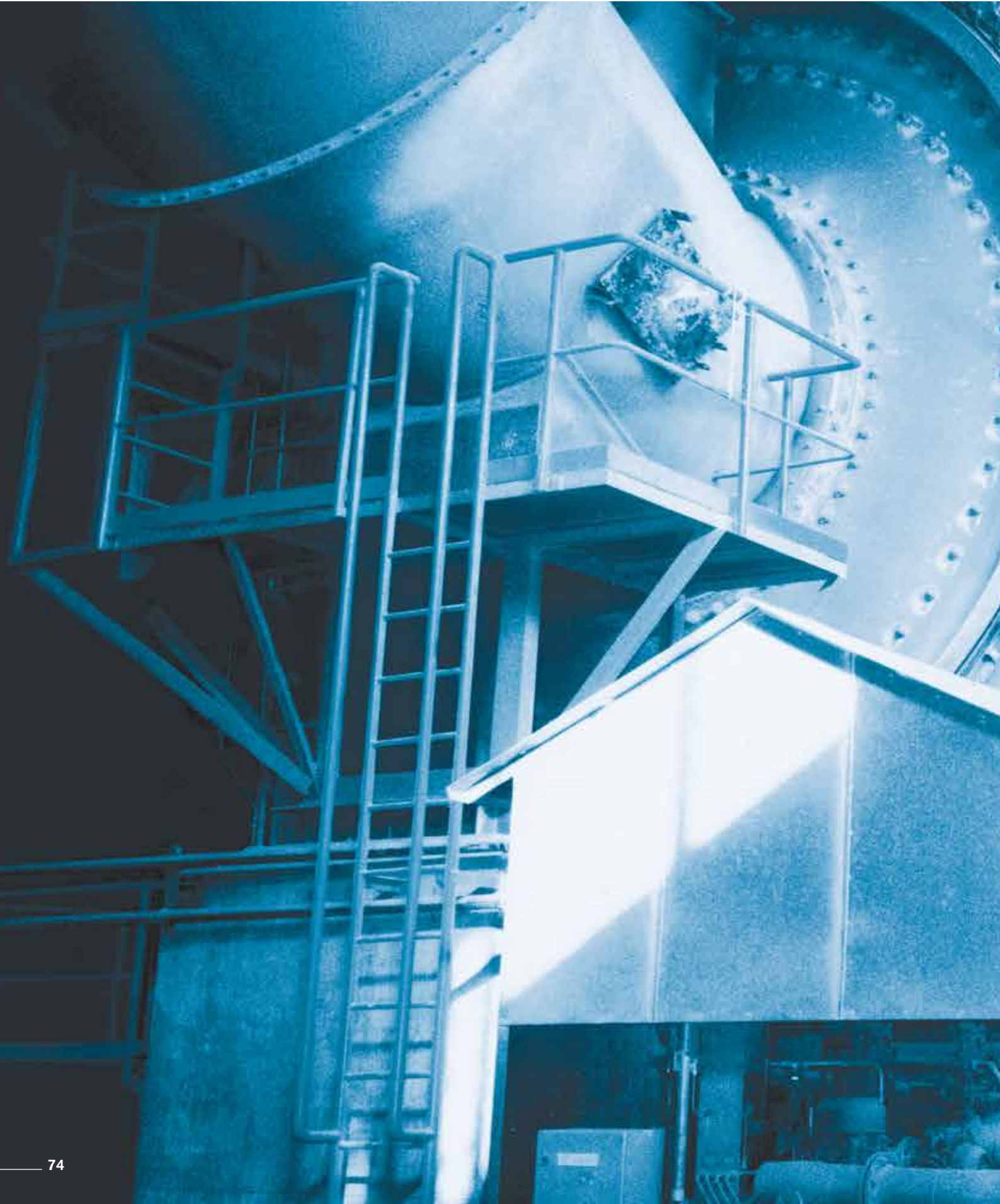
Ordering examples adapter bushings: RfN 4001

| Series   | d  | Version    |
|----------|----|------------|
| RfN 4001 | 80 | CB 55 x 70 |
| RfN 4001 | 55 | SB 35 x 48 |

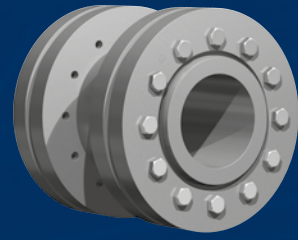
CB = Clamp bushing

SB = Support bushing

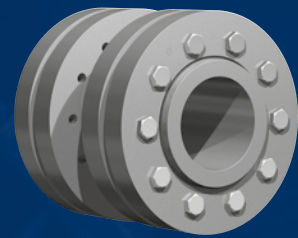
# RINGFEDER® Shaft Couplings







**RfN 5071**



**RfN 5091**

## Characteristics

Shrink discs are the modern method for creating a mechanical shrink fit. The shrink disc consists of either one or two thrust rings with tapered bores and a mating tapered inner ring. By tightening locking screws the thrust rings are drawn together compressing the inner ring and applying pressure to the outside of the hub clamping it to the shaft. Being positioned around the hub there is only one interface transmitting the loads giving the shrink disc method distinct advantages such as offering the possibility of very concentric and well balanced connections that are suited to high speed applications. Traditional shrink fits require complicated calculations, close machining tolerances and fine surface finishes, they also need considerable effort with mounting and removal. The shrink disc connection has none of these disadvantages and is better than any of the other usual connection methods with regard to fatigue strength under alternating torsional stress.

**Unlimited range of applications** – RINGFEDER® Shrink Disc connections are suitable for securing all types of hubs onto shafts and axles. Replacing traditional shrink fits, keys and polygon connections, splined shafts etc. So cog wheels and sprockets, levers, lifters, cam discs, pulleys or brake discs, balance wheels, couplings, slip on gear mechanisms, flanges, pulley wheels and rotors can be attached absolutely reliable.



## Explanations to tables

### Basic dimensions when screws are not tightened

|             |   |                                     |
|-------------|---|-------------------------------------|
| $d$         | = | Inner diameter                      |
| $D$         | = | Outer diameter                      |
| $d_w$       | = | Solid shaft diameter                |
| $L_{total}$ | = | Total length (several parts)        |
| $L$         | = | Overall length                      |
| $T_A$       | = | Max. tightened torque of the screws |
| $T$         | = | Transmissible torque at given $T_A$ |
| $F_{ax}$    | = | Transmissible axial force           |

Additional loads, e.g. tension, thrust or bending have to be taken into consideration accordingly.

### Function values

The functional characteristics are valid with the screw tightening torque listed in the tables and the following assumed conditions:

The locking screws are lubricated using MoS<sub>2</sub> ( $\mu_{tot} = 0,1$ ).

The tapered cones are lubricated using MoS<sub>2</sub> ( $\mu = 0,05$ ).

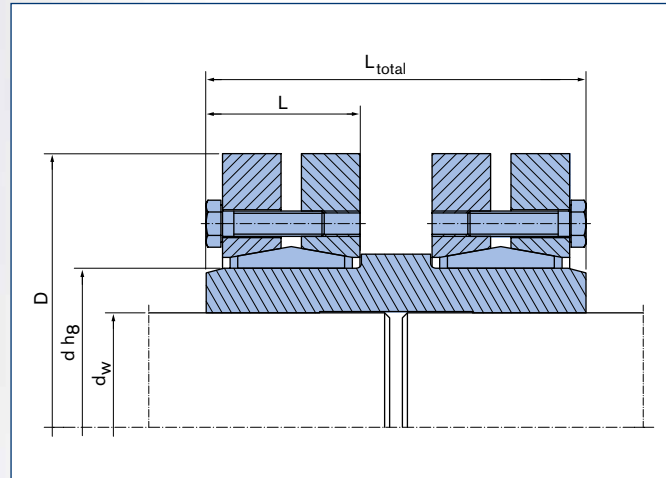
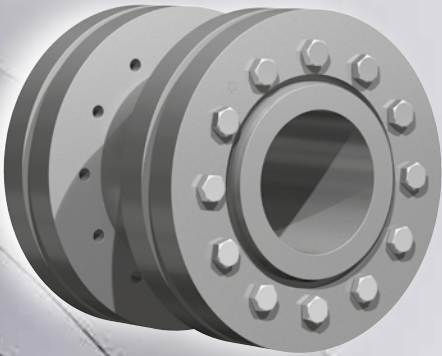
The contact surfaces ( $d_w$ ) are in lightly oiled condition with coefficient of friction  $\mu = 0,12$ .

The hub and shaft materials have a modulus of elasticity of 210,000 N/mm<sup>2</sup>. (Lower values result in increased values for  $T$  and  $F_{ax}$  with reduced tangential stress.)

The maximum clearance  $S$  is being fully utilized.

The shaft being used is solid, for hollow shaft applications the functional values will change.

In cases where the assumed conditions do not apply then contact our Technical Department where we will be happy to assist you with your application.



RINGFEDER® Shaft Coupling RfN 5071 · Dimensions

### Explanations

- $T_A$  = Max. tightened torque of the screws
- $T$  = Transmissible torque at given  $T_A$
- $F_{ax}$  = Transmissible axial force

Clearances considered for the calculation of the function values:

| $d_w$      |            | ISO    | max.        |
|------------|------------|--------|-------------|
| above inch | up to inch |        | Clearance S |
|            |            |        | inch        |
| 0.236      | 0.394      | H6/j6  | 0.0005      |
| 0.394      | 0.709      |        | 0.0006      |
| 0.709      | 1.181      | H6/h6  | 0.0007      |
| 1.181      | 1.969      | H6/g6  | 0.0013      |
| 1.969      | 3.150      | H7/g6  | 0.0019      |
| 3.150      | 4.724      |        | 0.0027      |
| 4.724      | 7.087      |        | 0.0031      |
| 7.087      | 9.843      |        | 0.0035      |
| 9.843      | 12.402     |        | 0.0040      |
| 12.402     | 15.748     |        | 0.0044      |
| 15.748     | 19.685     |        | 0.0048      |
| 19.685     | 24.803     |        | 0.0054      |
| 24.803     | 31.496     | 0.0061 |             |

### Surface

For shaft diameter  $d_w$ : Peak-to-valley height  $R_a \leq 125$  RMS.

