

Instructions for the installation and maintenance of Agathon centering rolling guide elements

Instructions for the installation and maintenance of Agathon fine centering units (see also Agathon catalog, chapter 2, Guide elements Basics)

Installation

1. Unpack the centering elements and clean the parts with an environmentally safe industrial cleaning agent. The delivered guide elements are provided with a corrosion inhibitor. This agent is not suitable for lubrication and must be removed.

Notes:

Agathon centering elements with roller cages are paired. This applies to the Agathon fine centering units Standards 7990, 7992, 7993 and 7995; this also includes multiple centering, for example for rotating tool applications. The elements must not be interchanged. Please label the elements that belong together with a consecutive number.

The Agathon mini fine centering units are equipped with balls. These do not necessarily have to be paired and can be freely assembled – for higher requirements, however, we recommend using the units in the same configuration whenever possible.

Before cleaning cages made of aluminum (Agathon Standards 7990, 7992 and 7995), please check that the industrial cleaner or cleaning method will not damage or destroy the aluminum cage.

Do not use alkaline or similar detergent. Before you use an ultrasonic cleaning device, clarify the permissible cleaning parameters beforehand or choose the ultrasound compatible Standard 7993.

2. Lightly grease the cleaned cages with a grease which is suitable for the application. See Agathon catalog on page 2.37 for recommended lubricants and page 2.20 for maintenance and lubrication of rolling guides.

Greasing the cage

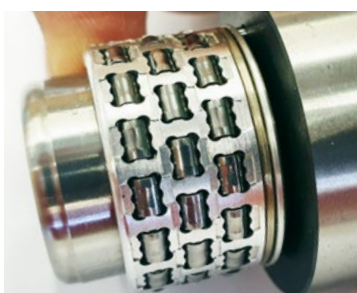


3. Installation of the centering elements in the plate bores. Information regarding positioning accuracy of the guide bores, installation options as well as installation/removal can be found in the catalog on pages 2.28 to 2.35. This also applies to the recommended bore tolerances. These are listed under «Assembly advice» by the relevant article. In particular for mini centering, the installation/removal method should be consulted in the brochure.

Maintenance/Replacement

1. For extremely high loads and long periods of use, grease can be supplied periodically as lubricant also during use. Old grease should first be carefully wiped off with a fluff-free cloth. The lubrication intervals depend strongly on external factors and cannot be generalized. As a guide, we recommend lubrication intervals between 5 and 10 working days. For cleanroom applications, excess grease on the cage can be wiped off with a fluff-free cloth (see photo). It is important that small quantities of lubricant are always present in the rolling element pockets.

2. When doing a periodic maintenance of the tool, the cages should be cleaned and greased again.
Attention: we recommend to remove aluminum cages before cleaning the tool in an ultrasonic bath or with alkaline cleaning agents! (see «Installation» points 1 and 2).
3. The guide elements must be replaced when:
 - there is no more preload: Bushing can be easily rotated in the preloaded area in the shut position (standard 799x) or the bushing can be pushed over the cage (standard 798x)
 - centering units must be replaced in case of loss of rolling elements or when signs of wear are visible on the rolling elements (flattened areas). Flattening can also be felt with a fingernail. To do this, move your fingernail across the rolling surfaces and make sure that you feel a fine step. If yes, you should replace the centering elements



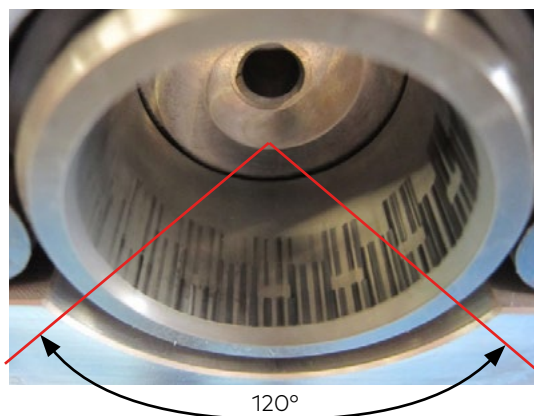
- centering pillars and bushings must be replaced when they show strong running tracks (wear) or eruptions on the surface due to overload. See the pictures below
- the centering units can also be replaced as a precaution on the basis of experience values

Notes:

Paired centering elements (Standards 799x) must be replaced as complete unit.

The mini fine centering (Standard 798x) can theoretically be replaced individually, i.e. either the pillar with cage or the bushing. As a rule, however, the entire centering unit must be replaced.

Photo, normal wear:



Defective, surface overloaded (pitting):



Normal wear pattern. Depending on the load capacity, the contact pattern is approximately 120° with a circular sector – for low requirements, the fine centering bushing can be rotated twice by 120° in relation to the pillar/cage in order to extend the lifespan.