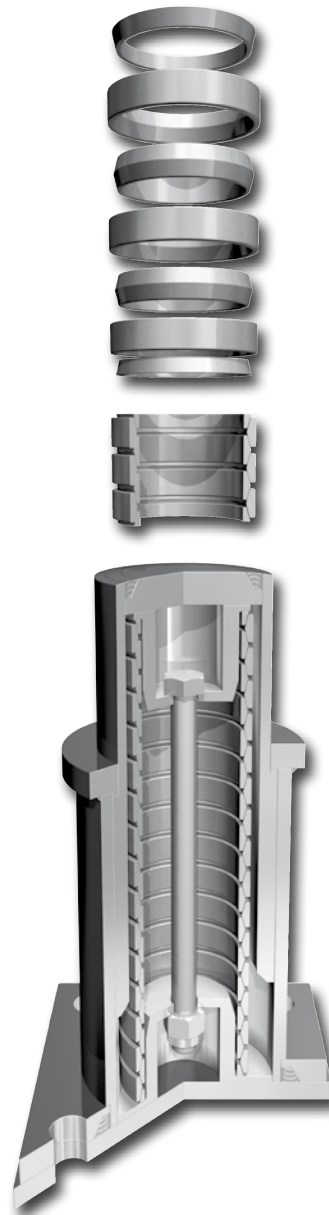


# Friction Springs **RINGFEDER®**

## Assembly, Disassembly, Maintenance



### Lubrication

An essential factor for long service life is a sufficient lubrication of the springs. All friction springs are supplied in greased condition - ready to be installed. Loose rings are oiled for the protection against corrosion. They must be cleaned and then greased with RINGFEDER® special grease on all surfaces prior to installing. It has to be ensured for all springs that an excess of grease may escape (e.g. through a groove in the thrust piece).

### Assembly

If the RINGFEDER® Friction Spring is not designed into a spring cartridge, the spring which consists of piled up loose rings is assembled best in its vertical position. Designing of particularly long springs is facilitated by guiding on a bolt or tube during aligning and pretensioning. At deliveries of already tested springs, the spring column must not be disassembled, nor the rings be exchanged, in order to maintain the values of the test diagram.

### Maintenance

Normally, during operation, no regreasing of the springs is necessary. Regreasing could even result in a failure of the spring when using other lubricants than specified by RINGFEDER POWER TRANSMISSION. If by constructional measures impurities of the lubricant cannot be avoided, appropriate maintenance intervals have to be provided. For refurbishing, a damaged friction spring has to be dismantled.

### Disassembly

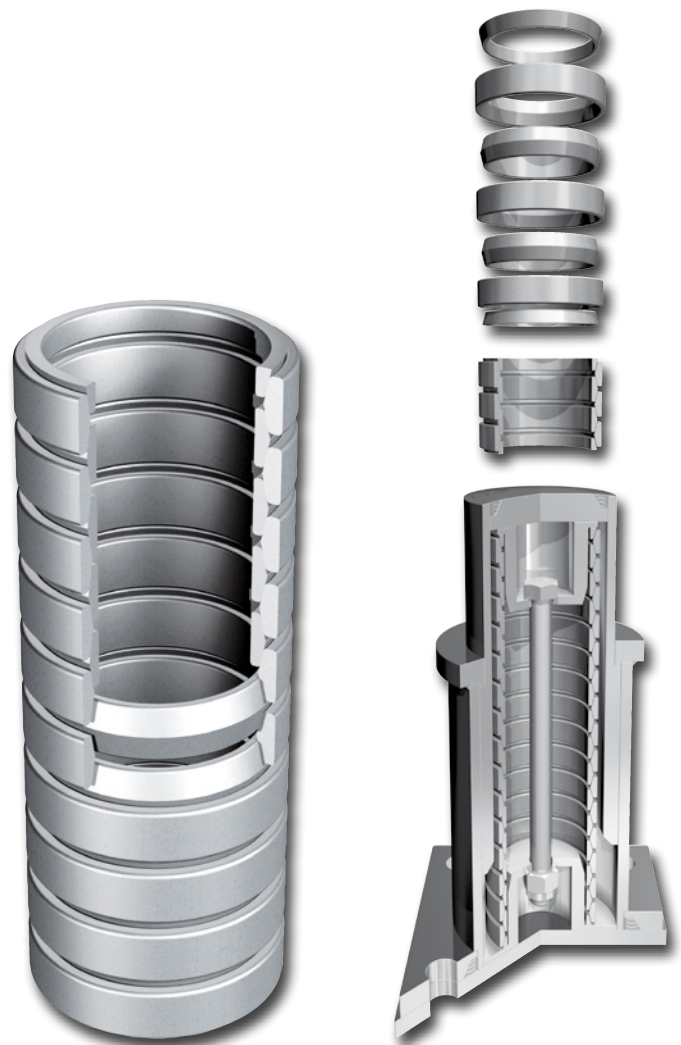


To prevent accidents during removal, it must be observed, that all rings expand evenly.

Rings which are not braced into a spring cartridge by the help of pretension components must only be transported and put down when protected in a casing. To prevent jammed rings from being forced apart explosively by the stored energy (CAUTION, DANGER!), they have to be released within a safety-device by a hammer stroke, after the rings have been carefully tied up with a strong rope. Jammed rings in spring cartridges with pretension components in position must also be released by a hammer stroke within a safety-device, before disassembly can be started.

### Cleaning of the rings

All residues of dirt and grease must be removed from the rings. Actual cleaning may be carried out in any grease solvent containing no impurities. Optimum spring life can only be obtained with rings showing a bright metallic surface. Rusty rings or rings with a black coating can only be cleaned by blasting. Any rings showing axial scoring marks have to be scrapped and replaced by new rings! Cleaning and checking can, of course, also be carried out by RINGFEDER POWER TRANSMISSION. Cleaned rings must subsequently be regreased with RINGFEDER® special grease.



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