| Shaft couplings dimensions |   |     |       |   |        |                         |                    | Transmissible torques<br>or axial forces |                | Locking Screws<br>DIN EN ISO<br>4014 / 4017 - 10.9 |                               |        |  |
|----------------------------|---|-----|-------|---|--------|-------------------------|--------------------|--|----------------|--|-------------------------------|--------|--|
| d                          | x | D   | d     | x | D      | d <sub>w</sub>          | L <sub>total</sub> | L  | T <sub>A</sub> | T  | F <sub>ax</sub>               | Thread |  |
| mm                         |   |     | inch  |   |        | inch                    | inch               | inch                                     | ft-lbs         | ft-lbs   | lbs                           |        |  |
| 20                         | x | 46  | 0.787 | x | 1.811  | 0.591<br>0.630<br>0.669 | 1.772              | 0.827                                    | 3              | 81<br>103<br>118                                   | 4,496<br>4,946<br>5,395       | M5     |  |
| 24                         | x | 50  | 0.945 | x | 1.969  | 0.748<br>0.787<br>0.827 | 1.969              | 0.906                                    | 3.7            | 177<br>199<br>221                                  | 7,194<br>7,868<br>8,543       | M5     | For all shaft couplings intermediate values for T and F <sub>ax</sub> can be calculated dependent on T <sub>A</sub> and the clearance S. In addition, stepped shaft couplings are available for different shaft diameters. |
| 30                         | x | 52  | 1.181 | x | 2.047  | 0.945<br>0.984<br>1.024 | 2.165              | 1.024                                    | 3.7            | 258<br>295<br>325                                  | 8,543<br>9,217<br>9,667       | M5     |  |
| 36                         | x | 72  | 1.417 | x | 2.835  | 1.102<br>1.181<br>1.220 | 2.559              | 1.102                                    | 9              | 435<br>509<br>516                                  | 11,915<br>13,039              | M6     | If required, we like to be of assistance.  |
| 40                         | x | 72  | 1.575 | x | 2.835  | 1.181<br>1.220<br>1.260 | 2.559              | 1.142                                    | 9              | 531<br>538<br>583                                  | 13,713<br>13,264<br>13,938    | M6     |  |
| 44                         | x | 80  | 1.732 | x | 3.150  | 1.260<br>1.378<br>1.417 | 2.756              | 1.181                                    | 9              | 590<br>738<br>774                                  | 14,163<br>16,411<br>17,085    | M6     |  |
| 50                         | x | 90  | 1.969 | x | 3.543  | 1.496<br>1.575<br>1.654 | 3.150              | 1.260                                    | 9              | 996<br>1,106<br>1,254                              | 20,008<br>21,582<br>23,155    | M6     |  |
| 55                         | x | 100 | 2.165 | x | 3.937  | 1.654<br>1.772<br>1.890 | 3.346              | 1.378                                    | 9              | 959<br>1,143<br>1,328                              | 17,535<br>19,558<br>21,582    | M6     |  |
| 62                         | x | 110 | 2.441 | x | 4.331  | 1.890<br>1.969<br>2.047 | 3.543              | 1.378                                    | 9              | 1,770<br>1,955<br>2,065                            | 28,326<br>29,900<br>30,574    | M6     |  |
| 68                         | x | 115 | 2.677 | x | 4.528  | 1.969<br>2.165<br>2.362 | 3.937              | 1.378                                    | 9              | 1,401<br>1,660<br>2,102                            | 21,357<br>23,380<br>27,202    | M6     |  |
| 75                         | x | 138 | 2.953 | x | 5.433  | 2.165<br>2.362<br>2.559 | 4.724              | 1.496                                    | 22             | 1,955<br>2,434<br>2,987                            | 27,202<br>31,248<br>35,520    | M8     |  |
| 80                         | x | 145 | 3.150 | x | 5.709  | 2.362<br>2.559<br>2.756 | 5.118              | 1.496                                    | 22             | 2,360<br>2,876<br>3,393                            | 28,326<br>32,148<br>35,969    | M8     |  |
| 90                         | x | 155 | 3.543 | x | 6.102  | 2.559<br>2.756<br>2.953 | 5.512              | 1.772                                    | 22             | 3,540<br>4,462<br>5,414                            | 39,117<br>43,838<br>48,334    | M8     |  |
| 100                        | x | 170 | 3.937 | x | 6.693  | 2.756<br>2.953<br>3.150 | 6.299              | 2.087                                    | 22             | 5,126<br>5,605<br>6,712                            | 45,411<br>50,132<br>55,078    | M8     |  |
| 110                        | x | 185 | 4.331 | x | 7.283  | 2.953<br>3.150<br>3.346 | 7.087              | 2.362                                    | 45             | 6,011<br>7,449<br>8,998                            | 58,226<br>64,071<br>66,543    | M10    |  |
| 125                        | x | 215 | 4.921 | x | 8.465  | 3.346<br>3.740<br>3.740 | 7.874              | 2.402                                    | 45             | 8,150<br>9,662<br>11,174                           | 67,443<br>73,513<br>79,807    | M10    |  |
| 140                        | x | 230 | 5.512 | x | 9.055  | 3.740<br>3.937<br>4.134 | 8.268              | 2.677                                    | 75             | 11,137<br>12,944<br>14,751                         | 82,055<br>88,800<br>95,319    | M12    |  |
| 165                        | x | 290 | 6.496 | x | 11.417 | 4.528<br>4.724<br>4.921 | 9.449              | 3.189                                    | 185            | 23,159<br>26,183<br>29,060                         | 135,110<br>143,203<br>149,273 | M16    |  |
| 185                        | x | 330 | 7.283 | x | 12.992 | 5.315<br>5.512<br>5.709 | 10.433             | 3.819                                    | 185            | 38,722<br>42,299<br>46,024                         | 176,700<br>186,142<br>195,584 | M16    |  |

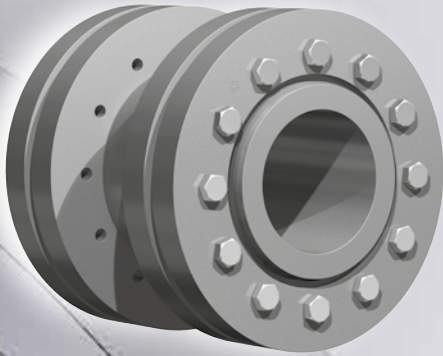
■ Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$

■ Tolerances  
For shaft see table page 78

Explanations to tables: Page 77

To continue see next page

■ When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team



## Characteristics

**Standard series** – this is the most popular shrink disc. High transmission values are possible and by varying the screw tightening torque the shrink disc can be adapted to the design specification.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

| Shaft couplings dimensions |   |      |        |      |        |                            |                    | Transmissible torques<br>or axial forces |                | Locking Screws<br>DIN EN ISO<br>4014 / 4017 - 10.9 |                                     |        |  |
|----------------------------|---|------|--------|------|--------|----------------------------|--------------------|--|----------------|--|-------------------------------------|--------|--|
| d                          | x | D    | d      | x    | D      | d <sub>w</sub>             | L <sub>total</sub> | L  | T <sub>A</sub> | T  | F <sub>ax</sub>                     | Thread |  |
| mm                         |   | inch |        | inch | inch   | inch                       | inch               | inch                                     | ft-lbs         | ft-lbs   | lbs                                 |        |  |
| 200                        | x | 350  | 7.874  | x    | 13.780 | 5.906<br>6.102<br>6.299    | 11.417             | 3.780                                    | 185            | 55,317<br>59,743<br>64,315                         | 224,809<br>234,925<br>245,267       | M16    |  |
| 220                        | x | 370  | 8.661  | x    | 14.567 | 6.299<br>6.496<br>6.693    | 12.205             | 4.488                                    | 185            | 70,068<br>75,231<br>81,132                         | 267,523<br>278,538<br>290,003       | M16    |  |
| 240                        | x | 405  | 9.449  | x    | 15.945 | 6.693<br>7.087<br>7.480    | 13.780             | 4.803                                    | 361            | 88,507<br>101,784<br>115,060                       | 329,120<br>354,299<br>376,555       | M20    | For all shaft couplings intermediate values for T and F <sub>ax</sub> can be calculated dependent on T <sub>A</sub> and the clearance S. In addition, stepped shaft couplings are available for different shaft diameters. |
| 260                        | x | 430  | 10.236 | x    | 16.929 | 7.480<br>7.874<br>8.268    | 15.354             | 5.236                                    | 361            | 120,960<br>135,711<br>151,200                      | 395,664<br>422,641<br>451,866       | M20    |  |
| 280                        | x | 460  | 11.024 | x    | 18.110 | 8.268<br>8.661<br>9.055    | 16.929             | 5.787                                    | 361            | 160,051<br>179,965<br>199,142                      | 469,851<br>499,076<br>528,301       | M20    | If required, we like to be of assistance.  |
| 300                        | x | 485  | 11.811 | x    | 19.094 | 9.055<br>9.449<br>9.646    | 17.520             | 6.102                                    | 361            | 202,830<br>217,581<br>232,332                      | 546,510<br>577,084<br>592,596       | M20    |  |
| 320                        | x | 520  | 12.598 | x    | 20.472 | 9.646<br>9.449<br>9.843    | 18.110             | 6.102                                    | 361            | 230,119<br>250,771<br>275,848                      | 595,069<br>626,318<br>651,946       | M20    |  |
| 340                        | x | 570  | 13.386 | x    | 22.441 | 10.236<br>10.630<br>10.630 | 18.898             | 6.654                                    | 361            | 287,649<br>311,620<br>339,279                      | 701,179<br>730,404<br>764,350       | M20    |  |
| 350                        | x | 580  | 13.780 | x    | 22.835 | 10.630<br>11.024<br>11.220 | 19.291             | 6.890                                    | 361            | 326,002<br>354,030<br>368,781                      | 736,474<br>771,095<br>786,831       | M20    |  |
| 360                        | x | 590  | 14.173 | x    | 23.228 | 11.024<br>11.417<br>11.614 | 19.685             | 6.890                                    | 361            | 341,491<br>370,256<br>385,007                      | 744,117<br>778,064<br>794,924       | M20    |  |
| 380                        | x | 645  | 14.961 | x    | 25.394 | 11.417<br>11.811<br>12.205 | 20.866             | 7.205                                    | 620            | 418,198<br>449,913<br>485,316                      | 879,003<br>917,220<br>954,988       | M24    |  |
| 390                        | x | 660  | 15.354 | x    | 25.984 | 11.811<br>12.205<br>12.598 | 21.260             | 7.205                                    | 620            | 460,239<br>494,904<br>529,570                      | 935,205<br>973,423<br>1,008,043     | M24    |  |
| 400                        | x | 680  | 15.748 | x    | 26.772 | 12.402<br>12.598<br>12.992 | 21.260             | 7.205                                    | 620            | 494,167<br>512,606<br>548,746                      | 957,686<br>976,795<br>1,011,640     | M24    |  |
| 420                        | x | 690  | 16.535 | x    | 27.165 | 12.992<br>13.386<br>13.780 | 22.835             | 7.992                                    | 620            | 575,298<br>619,552<br>663,806                      | 1,090,323<br>1,133,037<br>1,173,502 | M24    |  |
| 440                        | x | 750  | 17.323 | x    | 29.528 | 13.386<br>13.780<br>14.173 | 23.622             | 8.661                                    | 620            | 594,475<br>634,303<br>676,344                      | 1,065,594<br>1,103,812<br>1,144,277 | M24    |  |
| 460                        | x | 770  | 18.110 | x    | 30.315 | 14.173<br>14.567<br>14.961 | 24.409             | 8.661                                    | 620            | 737,562<br>789,191<br>840,821                      | 1,274,666<br>1,317,380<br>1,360,094 | M24    |  |
| 480                        | x | 800  | 18.898 | x    | 31.496 | 14.961<br>15.354<br>15.748 | 25.394             | 9.055                                    | 620            | 862,948<br>914,577<br>966,206                      | 1,382,575<br>1,427,537<br>1,472,498 | M24    |  |
| 500                        | x | 850  | 19.685 | x    | 33.465 | 15.748<br>16.142<br>16.535 | 26.378             | 9.055                                    | 920            | 967,681<br>1,017,836<br>1,073,153                  | 1,474,746<br>1,512,964<br>1,557,926 | M27    |  |

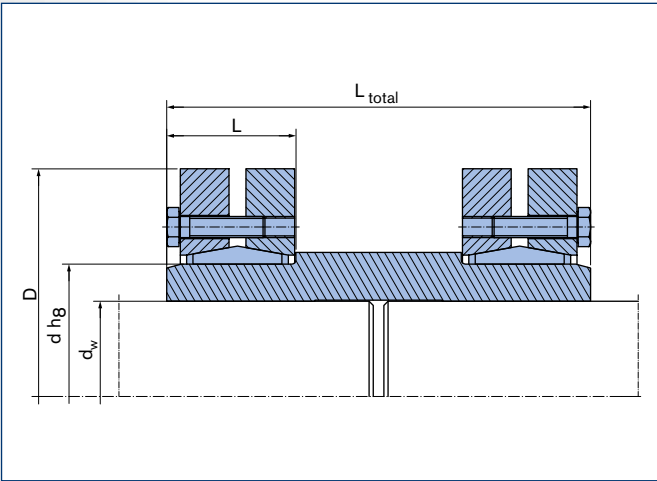
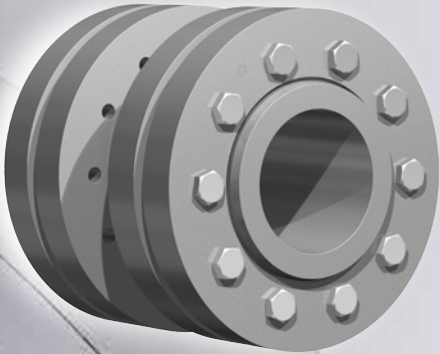
- Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm
- Tolerances  
For shaft see table page 78
- When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Explanations to tables: Page 77

Ordering example: RfN 5071

| Series   | d      | d <sub>w</sub> |
|----------|--------|----------------|
| RfN 5071 | 15.354 | 25.984         |





