


<h1 style="text-align: center;">Instructions For Use HELICODISC® in Spindles</h1>	Seite 1	Freigegeben: Bernd Schwärzler	27.04.2022	
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1 General Information

Correct functionality and a long service life of the HELICODISC® in a spindle can only be guaranteed if the rules specified in these instructions for use are observed.

2 Installation

- 2.1 „Shocks caused during shipping / handling / storage may lead to a shifting of the spring-halves. Therefor the HELICODISC® must be straightened in accordance with RÖHRS instruction F-13439a before assembly.
- 2.2 In order to minimize unbalance, the inside diameter of the spring is produced as small as possible to have only little space between the spring and the drawbar. Some springs therefore only can be assembled with increased manual force. This is not a defect, but ensures minimal place to the drawbar. Unless otherwise agreed, test shafts with IT-tolerance h7 are used.
- 2.3 Pretensioning the springs on drawbar via a thread can cause an unscrewing of the springs. To prevent this, care has to be taken to ensure that the coiling direction on the tensioning side of the clamping unit is correct:
 - Right-Hand-Thread of the clamping nut => spring coiling direction to the left
 - Left-Hand-Thread of the clamping nut => spring coiling direction to the right
- 2.4 The HELICODISC® has to be provided with a suitable grease for the application (good adhesive properties, good pressure absorption capacity) before assembly.
NOTE: Too much fat can cause unbalance.
- 2.5 At the start of operation, the HELICODISC® is in a start-up phase due to its design. During this „running-in phase“ there is a slight drop in force level and mass shifts. For optimum balancing quality, the system therefore only should be balanced after 100-200 cycles and the spring system should not be relieved to free length (L₀).
- 2.6 The drawbar should be ground and sufficiently hardened (recommendation > 60 HRC) to avoid premature wear.
- 2.7 When using an intermediate spacer (usually when combining a right and a left HELICODISC® to form a HELICODISC® set), it must be ensured that the intermediate spacer can also be tilted slightly without noticeable resistance over the drawbar. Otherwise, due to uneven loading of the springs, increased friction losses and a shorter service life has to be expected.

3 Operation

- 3.1 The application- or operating-lengths (L₁, ..., L_n) specified in the drawing must be observed. It has to be ensured that the spring stroke indicated in the drawing is not exceeded, since the spring was designed for this work area. Likewise, an increased tension-level by shifting the work area towards the block length increases the risk of premature failure. Any changes to the work area must be coordinated with RÖHRS in advance.
- 3.2 Lifetime expectations reported by RÖHRS relate to the loss of power that occurs during normal operation under sinusoidal load between the lengths for tool clamping and tool change (see 3.1). As a failure criterion, unless otherwise agreed, a residual force <60% of the nominal force is rated as not good. The values mentioned are based on empirical values, laboratory tests and comparative calculations and serve only as a guideline. Due to external influences during operation (e.g. temperature, contamination with coolant, vibrations), the actual service life can only be estimated.