RINGFEDER® Shaft Coupling RfN 5091 · Dimensions

| Shaft couplings dimensions |                 |                |                    |       | Transmissible torques or axial forces |         |                 | Locking Screws<br>DIN EN ISO<br>4014 / 4017 - 10.9 |  |
|----------------------------|-----------------|----------------|--------------------|-------|---------------------------------------|---------|-----------------|--|--|
| d x D                      | d x D           | d <sub>w</sub> | L <sub>total</sub> | L     | T <sub>A</sub>                        | T       | F <sub>ax</sub> | Thread   |  |
| mm                         | inch            | inch           | inch               | inch  | ft-lbs                                | ft-lbs  | lbs             |  |  |
| 125 x 215                  | 4.921 x 8.465   | 3.346          | 7.874              | 2.874 | 75                                    | 11,063  | 79,807          | M12  | For all shaft couplings intermediate values for T and F <sub>ax</sub> can be calculated dependent on T <sub>A</sub> and the clearance S. In addition, stepped shaft couplings are available for different shaft diameters. |
|                            |                 | 3.543          |                    |       |                                       | 12,907  | 87,226          |  |  |
|                            |                 | 3.740          |                    |       |                                       | 14,751  | 94,869          |  |  |
| 140 x 300                  | 5.512 x 11.811  | 3.543          | 8.661              | 4.173 | 185                                   | 27,069  | 97,342          | M16  |  |
|                            |                 | 3.937          |                    |       |                                       | 34,665  | 105,435         |  |  |
|                            |                 | 4.331          |                    |       |                                       | 43,295  | 112,404         |  |  |
| 155 x 263                  | 6.102 x 10.354  | 4.134          | 9.055              | 3.622 | 75                                    | 21,316  | 123,645         | M12  |  |
|                            |                 | 4.331          |                    |       |                                       | 23,897  | 132,637         |  |  |
|                            |                 | 4.528          |                    |       |                                       | 26,700  | 141,630         |  |  |
| 165 x 290                  | 6.496 x 11.417  | 4.528          | 9.449              | 3.858 | 185                                   | 30,240  | 166,359         | M16  |  |
|                            |                 | 4.724          |                    |       |                                       | 33,928  | 176,475         |  |  |
|                            |                 | 4.921          |                    |       |                                       | 37,394  | 183,219         |  |  |
| 175 x 300                  | 6.890 x 11.811  | 4.921          | 10.433             | 4.882 | 185                                   | 53,695  | 261,902         | M16  |  |
|                            |                 | 5.118          |                    |       |                                       | 58,931  | 276,515         |  |  |
|                            |                 | 5.315          |                    |       |                                       | 64,389  | 291,128         |  |  |
| 185 x 330                  | 7.283 x 12.992  | 5.315          | 10.433             | 4.803 | 185                                   | 53,104  | 247,290         | M16  |  |
|                            |                 | 5.512          |                    |       |                                       | 57,530  | 258,530         |  |  |
|                            |                 | 5.709          |                    |       |                                       | 63,430  | 269,771         |  |  |
| 195 x 350                  | 7.677 x 13.780  | 5.512          | 11.024             | 4.803 | 185                                   | 55,317  | 241,670         | M16  |  |
|                            |                 | 5.906          |                    |       |                                       | 64,905  | 267,073         |  |  |
|                            |                 | 6.102          |                    |       |                                       | 70,806  | 277,639         |  |  |
| 200 x 350                  | 7.874 x 13.780  | 5.906          | 11.417             | 4.803 | 185                                   | 68,224  | 276,515         | M16  |  |
|                            |                 | 6.102          |                    |       |                                       | 73,756  | 290,003         |  |  |
|                            |                 | 6.299          |                    |       |                                       | 78,919  | 302,368         |  |  |
| 220 x 370                  | 8.661 x 14.567  | 6.299          | 12.205             | 5.669 | 185                                   | 93,670  | 357,446         | M16  |  |
|                            |                 | 6.496          |                    |       |                                       | 100,308 | 370,935         |  |  |
|                            |                 | 6.693          |                    |       |                                       | 108,053 | 386,671         |  |  |
| 240 x 405                  | 9.449 x 15.945  | 6.693          | 13.780             | 6.181 | 361                                   | 114,322 | 409,152         | M20  |  |
|                            |                 | 7.087          |                    |       |                                       | 129,811 | 440,625         |  |  |
|                            |                 | 7.480          |                    |       |                                       | 146,037 | 467,603         |  |  |
| 260 x 430                  | 10.236 x 16.929 | 7.480          | 15.354             | 6.811 | 361                                   | 157,101 | 508,068         | M20  |  |
|                            |                 | 7.874          |                    |       |                                       | 177,015 | 544,038         |  |  |
|                            |                 | 8.268          |                    |       |                                       | 197,667 | 580,007         |  |  |
| 280 x 460                  | 11.024 x 18.110 | 8.268          | 16.929             | 7.283 | 361                                   | 210,205 | 615,976         | M20  |  |
|                            |                 | 8.661          |                    |       |                                       | 236,020 | 654,194         |  |  |
|                            |                 | 9.055          |                    |       |                                       | 261,835 | 694,660         |  |  |
| 300 x 485                  | 11.811 x 19.094 | 9.055          | 17.520             | 7.441 | 361                                   | 251,509 | 665,434         | M20  |  |
|                            |                 | 9.449          |                    |       |                                       | 277,323 | 703,652         |  |  |
|                            |                 | 9.646          |                    |       |                                       | 290,599 | 722,761         |  |  |
| 320 x 520                  | 12.598 x 20.472 | 9.449          | 18.110             | 7.756 | 361                                   | 278,798 | 708,148         | M20  |  |
|                            |                 | 9.843          |                    |       |                                       | 306,088 | 747,490         |  |  |
|                            |                 | 10.236         |                    |       |                                       | 332,641 | 780,087         |  |  |
| 340 x 570                  | 13.386 x 22.441 | 9.843          | 18.898             | 8.465 | 620                                   | 361,037 | 879,003         | M24  |  |
|                            |                 | 10.236         |                    |       |                                       | 390,908 | 916,096         |  |  |
|                            |                 | 10.630         |                    |       |                                       | 426,311 | 961,058         |  |  |
| 350 x 580                  | 13.780 x 22.835 | 10.630         | 19.291             | 8.465 | 620                                   | 410,085 | 926,662         | M24  |  |
|                            |                 | 11.024         |                    |       |                                       | 445,488 | 971,174         |  |  |
|                            |                 | 11.220         |                    |       |                                       | 463,927 | 992,531         |  |  |
| 360 x 590                  | 14.173 x 23.228 | 11.024         | 19.685             | 8.622 | 620                                   | 451,388 | 982,415         | M24  |  |
|                            |                 | 11.417         |                    |       |                                       | 489,004 | 1,027,377       |  |  |
|                            |                 | 11.614         |                    |       |                                       | 508,180 | 1,049,858       |  |  |
| 380 x 645                  | 14.961 x 25.394 | 11.417         | 20.866             | 8.622 | 620                                   | 455,813 | 959,934         | M24  |  |
|                            |                 | 11.811         |                    |       |                                       | 492,691 | 1,001,524       |  |  |
|                            |                 | 12.205         |                    |       |                                       | 530,307 | 1,044,237       |  |  |

■ Surface finishes  
For shaft R<sub>a</sub> ≤ 3,2 μm

■ Tolerances  
For shaft see table page 78

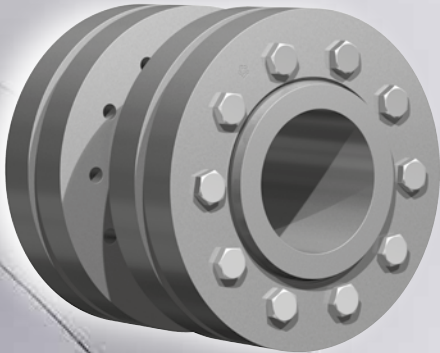
Explanations to tables: Page 77

To continue see next page

■ When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Ordering example: RfN 5091

| Series   | d     | d <sub>w</sub> |
|----------|-------|----------------|
| RfN 5091 | 9.449 | 15.945         |



## Characteristics

**Heavy design** – for highest transmission values.

**Slitted inner ring** – low forces and pressures on hub and shaft.

**Compensation of small tolerance errors** – please contact our engineers.

**Maximum reliability** – suitable for static, dynamic and impact loads.

**Simplified manufacture** – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

**Easy replacement** – the RINGFEDER® Shrink Disc is free from any form fit.

**Easy mounting** – no steps, keyways, splines are required, therefore hubs can be located and locked at any point or angle on the shaft. RINGFEDER® Shrink Discs use standard screws tightened with standard tools. No additional machining or fitting work is required.

**Easy removal** – after loosening the locking screws, the RINGFEDER® Shrink Disc will self release and the hub will move freely on the shaft.

**Low susceptibility to contamination** – when the locking screws are tightened the functional contact surfaces are pressed firmly together and prevent the ingress of dirt and moisture.

| Shaft couplings dimensions |                 |                |                    |        | Transmissible torques or axial forces |           |                 | Locking Screws<br>DIN EN ISO<br>4014 / 4017 - 10.9 |   |
|----------------------------|-----------------|----------------|--------------------|--------|---------------------------------------|-----------|-----------------|--|---|
| d x D                      | d x D           | d <sub>w</sub> | L <sub>total</sub> | L      | T <sub>A</sub>                        | T         | F <sub>ax</sub> | Thread   |   |
| mm                         | inch            | inch           | inch               | inch   | ft-lbs                                | ft-lbs    | lbs             |  |   |
| 390 x 660                  | 15.354 x 25.984 | 11.811         | 21.260             | 8.937  | 620                                   | 522,194   | 1,059,974       | M24  | For all shaft couplings intermediate values for T and F <sub>ax</sub> can be calculated dependent on T <sub>A</sub> and the clearance S. In addition, stepped shaft couplings are available for different shaft diameters.<br><br>If required, we like to be of assistance. |
|                            |                 | 12.205         |                    |        |                                       | 562,022   | 1,103,812       |  |   |
|                            |                 | 12.598         |                    |        |                                       | 600,744   | 1,144,277       |  |   |
| 400 x 680                  | 15.748 x 26.772 | 12.402         | 21.260             | 8.937  | 620                                   | 564,235   | 1,091,447       |  |   |
|                            |                 | 12.598         |                    |        |                                       | 581,199   | 1,107,633       |  |   |
|                            |                 | 12.992         |                    |        |                                       | 623,240   | 1,152,146       |  |   |
| 420 x 690                  | 16.535 x 27.165 | 12.992         | 22.835             | 9.961  | 620                                   | 736,825   | 1,361,218       |  |   |
|                            |                 | 13.386         |                    |        |                                       | 787,716   | 1,412,924       |  |   |
|                            |                 | 13.780         |                    |        |                                       | 840,821   | 1,464,630       |  |   |
| 440 x 750                  | 17.323 x 29.528 | 13.386         | 23.622             | 10.591 | 920                                   | 780,341   | 1,400,559       |  |   |
|                            |                 | 13.780         |                    |        |                                       | 833,445   | 1,452,265       |  |   |
|                            |                 | 14.173         |                    |        |                                       | 888,025   | 1,503,972       |  |   |
| 460 x 770                  | 18.110 x 30.315 | 14.173         | 24.409             | 10.591 | 920                                   | 973,582   | 1,672,578       |  |   |
|                            |                 | 14.567         |                    |        |                                       | 104,7338  | 1,731,029       |  |   |
|                            |                 | 14.961         |                    |        |                                       | 1,106,343 | 1,787,231       |  |   |
| 480 x 800                  | 18.898 x 31.496 | 14.961         | 25.394             | 11.457 | 920                                   | 1,132,158 | 1,816,456       |  |   |
|                            |                 | 15.354         |                    |        |                                       | 1,199,276 | 1,874,906       |  |   |
|                            |                 | 15.748         |                    |        |                                       | 1,268,607 | 1,933,357       |  |   |
| 500 x 850                  | 19.685 x 33.465 | 15.748         | 26.378             | 11.457 | 920                                   | 1,290,734 | 1,967,078       |  |   |
|                            |                 | 16.142         |                    |        |                                       | 1,357,114 | 2,018,784       |  |   |
|                            |                 | 16.535         |                    |        |                                       | 1,430,870 | 2,079,482       |  |   |

■ Surface finishes  
For shaft  $R_a \leq 3,2 \mu\text{m}$

■ Tolerances  
For shaft see table page 78

Explanations to tables: Page 77

■ When using a hollow shaft instead of a solid shaft  
please contact our Engineering-Team

Ordering example: RfN 5091

| Series   | d      | d <sub>w</sub> |
|----------|--------|----------------|
| RfN 5091 | 14.173 | 11.024         |



# Flange Couplings RINGFEDER® RfN 5571



RINGFEDER® Flange Couplings are the better alternative to press fits. Neither additional components such as keyways or wedges, nor a warming of the outer section and cooling of the inner section are required. The flange coupling is simply pushed onto the shaft

and fastened so it is frictionally engaged by tightening the screws in the shrink disc. They transfer torque and bending moments as well as axial and radial forces.

## ***Advantages***

- *Strong connection with high torque capacity*
- *Easy assembly and disassembly*
- *Backlash-free shaft hub connection*
- *High level of true running accuracy*

## ***Applications***

- *Mining companies*
- *Plant manufacturers*
- *Gearbox manufacturers*

## Designs

### Version A Shrink Discs with hexagon head screws

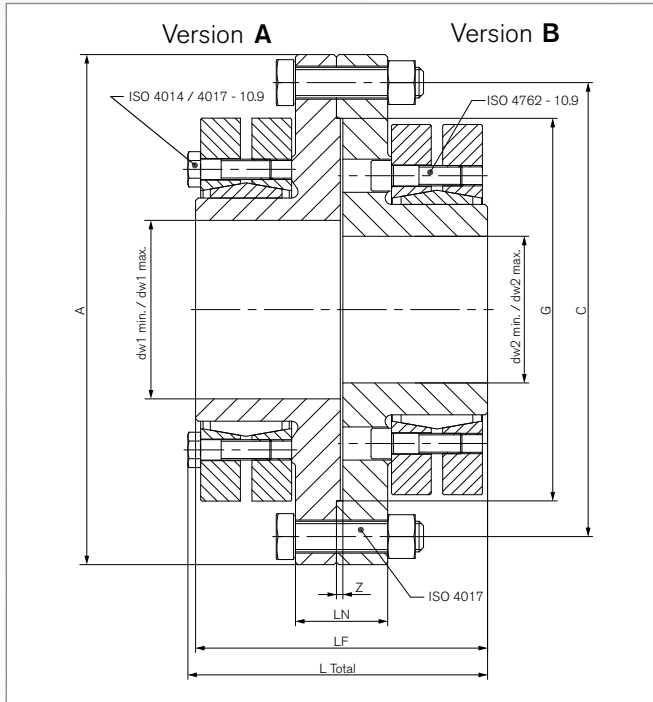


### Version B Shrink Discs with hexagon socket head cap screws





# Flange Couplings RINGFEDER® RfN 5571



## Explanations to tables

Basic dimensions when screws are not tightened

- dw<sub>1</sub>** = Solid shaft diameter
- dw<sub>2</sub>** = Solid shaft diameter
- A** = Max. outer diameter
- C** = Pitch circle diameter
- G** = Center diameter
- LF** = Total length of the mated flanges (HM+HF)
- LN** = Flange width
- L<sub>total</sub>** = Total length (several parts)
- Z** = Depth of center value
- T** = Transmissible torque at given T<sub>A</sub>
- n<sub>Sc3</sub>** = Quantity of screws at flange
- D<sub>G3</sub>** = Thread of the flange screws
- T<sub>A3</sub>** = Tightening torque of the flange bolts (D<sub>G3</sub>)
- n<sub>SD</sub>** = Quantity of screws (Shrink disc)
- D<sub>SD</sub>** = Diameter of screws (Shrink disc)
- T<sub>A</sub>** = Max. tightened torque of the clamping screws
- Gw** = Weight

# Flange Couplings RINGFEDER® RfN 5571

| Size | Flange couplings dimensions |                 |        |        |        |                |                |                    |       | Transmissible torques<br>T | Flange screws<br>ISO 4017 |                 |                 | Shrink disc screws<br>Version A: ISO 4014/4017 - 10.9<br>Version B: ISO 4762 - 10.9 |                 |                 |                | Gw  |
|------|-----------------------------|-----------------|--------|--------|--------|----------------|----------------|--------------------|-------|----------------------------|---------------------------|-----------------|-----------------|---|-----------------|-----------------|----------------|-----|
|      | d <sub>w1</sub>             | d <sub>w2</sub> | A      | C      | G      | L <sub>F</sub> | L <sub>N</sub> | L <sub>total</sub> | Z     |                            | n <sub>Sc3</sub>          | D <sub>G3</sub> | T <sub>A3</sub> | Size  | n <sub>SD</sub> | D <sub>SD</sub> | T <sub>A</sub> |     |
|      | inch                        | inch            | inch   | inch   | inch   | inch           | inch           | inch               | inch  |                            | ft-lbs                    | pcs.            | mm              | ft-lbs  | inch            | pcs.            | mm             |     |
| 075  | 2.756                       | 2.756           |        |        |        |                |                |                    |       | 5,148                      |                           |                 |                 | 100x170   | 12              | M 8             | 22             |     |
|      | 2.953                       | 2.953           | 9.449  | 8.268  | 6.693  | 5.354          | 1.732          | 5.787              | 0.157 | 5,606                      | 6                         | M16             | 155             | 100x170   | 12              | M 8             | 22             | 57  |
|      | 3.150                       | 3.150           |        |        |        |                |                |                    |       | 6,712                      |                           |                 |                 | 100x170   | 12              | M 8             | 22             |     |
| 090  | 2.756                       | 2.756           |        |        |        |                |                |                    |       | 5,148                      |                           |                 |                 | 100x170   | 12              | M 8             | 22             |     |
|      | 2.953                       | 2.953           |        |        |        |                |                |                    |       | 5,606                      |                           |                 |                 | 100x170   | 12              | M 8             | 22             |     |
|      | 3.150                       | 3.150           | 12.008 | 10.433 | 8.465  | 6.299          | 1.890          | 6.654              | 0.197 | 6,712                      | 6                         | M20             | 310             | 100x170   | 12              | M 8             | 22             | 106 |
|      | >3.150                      | >3.150          |        |        |        |                |                |                    |       | 6,823                      |                           |                 |                 | 125x215   | 12              | M 10            | 44             |     |
|      | 3.543                       | 3.543           |        |        |        |                |                |                    |       | 9,662                      |                           |                 |                 | 125x215   | 12              | M 10            | 44             |     |
|      | 3.937                       | 3.937           |        |        |        |                |                |                    |       | 13,166                     |                           |                 |                 | 125x215   | 12              | M 10            | 44             |     |
| 100  | 3.543                       | 3.543           |        |        |        |                |                |                    |       | 10,105                     |                           |                 |                 | 130x215   | 12              | M 10            | 44             |     |
|      | 3.740                       | 3.740           |        |        |        |                |                |                    |       | 11,654                     |                           |                 |                 | 130x215   | 12              | M 10            | 44             |     |
|      | 3.937                       | 3.937           | 13.386 | 11.260 | 9.055  | 7.480          | 2.205          | 7.756              | 0.197 | 13,424                     | 5                         | M24             | 531             | 130x215   | 12              | M 10            | 44             | 139 |
|      | >3.937                      | >3.937          |        |        |        |                |                |                    |       | 12,944                     |                           |                 |                 | 140x230   | 10              | M 12            | 74             |     |
|      | 4.331                       | 4.331           |        |        |        |                |                |                    |       | 16,890                     |                           |                 |                 | 140x230   | 10              | M 12            | 74             |     |
|      | 4.528                       | 4.528           |        |        |        |                |                |                    |       | 19,051                     |                           |                 |                 | 140x230   | 10              | M 12            | 74             |     |
| 120  | 3.740                       | 3.740           |        |        |        |                |                |                    |       | 11,137                     |                           |                 |                 | 140x230   | 10              | M 12            | 74             |     |
|      | 4.134                       | 4.134           |        |        |        |                |                |                    |       | 14,751                     |                           |                 |                 | 140x230   | 10              | M 12            | 74             |     |
|      | 4.528                       | 4.528           | 15.748 | 14.016 | 11.811 | 8.976          | 2.835          | 9.449              | 0.197 | 19,066                     | 8                         | M24             | 531             | 140x230   | 10              | M 12            | 74             | 265 |
|      | >4.528                      | >4.528          |        |        |        |                |                |                    |       | 23,197                     |                           |                 |                 | 165x290   | 8               | M 16            | 184            |     |
|      | 4.921                       | 4.921           |        |        |        |                |                |                    |       | 29,060                     |                           |                 |                 | 165x290   | 8               | M 16            | 184            |     |
|      | 5.315                       | 5.315           |        |        |        |                |                |                    |       | 36,473                     |                           |                 |                 | 165x290   | 8               | M 16            | 184            |     |
| 130  | 4.528                       | 4.528           |        |        |        |                |                |                    |       | 23,197                     |                           |                 |                 | 165x290   | 8               | M 16            | 184            |     |
|      | 4.921                       | 4.921           |        |        |        |                |                |                    |       | 29,060                     |                           |                 |                 | 165x290   | 8               | M 16            | 184            |     |
|      | 5.315                       | 5.315           | 15.748 | 14.016 | 11.811 | 8.976          | 2.835          | 9.449              | 0.197 | 36,473                     | 8                         | M24             | 531             | 165x290   | 8               | M 16            | 184            | 265 |
|      | >5.315                      | >5.315          |        |        |        |                |                |                    |       | 33,559                     |                           |                 |                 | 175x300   | 8               | M 16            | 184            |     |
|      | 5.413                       | 5.413           |        |        |        |                |                |                    |       | 35,071                     |                           |                 |                 | 175x300   | 8               | M 16            | 184            |     |
|      | 5.512                       | 5.512           |        |        |        |                |                |                    |       | 36,657                     |                           |                 |                 | 175x300   | 8               | M 16            | 184            |     |
| 150  | 4.921                       | 4.921           |        |        |        |                |                |                    |       | 27,032                     |                           |                 |                 | 175x300   | 8               | M 16            | 184            |     |
|      | 5.118                       | 5.118           |        |        |        |                |                |                    |       | 30,646                     |                           |                 |                 | 175x300   | 8               | M 16            | 184            |     |
|      | 5.512                       | 5.512           | 18.701 | 16.535 | 13.780 | 10.945         | 3.543          | 11.417             | 0.236 | 36,657                     | 10                        | M30             | 1,069           | 175x300   | 8               | M 16            | 184            | 474 |
|      | >5.512                      | >5.512          |        |        |        |                |                |                    |       | 48,643                     |                           |                 |                 | 195x350   | 12              | M 16            | 184            |     |
|      | 5.906                       | 5.906           |        |        |        |                |                |                    |       | 57,235                     |                           |                 |                 | 195x350   | 12              | M 16            | 184            |     |
|      | 6.496                       | 6.496           |        |        |        |                |                |                    |       | 71,471                     |                           |                 |                 | 195x350   | 12              | M 16            | 184            |     |
| 165  | 5.512                       | 5.512           |        |        |        |                |                |                    |       | 48,643                     |                           |                 |                 | 195x350   | 12              | M 16            | 184            |     |
|      | 5.906                       | 5.906           |        |        |        |                |                |                    |       | 57,235                     |                           |                 |                 | 195x350   | 12              | M 16            | 184            |     |
|      | 6.496                       | 6.496           | 20.079 | 17.323 | 14.567 | 12.362         | 3.543          | 12.835             | 0.236 | 71,471                     | 14                        | M30             | 1,069           | 195x350   | 12              | M 16            | 184            | 595 |
|      | >6.496                      | >6.496          |        |        |        |                |                |                    |       | 76,117                     |                           |                 |                 | 220x370   | 15              | M 16            | 184            |     |
|      | 6.693                       | 6.693           |        |        |        |                |                |                    |       | 81,612                     |                           |                 |                 | 220x370   | 15              | M 16            | 184            |     |
|      | 7.087                       | 7.087           |        |        |        |                |                |                    |       | 93,266                     |                           |                 |                 | 220x370   | 15              | M 16            | 184            |     |
| 180  | 6.299                       | 6.299           |        |        |        |                |                |                    |       | 70,807                     |                           |                 |                 | 220x370   | 15              | M 16            | 184            |     |
|      | 6.693                       | 6.693           |        |        |        |                |                |                    |       | 81,612                     |                           |                 |                 | 220x370   | 15              | M 16            | 184            |     |
|      | 7.087                       | 7.087           | 21.260 | 18.701 | 15.945 | 12.677         | 3.465          | 13.346             | 0.236 | 93,266                     | 16                        | M30             | 1,069           | 220x370   | 15              | M 16            | 184            | 683 |
|      | >7.087                      | >7.087          |        |        |        |                |                |                    |       | 104,329                    |                           |                 |                 | 240x405   | 12              | M 20            | 361            |     |
|      | 7.480                       | 7.480           |        |        |        |                |                |                    |       | 118,269                    |                           |                 |                 | 240x405   | 12              | M 20            | 361            |     |
|      | 7.874                       | 7.874           |        |        |        |                |                |                    |       | 133,168                    |                           |                 |                 | 240x405   | 12              | M 20            | 361            |     |
| 200  | 6.693                       | 6.693           |        |        |        |                |                |                    |       | 91,311                     |                           |                 |                 | 240x405   | 12              | M 20            | 361            |     |
|      | 7.283                       | 7.283           |        |        |        |                |                |                    |       | 111,189                    |                           |                 |                 | 240x405   | 12              | M 20            | 361            |     |
|      | 7.874                       | 7.874           | 22.047 | 19.685 | 16.929 | 14.488         | 4.331          | 15.079             | 0.315 | 133,168                    | 16                        | M30             | 1,069           | 240x405   | 12              | M 20            | 361            | 871 |
|      | >7.874                      | >7.874          |        |        |        |                |                |                    |       | 140,323                    |                           |                 |                 | 260x430   | 14              | M 20            | 361            |     |
|      | 8.268                       | 8.268           |        |        |        |                |                |                    |       | 157,029                    |                           |                 |                 | 260x430   | 14              | M 20            | 361            |     |
|      | 8.661                       | 8.661           |        |        |        |                |                |                    |       | 174,693                    |                           |                 |                 | 260x430   | 14              | M 20            | 361            |     |
| 220  | 7.480                       | 7.480           |        |        |        |                |                |                    |       | 124,649                    |                           |                 |                 | 260x430   | 14              | M 20            | 361            |     |
|      | 8.071                       | 8.071           |        |        |        |                |                |                    |       | 148,547                    |                           |                 |                 | 260x430   | 14              | M 20            | 361            |     |
|      | 8.661                       | 8.661           | 23.228 | 20.866 | 18.110 | 15.433         | 4.094          | 16.024             | 0.315 | 174,693                    | 18                        | M30             | 1,069           | 260x430   | 14              | M 20            | 361            | 981 |
|      | >8.661                      | >8.661          |        |        |        |                |                |                    |       | 181,774                    |                           |                 |                 | 280x460   | 16              | M 20            | 361            |     |
|      | 9.055                       | 9.055           |        |        |        |                |                |                    |       | 201,246                    |                           |                 |                 | 280x460   | 16              | M 20            | 361            |     |
|      | 9.449                       | 9.449           |        |        |        |                |                |                    |       | 221,787                    |                           |                 |                 | 280x460   | 16              | M 20            | 361            |     |



# Flange Couplings RINGFEDER® RfN 5571

| Size | Flange couplings dimensions |                 |        |        |        |                |                |                    |       | Transmissible torques<br>T<br>ft-lbs | Flange screws<br>ISO 4017 |                 |                 | Shrink disc screws<br>Version A: ISO 4014/4017 - 10.9<br>Version B: ISO 4762 - 10.9 |                 |                 |                |                |
|------|-----------------------------|-----------------|--------|--------|--------|----------------|----------------|--------------------|-------|--------------------------------------|---------------------------|-----------------|-----------------|---|-----------------|-----------------|----------------|----------------|
|      | d <sub>w1</sub>             | d <sub>w2</sub> | A      | C      | G      | L <sub>F</sub> | L <sub>N</sub> | L <sub>total</sub> | Z     |                                      | n <sub>Sc3</sub>          | D <sub>G3</sub> | T <sub>A3</sub> | Size  | n <sub>SD</sub> | D <sub>SD</sub> | T <sub>A</sub> | G <sub>w</sub> |
|      | inch                        | inch            | inch   | inch   | inch   | inch           | inch           | inch               | inch  |                                      | pcs.                      | mm              | ft-lbs          | inch  | pcs.            | mm              | ft-lbs         | lbs            |
| 240  | 8.268                       | 8.268           | 24.213 | 21.850 | 19.094 | 16.063         | 4.094          | 16.654             | 0.315 | 20                                   | M30                       | 1,069           | 280x460         | 16  | M 20            | 361             | 1,102          |                |
|      | 8.858                       | 8.858           |        |        |        |                |                |                    |       |                                      |                           |                 | 280x460         | 16  | M 20            | 361             |                |                |
|      | 9.449                       | 9.449           |        |        |        |                |                |                    |       |                                      |                           |                 | 280x460         | 16  | M 20            | 361             |                |                |
|      | >9.449                      | >9.449          |        |        |        |                |                |                    |       |                                      |                           |                 | 300x485         | 18  | M 20            | 361             |                |                |
|      | 9.843                       | 9.843           |        |        |        |                |                |                    |       |                                      |                           |                 | 300x485         | 18  | M 20            | 361             |                |                |
|      | 10.236                      | 10.236          |        |        |        |                |                |                    |       |                                      |                           |                 | 300x485         | 18  | M 20            | 361             |                |                |
| 260  | 9.055                       | 9.055           | 27.953 | 25.197 | 22.441 | 17.717         | 4.646          | 18.307             | 0.315 | 24                                   | M30                       | 1,069           | 300x485         | 18  | M 20            | 361             | 1,720          |                |
|      | 9.646                       | 9.646           |        |        |        |                |                |                    |       |                                      |                           |                 | 300x485         | 18  | M 20            | 361             |                |                |
|      | 10.236                      | 10.236          |        |        |        |                |                |                    |       |                                      |                           |                 | 300x485         | 18  | M 20            | 361             |                |                |
|      | >10.236                     | >10.236         |        |        |        |                |                |                    |       |                                      |                           |                 | 340x570         | 24  | M 20            | 361             |                |                |
|      | 10.827                      | 10.827          |        |        |        |                |                |                    |       |                                      |                           |                 | 340x570         | 24  | M 20            | 361             |                |                |
|      | 11.417                      | 11.417          |        |        |        |                |                |                    |       |                                      |                           |                 | 340x570         | 24  | M 20            | 361             |                |                |
| 290  | 9.055                       | 9.055           | 28.346 | 25.984 | 23.228 | 17.717         | 4.173          | 18.307             | 0.315 | 24                                   | M30                       | 1,069           | 340x570         | 24  | M 20            | 361             | 1,742          |                |
|      | 10.236                      | 10.236          |        |        |        |                |                |                    |       |                                      |                           |                 | 340x570         | 24  | M 20            | 361             |                |                |
|      | 11.417                      | 11.417          |        |        |        |                |                |                    |       |                                      |                           |                 | 340x570         | 24  | M 20            | 361             |                |                |
|      | >11.417                     | >11.417         |        |        |        |                |                |                    |       |                                      |                           |                 | 360x590         | 24  | M 20            | 361             |                |                |
|      | 12.008                      | 12.008          |        |        |        |                |                |                    |       |                                      |                           |                 | 360x590         | 24  | M 20            | 361             |                |                |
|      | 12.598                      | 12.598          |        |        |        |                |                |                    |       |                                      |                           |                 | 360x590         | 24  | M 20            | 361             |                |                |
| 310  | 11.024                      | 11.024          | 31.693 | 28.937 | 25.984 | 19.055         | 4.488          | 19.291             | 0.315 | 28                                   | M30                       | 1,069           | 360x590         | 24  | M 20            | 361             | 2,337          |                |
|      | 11.811                      | 11.811          |        |        |        |                |                |                    |       |                                      |                           |                 | 360x590         | 24  | M 20            | 361             |                |                |
|      | 12.598                      | 12.598          |        |        |        |                |                |                    |       |                                      |                           |                 | 360x590         | 24  | M 20            | 361             |                |                |
|      | >12.598                     | >12.598         |        |        |        |                |                |                    |       |                                      |                           |                 | 390x660         | 21  | M 24            | 620             |                |                |
|      | 12.992                      | 12.992          |        |        |        |                |                |                    |       |                                      |                           |                 | 390x660         | 21  | M 24            | 620             |                |                |
|      | 13.386                      | 13.386          |        |        |        |                |                |                    |       |                                      |                           |                 | 390x660         | 21  | M 24            | 620             |                |                |
| 340  | 11.811                      | 11.811          | 32.874 | 30.315 | 27.165 | 20.787         | 4.803          | 21.181             | 0.394 | 30                                   | M30                       | 1,069           | 390x660         | 21  | M 24            | 620             | 2,712          |                |
|      | 12.598                      | 12.598          |        |        |        |                |                |                    |       |                                      |                           |                 | 390x660         | 21  | M 24            | 620             |                |                |
|      | 13.386                      | 13.386          |        |        |        |                |                |                    |       |                                      |                           |                 | 390x660         | 21  | M 24            | 620             |                |                |
|      | >13.386                     | >13.386         |        |        |        |                |                |                    |       |                                      |                           |                 | 420x690         | 24  | M 24            | 620             |                |                |
|      | 13.780                      | 13.780          |        |        |        |                |                |                    |       |                                      |                           |                 | 420x690         | 24  | M 24            | 620             |                |                |
|      | 14.173                      | 14.173          |        |        |        |                |                |                    |       |                                      |                           |                 | 420x690         | 24  | M 24            | 620             |                |                |
| 380  | 12.992                      | 12.992          | 36.220 | 33.268 | 30.315 | 21.890         | 5.039          | 22.598             | 0.394 | 35                                   | M30                       | 1,069           | 420x690         | 24  | M 24            | 620             | 3,131          |                |
|      | 13.583                      | 13.583          |        |        |        |                |                |                    |       |                                      |                           |                 | 420x690         | 24  | M 24            | 620             |                |                |
|      | 14.173                      | 14.173          |        |        |        |                |                |                    |       |                                      |                           |                 | 420x690         | 24  | M 24            | 620             |                |                |
|      | >14.173                     | >14.173         |        |        |        |                |                |                    |       |                                      |                           |                 | 460x770         | 28  | M 24            | 620             |                |                |
|      | 14.764                      | 14.764          |        |        |        |                |                |                    |       |                                      |                           |                 | 460x770         | 28  | M 24            | 620             |                |                |
|      | 15.354                      | 15.354          |        |        |        |                |                |                    |       |                                      |                           |                 | 460x770         | 28  | M 24            | 620             |                |                |
| 410  | 14.173                      | 14.173          | 40.551 | 37.008 | 33.465 | 24.331         | 6.142          | 24.724             | 0.472 | 32                                   | M36                       | 1,770           | 460x770         | 28  | M 24            | 620             | 4,850          |                |
|      | 14.764                      | 14.764          |        |        |        |                |                |                    |       |                                      |                           |                 | 460x770         | 28  | M 24            | 620             |                |                |
|      | 15.354                      | 15.354          |        |        |        |                |                |                    |       |                                      |                           |                 | 460x770         | 28  | M 24            | 620             |                |                |
|      | >15.354                     | >15.354         |        |        |        |                |                |                    |       |                                      |                           |                 | 500x850         | 24  | M 27            | 922             |                |                |
|      | 16.142                      | 16.142          |        |        |        |                |                |                    |       |                                      |                           |                 | 500x850         | 24  | M 27            | 922             |                |                |
|      | 16.929                      | 16.929          |        |        |        |                |                |                    |       |                                      |                           |                 | 500x850         | 24  | M 27            | 922             |                |                |
| 440  | 15.748                      | 15.748          | 43.307 | 39.370 | 35.433 | 27.402         | 6.299          | 27.323             | 0.551 | 36                                   | M36                       | 1,770           | 500x850         | 24  | M 27            | 922             | 5,908          |                |
|      | 16.339                      | 16.339          |        |        |        |                |                |                    |       |                                      |                           |                 | 500x850         | 24  | M 27            | 922             |                |                |
|      | 16.929                      | 16.929          |        |        |        |                |                |                    |       |                                      |                           |                 | 500x850         | 24  | M 27            | 922             |                |                |
|      | >16.929                     | >16.929         |        |        |        |                |                |                    |       |                                      |                           |                 | 530x900         | 30  | M 27            | 922             |                |                |
|      | 17.520                      | 17.520          |        |        |        |                |                |                    |       |                                      |                           |                 | 530x900         | 30  | M 27            | 922             |                |                |
|      | 18.110                      | 18.110          |        |        |        |                |                |                    |       |                                      |                           |                 | 530x900         | 30  | M 27            | 922             |                |                |
| 470  | 16.929                      | 16.929          | 46.457 | 42.520 | 38.583 | 29.291         | 6.457          | 29.449             | 0.551 | 40                                   | M36                       | 1,770           | 530x900         | 30  | M 27            | 922             | 7,363          |                |
|      | 17.520                      | 17.520          |        |        |        |                |                |                    |       |                                      |                           |                 | 530x900         | 30  | M 27            | 922             |                |                |
|      | 18.110                      | 18.110          |        |        |        |                |                |                    |       |                                      |                           |                 | 530x900         | 30  | M 27            | 922             |                |                |
|      | >18.110                     | >18.110         |        |        |        |                |                |                    |       |                                      |                           |                 | 590x980         | 36  | M 27            | 922             |                |                |
|      | 18.898                      | 18.898          |        |        |        |                |                |                    |       |                                      |                           |                 | 590x980         | 36  | M 27            | 922             |                |                |
|      | 19.685                      | 19.685          |        |        |        |                |                |                    |       |                                      |                           |                 | 590x980         | 36  | M 27            | 922             |                |                |

# Flange Couplings RINGFEDER® RfN 5571

| Size | Flange couplings dimensions |                 |        |        |        |                |                |                    |       | Transmissible torques<br>T | Flange screws<br>ISO 4017 |                 |                 | Shrink disc screws<br>Version A: ISO 4014/4017 - 10.9<br>Version B: ISO 4762 - 10.9 |                 |                 |                | Gw   |
|------|-----------------------------|-----------------|--------|--------|--------|----------------|----------------|--------------------|-------|----------------------------|---------------------------|-----------------|-----------------|---|-----------------|-----------------|----------------|------|
|      | d <sub>w1</sub>             | d <sub>w2</sub> | A      | C      | G      | L <sub>F</sub> | L <sub>N</sub> | L <sub>total</sub> | Z     |                            | n <sub>Sc3</sub>          | D <sub>G3</sub> | T <sub>A3</sub> | Size  | n <sub>SD</sub> | D <sub>SD</sub> | T <sub>A</sub> |      |
|      | inch                        | inch            | inch   | inch   | inch   | inch           | inch           | inch               | inch  |                            | pcs.                      | mm              | ft-lbs          | inch  | pcs.            | mm              | ft-lbs         |      |
| 500  | 18.504                      | 18.504          | 47.638 | 43.701 | 40.157 | 29.291         | 6.457          | 29.449             | 0.551 | 1699361                    | 42                        | M36             | 1770            | 590x980   | 36              | M 27            | 922            | 7981 |
|      | 19.094                      | 19.094          |        |        |        |                |                |                    |       |                            |                           |                 |                 | 590x980   | 36              |                 |                |      |
|      | 19.685                      | 19.685          |        |        |        |                |                |                    |       |                            |                           |                 |                 | 590x980   | 36              |                 |                |      |
|      | >19.685                     | >19.685         |        |        |        |                |                |                    |       |                            |                           |                 |                 | 620x1020  | 38              |                 |                |      |
|      | 20.472                      | 20.472          |        |        |        |                |                |                    |       |                            |                           |                 |                 | 620x1020  | 38              |                 |                |      |
|      | 21.260                      | 21.260          |        |        |        |                |                |                    |       |                            |                           |                 |                 | 620x1020  | 38              |                 |                |      |
|      |                             |                 |        |        |        |                |                |                    |       |                            |                           |                 |                 | 620x1020  | 38              |                 |                |      |

## Surface finishes

For shaft:  $R_a \leq 3,2 \mu\text{m}$


## Tolerances

For shaft see table below

## Explanations to tables: Page 88


## Ordering example: RfN 5571

| Series   | Size | Version | d <sub>w1</sub> | d <sub>w2</sub> | Further details |
|----------|------|---------|-----------------|-----------------|-----------------|
| RfN 5571 | 500  | A       | 19.094          | 20.472          | -               |



| Series   | Size | Version | d <sub>w1</sub> | Further details |
|----------|------|---------|-----------------|-----------------|
| RfN 5571 | 500  | B       | 19.094          | HF              |

HM = Centering outside  
HF = Centering inside



## Table clearance

| d <sub>w</sub> |            | ISO   | Max. Clearance S |
|----------------|------------|-------|------------------|
| above inch     | up to inch |       |                  |
| 0.236          | 0.394      | H6/j6 | 0.0005           |
| 0.394          | 0.709      |       | 0.0006           |
| 0.709          | 1.181      | H6/h6 | 0.0007           |
| 1.181          | 1.969      | H6/g6 | 0.0013           |
| 1.969          | 3.150      | H7/g6 | 0.0019           |
| 3.150          | 4.724      |       | 0.0027           |
| 4.724          | 7.087      |       | 0.0031           |
| 7.087          | 9.843      |       | 0.0035           |
| 9.843          | 12.402     |       | 0.0040           |
| 12.402         | 15.748     |       | 0.0044           |
| 15.748         | 19.685     |       | 0.0048           |
| 19.685         | 24.803     |       | 0.0054           |
| 24.803         | 31.496     |       | 0.0061           |

Clearances considered for the calculation of the function values

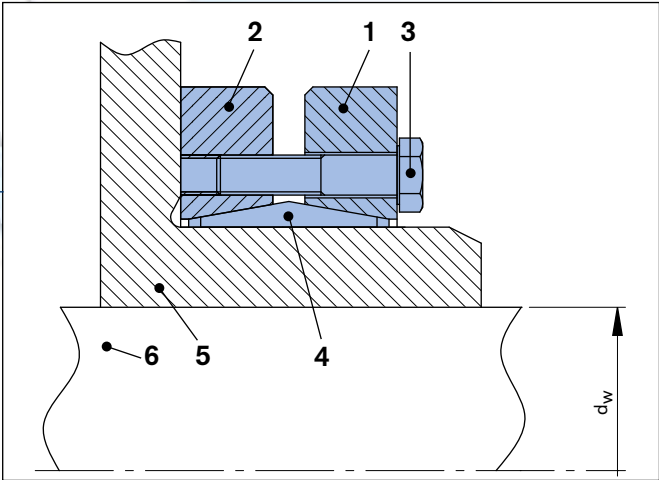


All technical details and information are non-binding and cannot be used as a basis for legal claims. The user is obligated to determine whether the represented products meet his requirements. We reserve the right at all times to carry out modifications in the interests of technical progress. Upon the issue of this catalogue all previous brochures and questionnaires on the products displayed are no longer valid.

## Part description

### 3-part design

- 1 Front thrust ring
- 2 Rear thrust ring
- 3 Locking screw
- 4 Inner ring
- 5 Hub
- 6 Shaft



RINGFEDER® Shrink Discs RfN 4051/4061/4071/4073/4091/4061 stainless steel

Detailed installation and removal instructions can be found on our homepage [www.ringfeder.com](http://www.ringfeder.com).

## Installation and removal instructions

Shrink Discs RfN 4051, 4061, 4071, 4073, 4091,  
4061 stainless steel

### Installation

1. Clean the area on the hub where the shrink disc will be seated and oil to ease assembly, if necessary.
2. Removing spacers which may be present between the tensioning discs for transport purposes.
3. Sliding the shrink disc onto the hub.  
Attention: Do not start tensioning before the shaft is in the bore of the hub, this may cause permanent deformation.
4. Slide the hub onto the shaft and position as required. Use a thin oil to lightly lubricate the hub bore and shaft to facilitate assembly.  
Attention: Do not use lubricants containing MOS2.
5. Tighten by uniformly tensioning the screws in circular sequence, increasing the applied torque stepwise after each sequence. Tension the bolts in sequence (not cross-wise), using a torque wrench. Before starting to tension, make sure that the tensioning discs are aligned plane-parallel.
6. Re-check tightening torque by applying it to all screws all the way around. If all screws have reached the max. tightening torque  $T_A$ , the assembly is completed.

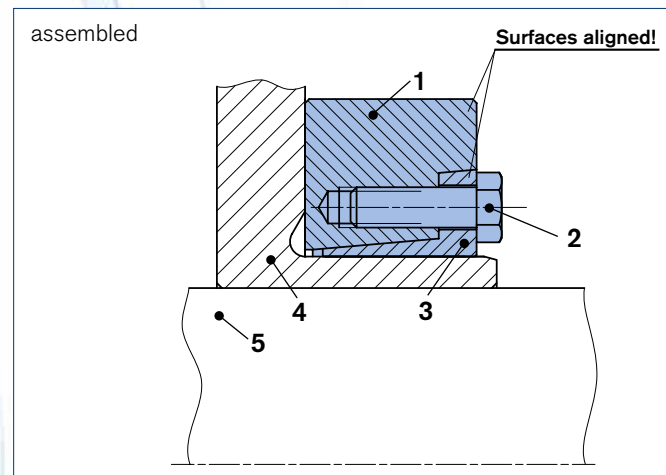
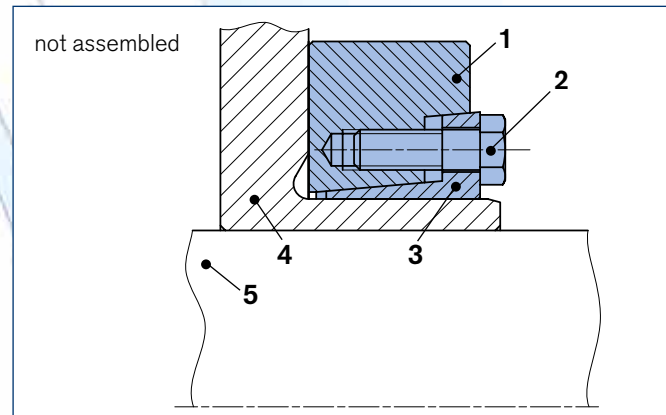
### Removal

1. Loosen the tensioning bolts evenly and in sequence, again in several circular sequences, to avoid jamming of the discs on the inner ring. Never completely remove the tensioning bolts from their threaded holes, this creates a risk of accidents.
2. Sliding the shrink disc and its attachment part from the shaft. First remove possible traces of rust from the shaft.
3. Sliding the shrink disc from the hub.



## Part description

### 2-part design



RINGFEDER® Shrink Discs RfN 4161/4181

- 1 Outer ring
- 2 Locking screw
- 3 Inner ring
- 4 Hub
- 5 Shaft

Detailed installation and removal instructions can be found on our homepage [www.ringfeder.com](http://www.ringfeder.com).

## Installation and removal instructions

Shrink Discs RfN 4161, 4181

### Installation

1. Clean the area on the hub where the shrink disc will be seated and oil to ease assembly, if necessary.
2. Sliding the shrink disc onto the hub.  
Attention: Do not start tensioning before the shaft is in the bore of the hub; this may cause permanent deformation.
3. Slide the hub onto the shaft and position as required. Use a thin oil to lightly lubricate the hub bore and shaft to facilitate assembly.  
Attention: Do not use lubricants containing  $\text{MOS}_2$ .
4. Tighten by uniformly tensioning the bolts in circular sequence, increasing the applied torque stepwise after each sequence. Tension the bolts in sequence (not cross-wise). Make sure that the faces of the inner and outer rings are aligned plane-parallel.



- Assembly, using a torque wrench:  
Check torquing of the bolts in sequence of their positions. Assembly is only complete once all the bolts have been torqued as specified.



- Assembly, without a torque wrench:  
Assembly is complete once the faces of the inner and outer rings are aligned flush.

### Removal

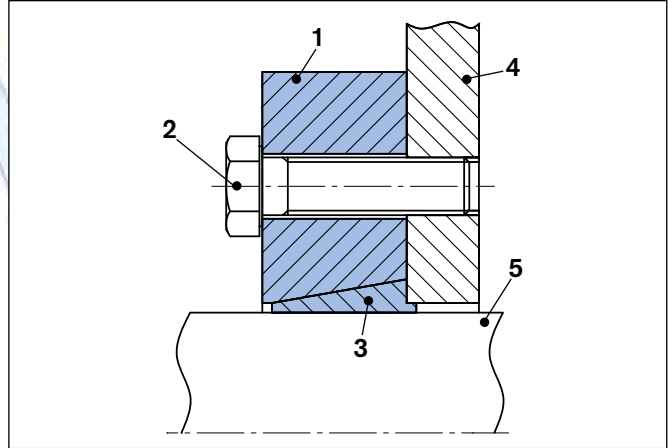
1. Loosen the tensioning bolts evenly and in sequence, again in several circular sequences, to avoid jamming of the discs on the inner ring. Never completely remove the tensioning bolts from their threaded holes, this creates a risk of accidents.
2. Disassembling the shaft, i.e. removing the hub from the shaft. First remove possible traces of rust on the shaft and the hub.
3. Sliding the shrink disc from the hub.

## Part description

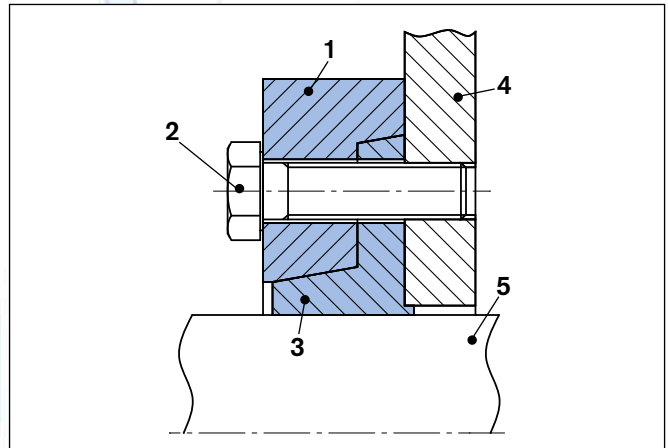
- 1 Outer ring
- 2 Locking screw
- 3 Inner ring
- 4 Attachment part
- 5 Shaft

Part 2, 4, 5 provided by the customer

### 2-part design with attachment part



RINGFEDER® Shrink Discs RfN 4012



RINGFEDER® Shrink Discs RfN 4022/4023

Detailed installation and removal instructions can be found on our homepage [www.ringfeder.com](http://www.ringfeder.com).

## Installation and removal instructions

Shrink Discs RfN 4012, 4022, 4023

### Installation

1. Clean and degrease position of the shrink disc on the shaft and contact surface of the attachment part.
2. Fasten the attachment part to the shrink disc.  
**ATTENTION:** Tighten the bolts lightly.
3. Sliding the shrink disc onto the shaft.
4. Tighten by uniformly tensioning the bolts in circular sequence, increasing the applied torque stepwise after each sequence. Tension the bolts in sequence (not cross-wise), using a torque wrench.
5. Re-check tightening torque by applying it to all screws all the way around. If all screws have reached the max. tightening torque  $T_A$ , the assembly is completed.

### Removal

1. Loosen the tensioning bolts evenly and in sequence, again in several circular sequences, to avoid jamming of the discs on the inner ring. Never completely remove the tensioning bolts from their threaded holes, this creates a risk of accidents.
2. Sliding the shrink disc and its attachment part from the shaft. First remove possible traces of rust from the shaft.
3. Releasing the attachment part from the shrink disc.



# ISO Tolerances

## Shafts

| Nominal diameter of shaft |     | d11   |       | e8    |       | e7    |       | f8    |       | f7    |       | g6    |       | h11   |       | h9    |       | h8    |       | h7    |       |
|---------------------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| mm                        |     | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       |
| above                     | to  | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower |
| 3                         | 6   | - 30  | - 105 | - 20  | - 38  | - 20  | - 32  | - 10  | - 28  | - 10  | - 22  | - 4   | - 12  | 0     | - 75  | 0     | - 30  | 0     | - 18  | 0     | - 12  |
| 6                         | 10  | - 40  | - 130 | - 25  | - 47  | - 25  | - 40  | - 13  | - 35  | - 13  | - 28  | - 5   | - 14  | 0     | - 90  | 0     | - 36  | 0     | - 22  | 0     | - 15  |
| 10                        | 18  | - 50  | - 160 | - 32  | - 59  | - 32  | - 50  | - 16  | - 43  | - 16  | - 34  | - 6   | - 17  | 0     | - 110 | 0     | - 43  | 0     | - 27  | 0     | - 18  |
| 18                        | 30  | - 65  | - 195 | - 40  | - 73  | - 40  | - 61  | - 20  | - 53  | - 20  | - 42  | - 7   | - 20  | 0     | - 130 | 0     | - 52  | 0     | - 33  | 0     | - 21  |
| 30                        | 50  | - 80  | - 240 | - 50  | - 89  | - 50  | - 75  | - 25  | - 64  | - 25  | - 50  | - 9   | - 25  | 0     | - 160 | 0     | - 62  | 0     | - 39  | 0     | - 25  |
| 50                        | 80  | - 100 | - 290 | - 60  | - 106 | - 60  | - 90  | - 30  | - 76  | - 30  | - 60  | - 10  | - 29  | 0     | - 190 | 0     | - 74  | 0     | - 46  | 0     | - 30  |
| 80                        | 120 | - 120 | - 340 | - 72  | - 126 | - 72  | - 107 | - 36  | - 90  | - 36  | - 71  | - 12  | - 34  | 0     | - 220 | 0     | - 87  | 0     | - 54  | 0     | - 35  |
| 120                       | 180 | - 145 | - 395 | - 85  | - 148 | - 85  | - 125 | - 43  | - 106 | - 43  | - 83  | - 14  | - 39  | 0     | - 250 | 0     | - 100 | 0     | - 63  | 0     | - 40  |
| 180                       | 250 | - 170 | - 460 | - 100 | - 172 | - 100 | - 146 | - 50  | - 122 | - 50  | - 96  | - 15  | - 44  | 0     | - 290 | 0     | - 115 | 0     | - 72  | 0     | - 46  |
| 250                       | 315 | - 190 | - 510 | - 110 | - 191 | - 110 | - 162 | - 56  | - 137 | - 56  | - 108 | - 17  | - 49  | 0     | - 320 | 0     | - 130 | 0     | - 81  | 0     | - 52  |
| 315                       | 400 | - 210 | - 570 | - 125 | - 214 | - 125 | - 182 | - 62  | - 151 | - 62  | - 119 | - 18  | - 54  | 0     | - 360 | 0     | - 140 | 0     | - 89  | 0     | - 57  |
| 400                       | 500 | - 230 | - 630 | - 135 | - 232 | - 135 | - 198 | - 68  | - 165 | - 68  | - 131 | - 20  | - 60  | 0     | - 440 | 0     | - 155 | 0     | - 97  | 0     | - 63  |
| 500                       | 630 | - 260 | - 700 | - 145 | - 255 | - 145 | - 215 | - 76  | - 186 | - 76  | - 146 | - 22  | - 66  | 0     | - 440 | 0     | - 175 | 0     | - 110 | 0     | - 70  |
| 630                       | 800 | - 290 | - 790 | - 160 | - 285 | - 160 | - 240 | - 80  | - 205 | - 80  | - 160 | - 24  | - 74  | 0     | - 500 | 0     | - 200 | 0     | - 125 | 0     | - 80  |

| Nominal diameter of shaft |     | h6    |       | h5    |       | j6    |       | k6    |       | k5    |       | m6    |       | m5    |       | n6    |       | p6    |       |
|---------------------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| mm                        |     | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       |
| above                     | to  | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower |
| 3                         | 6   | 0     | - 8   | 0     | - 5   | + 7   | - 1   | -     | -     | -     | -     | + 12  | + 4   | + 9   | + 4   | + 16  | + 8   | + 20  | + 12  |
| 6                         | 10  | 0     | - 9   | 0     | - 6   | + 7   | - 2   | + 10  | + 1   | + 7   | + 1   | + 15  | + 6   | + 12  | + 6   | + 19  | + 10  | + 24  | + 15  |
| 10                        | 18  | 0     | - 11  | 0     | - 8   | + 8   | - 3   | + 12  | + 1   | + 9   | + 1   | + 18  | + 7   | + 15  | + 7   | + 23  | + 12  | + 29  | + 18  |
| 18                        | 30  | 0     | - 13  | 0     | - 9   | + 9   | - 4   | + 15  | + 2   | + 11  | + 2   | + 21  | + 8   | + 17  | + 8   | + 28  | + 15  | + 35  | + 26  |
| 30                        | 50  | 0     | - 16  | 0     | - 11  | + 11  | - 5   | + 18  | + 2   | + 13  | + 2   | + 25  | + 9   | + 20  | + 9   | + 33  | + 17  | + 42  | + 26  |
| 50                        | 80  | 0     | - 19  | 0     | - 13  | + 12  | - 7   | + 21  | + 2   | + 15  | + 2   | + 30  | + 11  | + 24  | + 11  | + 39  | + 20  | + 51  | + 32  |
| 80                        | 120 | 0     | - 22  | 0     | - 15  | + 13  | - 9   | + 25  | + 3   | + 18  | + 3   | + 35  | + 13  | + 28  | + 13  | + 45  | + 23  | + 59  | + 37  |
| 120                       | 180 | 0     | - 25  | 0     | - 18  | + 14  | - 11  | + 28  | + 3   | + 21  | + 3   | + 40  | + 15  | + 33  | + 15  | + 52  | + 27  | + 68  | + 43  |
| 180                       | 250 | 0     | - 29  | 0     | - 20  | + 16  | - 13  | + 33  | + 4   | + 24  | + 4   | + 46  | + 17  | + 37  | + 17  | + 60  | + 31  | + 79  | + 50  |
| 250                       | 315 | 0     | - 32  | 0     | - 23  | + 16  | - 16  | + 36  | + 4   | + 27  | + 4   | + 53  | + 20  | + 43  | + 20  | + 66  | + 34  | + 88  | + 56  |
| 315                       | 400 | 0     | - 36  | 0     | - 25  | + 18  | - 18  | + 40  | + 4   | + 29  | + 4   | + 57  | + 21  | + 46  | + 21  | + 73  | + 37  | + 98  | + 62  |
| 400                       | 500 | 0     | - 40  | 0     | - 27  | + 20  | - 20  | + 45  | + 5   | + 32  | + 5   | + 63  | + 23  | + 50  | + 23  | + 80  | + 40  | + 108 | + 68  |
| 500                       | 630 | 0     | - 44  | 0     | - 28  | -     | -     | + 44  | 0     | -     | -     | + 70  | + 26  | -     | -     | + 88  | + 44  | + 122 | + 78  |
| 630                       | 800 | 0     | - 50  | 0     | - 32  | -     | -     | + 50  | 0     | -     | -     | + 80  | + 30  | -     | -     | + 100 | + 50  | + 138 | + 88  |

# Bores

| Nominal diameter of bore |     | D11   |       | E8    |       | E7    |       | F8    |       | F7    |       | G7    |       | H11   |       | H9    |       | H8    |       | H7    |       |
|--------------------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| mm                       |     | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       |
| above                    | to  | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower |
| 3                        | 6   | + 105 | + 30  | + 38  | + 20  | + 32  | + 20  | + 28  | + 10  | + 22  | + 10  | + 16  | + 4   | + 75  | 0     | + 30  | 0     | + 18  | 0     | + 12  | 0     |
| 6                        | 10  | + 130 | + 40  | + 47  | + 25  | + 40  | + 25  | + 35  | + 10  | + 28  | + 13  | + 20  | + 5   | + 90  | 0     | + 36  | 0     | + 22  | 0     | + 15  | 0     |
| 10                       | 18  | + 160 | + 50  | + 59  | + 32  | + 50  | + 32  | + 43  | + 12  | + 34  | + 16  | + 24  | + 6   | + 110 | 0     | + 43  | 0     | + 27  | 0     | + 18  | 0     |
| 18                       | 30  | + 195 | + 65  | + 73  | + 40  | + 61  | + 40  | + 53  | + 15  | + 41  | + 20  | + 28  | + 7   | + 130 | 0     | + 52  | 0     | + 33  | 0     | + 21  | 0     |
| 30                       | 50  | + 240 | + 80  | + 89  | + 50  | + 75  | + 50  | + 64  | + 18  | + 50  | + 25  | + 34  | + 9   | + 160 | 0     | + 62  | 0     | + 39  | 0     | + 25  | 0     |
| 50                       | 80  | + 290 | + 100 | + 106 | + 60  | + 90  | + 60  | + 76  | + 21  | + 60  | + 30  | + 40  | + 10  | + 190 | 0     | + 74  | 0     | + 46  | 0     | + 30  | 0     |
| 80                       | 120 | + 340 | + 120 | + 126 | + 72  | + 107 | + 72  | + 90  | + 25  | + 71  | + 36  | + 47  | + 12  | + 220 | 0     | + 87  | 0     | + 54  | 0     | + 35  | 0     |
| 120                      | 180 | + 395 | + 145 | + 148 | + 85  | + 125 | + 85  | + 106 | + 28  | + 83  | + 43  | + 54  | + 14  | + 250 | 0     | + 100 | 0     | + 63  | 0     | + 40  | 0     |
| 180                      | 250 | + 460 | + 170 | + 172 | + 100 | + 146 | + 100 | + 122 | + 33  | + 96  | + 50  | + 61  | + 15  | + 290 | 0     | + 115 | 0     | + 72  | 0     | + 46  | 0     |
| 250                      | 315 | + 510 | + 190 | + 191 | + 110 | + 162 | + 110 | + 137 | + 36  | + 108 | + 56  | + 69  | + 17  | + 320 | 0     | + 130 | 0     | + 81  | 0     | + 52  | 0     |
| 315                      | 400 | + 570 | + 210 | + 214 | + 125 | + 182 | + 125 | + 151 | + 40  | + 119 | + 62  | + 75  | + 18  | + 360 | 0     | + 140 | 0     | + 89  | 0     | + 57  | 0     |
| 400                      | 500 | + 630 | + 230 | + 232 | + 135 | + 198 | + 135 | + 165 | + 45  | + 131 | + 68  | + 83  | + 20  | + 400 | 0     | + 155 | 0     | + 97  | 0     | + 63  | 0     |
| 500                      | 630 | + 700 | + 260 | + 255 | + 145 | + 215 | + 145 | + 186 | + 76  | + 146 | + 76  | + 92  | + 22  | + 440 | 0     | + 175 | 0     | + 110 | 0     | + 70  | 0     |
| 630                      | 800 | + 790 | + 290 | + 285 | + 160 | + 240 | + 160 | + 205 | + 80  | + 160 | + 80  | + 104 | + 24  | + 500 | 0     | + 200 | 0     | + 125 | 0     | + 80  | 0     |

| Nominal diameter of bore |     | H6    |       | J7    |       | J6    |       | K7    |       | K6    |       | M7    |       | M6    |       | N7    |       | N6    |       | P7    |       |
|--------------------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| mm                       |     | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       | µm    |       |
| above                    | to  | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower | upper | lower |
| 3                        | 6   | + 8   | 0     | + 5   | - 7   | + 4   | - 4   | -     | -     | -     | -     | 0     | - 12  | - 1   | - 9   | - 4   | - 16  | - 5   | - 13  | - 8   | - 20  |
| 6                        | 10  | + 9   | 0     | + 8   | + 7   | + 5   | - 4   | + 5   | - 10  | + 2   | - 7   | 0     | - 15  | - 3   | - 12  | - 4   | - 19  | - 7   | - 16  | - 9   | - 24  |
| 10                       | 18  | + 11  | 0     | + 10  | - 8   | + 6   | - 5   | + 6   | - 12  | + 2   | - 9   | 0     | - 18  | - 4   | - 15  | - 5   | - 23  | - 9   | - 20  | - 11  | - 29  |
| 18                       | 30  | + 13  | 0     | + 12  | - 9   | + 8   | - 5   | + 6   | - 15  | + 2   | - 11  | 0     | - 21  | - 4   | - 17  | - 7   | - 28  | - 11  | - 24  | - 14  | - 35  |
| 30                       | 50  | + 16  | 0     | + 14  | - 11  | + 10  | - 6   | + 7   | - 18  | + 3   | - 13  | 0     | - 25  | - 4   | - 20  | - 8   | - 33  | - 12  | - 28  | - 17  | - 42  |
| 50                       | 80  | + 19  | 0     | + 18  | - 12  | + 13  | - 6   | + 9   | - 21  | + 4   | - 15  | 0     | - 30  | - 5   | - 24  | - 9   | - 39  | - 14  | - 33  | - 21  | - 51  |
| 80                       | 120 | + 22  | 0     | + 22  | - 13  | + 16  | - 6   | + 10  | - 25  | + 4   | - 18  | 0     | - 35  | - 6   | - 28  | - 10  | - 45  | - 16  | - 38  | - 24  | - 59  |
| 120                      | 180 | + 25  | 0     | + 26  | - 14  | + 18  | - 7   | + 12  | - 28  | + 4   | - 21  | 0     | - 40  | - 8   | - 33  | - 12  | - 52  | - 20  | - 45  | - 28  | - 68  |
| 180                      | 250 | + 29  | 0     | + 30  | - 16  | + 22  | - 7   | + 13  | - 33  | + 5   | - 24  | 0     | - 46  | - 8   | - 37  | - 14  | - 60  | - 22  | - 51  | - 33  | - 79  |
| 250                      | 315 | + 32  | 0     | + 36  | - 16  | + 25  | - 7   | + 16  | - 36  | + 5   | - 27  | 0     | - 52  | - 9   | - 41  | - 14  | - 66  | - 25  | - 57  | - 36  | - 88  |
| 315                      | 400 | + 36  | 0     | + 39  | - 18  | + 29  | - 7   | + 17  | - 40  | + 7   | - 29  | 0     | - 57  | - 10  | - 46  | - 16  | - 73  | - 26  | - 62  | - 41  | - 98  |
| 400                      | 500 | + 40  | 0     | + 43  | - 20  | + 33  | - 7   | + 18  | - 45  | + 8   | - 32  | 0     | - 63  | - 10  | - 50  | - 17  | - 80  | - 27  | - 67  | - 45  | - 108 |
| 500                      | 630 | + 44  | 0     | -     | -     | -     | -     | 0     | - 70  | 0     | - 44  | - 26  | - 96  | - 26  | - 70  | - 44  | - 114 | - 44  | - 88  | - 78  | - 148 |
| 630                      | 800 | + 50  | 0     | -     | -     | -     | -     | 0     | - 80  | 0     | - 50  | - 30  | - 110 | - 30  | - 80  | - 50  | - 130 | - 50  | - 100 | - 88  | - 168 |

# Fax Inquiry

To get a design proposal for RINGFEDER® Shaft-hub-connection

RINGFEDER POWER TRANSMISSION USA CORPORATION, Westwood/USA

FAX: +1 201 664 6053

## Addresser

Company

Attn.  Dept.

Address

Phone  Fax

E-Mail

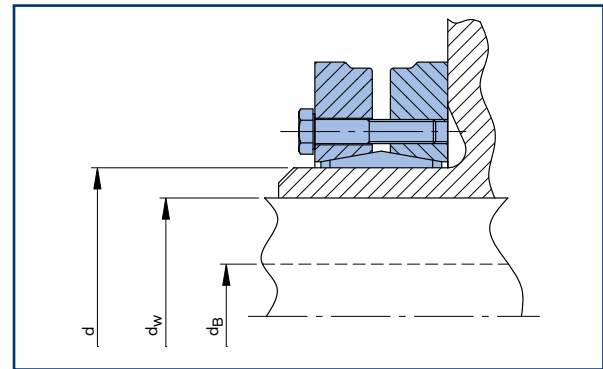
We ask for a consulting discussion. Please call us back under

To make it easy for our technical staff and to avoid errors or mistakes your inquiry should include the following information:

## Information for technical service

### Expected maximum loads

Max. torque  
 Max. bending moment  
 Max. axial load  
 Max. radial load



T max. =  lb-ft  
 M<sub>b</sub> max. =  lb-ft  
 F<sub>ax</sub> max. =  lbs  
 F<sub>r</sub> max. =  lbs

### Dimensions, materials:

Shaft diameter  
 In case of hollow shaft, internal diameter  
 Shaft revolution speed  
 Inner diameter shrink disc  
 Hub width  
 Hub material/yield strength  
 Shaft material/yield strength  
 Temperature of the connection

$d_w$  =  inches  
 $d_B$  =  inches  
 $n$  =  rpm  
 $d$  =  inches  
 $L_N$  =  inches  
 $R_{p0,2N}$  =  psi  
 $R_{p0,2W}$  =  psi  
 Temp. =  degree F

Additional information:

**Please send a drawing or sketch together with your inquiry!**

RINGFEDER POWER TRANSMISSION USA CORPORATION · 165 Carver Avenue · P.O. Box 691 Westwood · NJ 07675 · USA

Toll Free: +1 888 746-4333 · Phone: +1 201 666 3320 Fax: +1 201 664 6053

E-mail: sales.usa@ringfeder.com

# Fax Inquiry

To get a design proposal for RINGFEDER® Flange Couplings

RINGFEDER POWER TRANSMISSION USA CORPORATION, Westwood/USA

FAX: +1 201 664 6053

## Addresser

Company

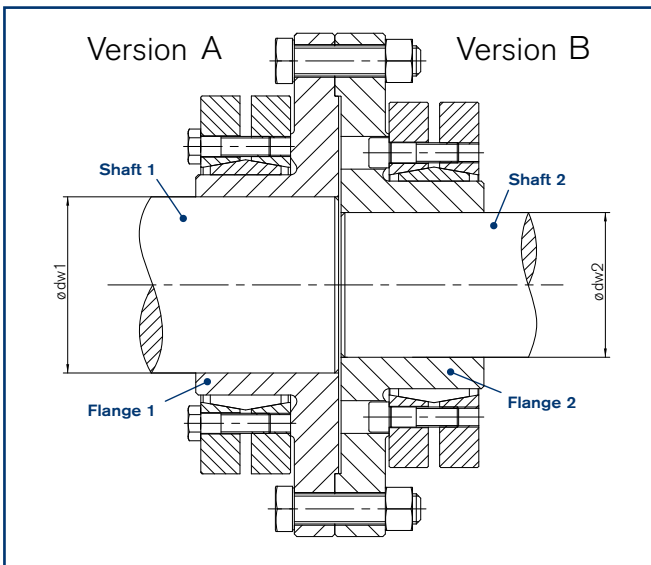
Attn.  Dept.

Address

Phone  Fax

E-Mail

We ask for a consulting discussion. Please call us back under



### Version A

Shaft diameter  $d_{w1}$  =  inches  
 Shaft diameter  $d_{w2}$  =  inches

### Version B

Shaft diameter  $d_{w1}$  =  inches  
 Shaft diameter  $d_{w2}$  =  inches

### Yield point

Material =   
 $R_{p0,2W}$  =  N/mm<sup>2</sup>

## Expected maximum loads

Max. torque  $T_{max.}$  =  ft-lbs      Max. axial load  $F_{ax max.}$  =  lbs  
 Max. bending moment  $M_{bmax.}$  =  ft-lbs      Max. radial load  $F_r max.$  =  lbs

Additional information:

**Please send a drawing or sketch together with your inquiry!**

**RINGFEDER POWER TRANSMISSION USA CORPORATION** · 165 Carver Avenue · P.O. Box 691 Westwood · NJ 07675 · USA  
 Toll Free: +1 888 746-4333 · Phone: +1 201 666 3320 Fax: +1 201 664 6053  
 E-mail: sales.usa@ringfeder.com





## Locking Devices



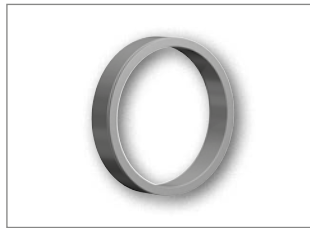
Locking Assemblies



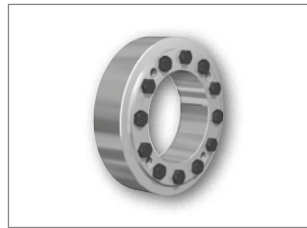
Locking Assemblies for bending moments



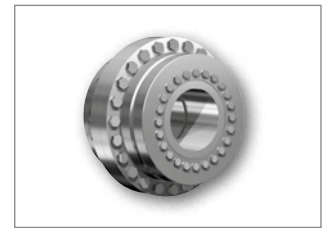
Locking Assemblies – Stainless steel



Locking Elements



Shrink Discs



Flange Couplings

## Damping Technology



Friction Springs



DEFORM *plus*®



DEFORM *plus*® R



## Couplings



Torsionally Flexible Couplings



Torsionally Flexible Couplings



Torsionally Flexible Couplings



Torsionally Rigid Gear Couplings



Torsionally Rigid Barrel Coupling



Couplings with variable Stiffness



### Couplings



Flexible Couplings Henflex



Hydrodynamic Couplings Henfluid



Hydrodynamic Couplings with variable speed

### Bearing Housings



Bearing Housings

**Remark:**

HENFEL products are only available in South America and selected markets.



### Couplings



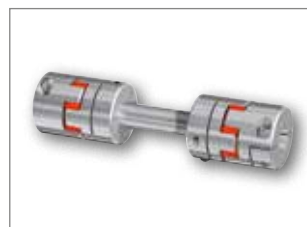
Metal Bellows Couplings



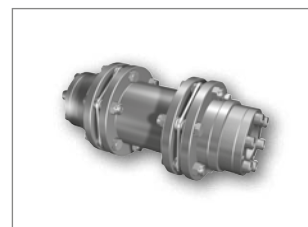
Servo-Insert Couplings



Safety Couplings



Line Shafts



Torsionally Rigid Disc Couplings



**RINGFEDER POWER TRANSMISSION GMBH**

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 Phone: +86 (0) 512-5745-3960 · Fax: +86 (0) 512-5745-3961 · E-mail: sales.china@ringfeder.com