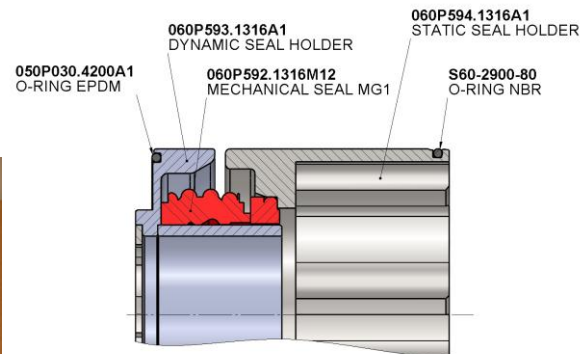


Mechanical Seal System MR160

Instructions for installation and operation



1. Safety recommendations

Please read these instructions carefully. Contact Watson-Marlow if any points are unclear.

This mechanical seals are precision-made, tested machine elements. Special knowledge is required to operate them correctly.

Pay due attention to the rules and regulations governing occupational safety, accident prevention, working with hazardous materials and normal usage.

Before carrying out any work on a mechanical seal, make sure that the system has been shut down, is no longer pressurised and has cooled off. Conversions and changes to the seal are prohibited (seal failure, loss of warranty rights).

Use original Watson-Marlow spare parts only. For own safety, any repairs should be carried out by Watson-Marlow.

2. General procedure

- Clean the seal chamber and examine for signs of damage. Check the installation and connection dimensions. Check the accuracy of the axial and radial run-out tolerances between shaft and the housing.
- Any edges, shoulders and transitions which come into contact with the sealing elements (e.g. o-rings) during installation should be sufficiently chamfered or round off.
- Assemble under extra-clean conditions and with great care. Use no force! This could result in permanent deformations and broken ceramic parts.
- The sequence of steps for installing and dismantling the mechanical seal depends on the pump and is described in the pump manual.
- NEVER place the seal faces or seats on their sliding faces without having covered them adequately.

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- To reduce friction during assembly, wet all slinging surfaces for the O-rings with water or lubricate with silicone grease.
- Note special instructions for storing and handling elastomeric parts
- Keep elastomer parts made of EP rubber away from lubricants based on mineral oil.
- Take plenty of time and use little force when assembling O-rings made of PTFE in order to avoid damage to other seal elements.
- Never apply lubricant to seal faces. Assemble in a completely dry, dustfree and clean condition.

3. Special procedures

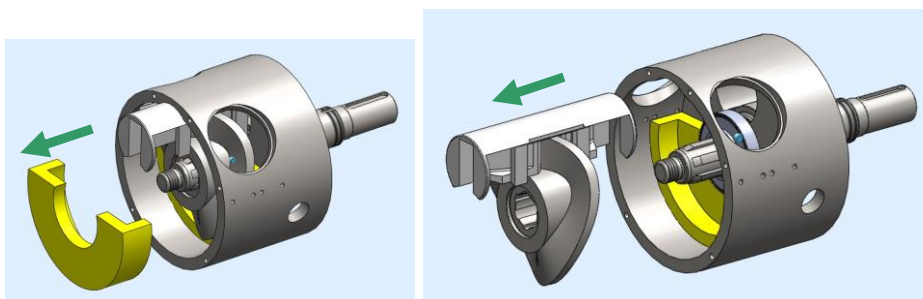
Elastomer bellows seals are to be pushed onto the shaft sleeve using low-surface-tension water (addition of a detergent) and a screwing movement. Use no oil or grease! Apply pressure only on the corner rings. When you are finished with the assembly, check that the corner rings, the spring and the seal face fit correctly

4. Operation

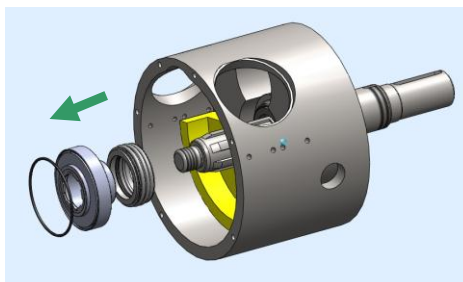
A properly operated mechanical seal requires low maintenance but is subject to a certain wear.

Make sure the seal is completely immersed in liquid (or there will be a risk of dry running!).

5. Disassembly of mechanical seal system



After opening the front cover and the locking nut as described in the manual, pull the front liner out of the pump housing, remove the rotor together with the scraper gate and scraper gate guide.



The dynamic unit of the mechanical seal can be removed. Be careful with the faces.

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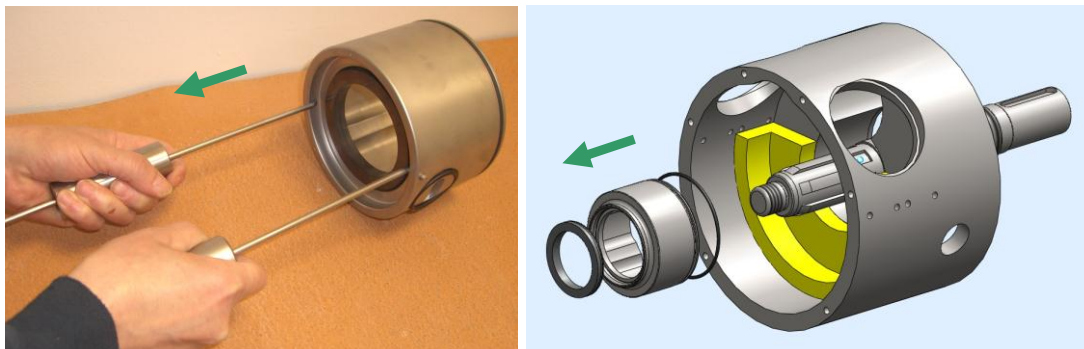
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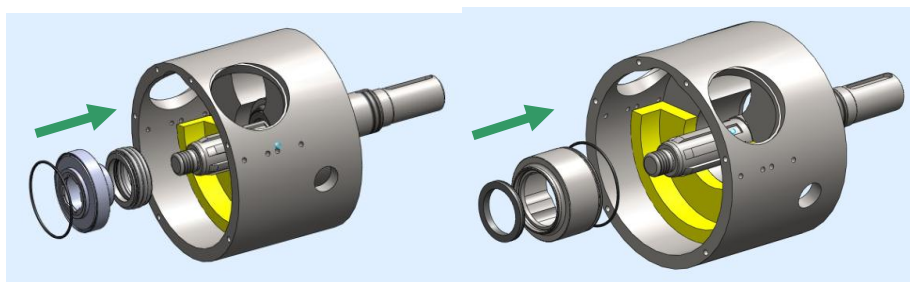
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Now the complete seal system can be pulled out of the back of the pump housing for replacement or inspection. Use removal tool S60-9003-12.

6. Assembly of mechanical seal system



Fit the seal face in the stainless steel static part. Fit the bellow into the stainless steel dynamic part.

Depending on where window should be located insert the locking pin in the required position (for window left/right side). Check if all O-Rings are correctly installed. Pre-align the seal housing with the pin mark and push the seal housing to the stop end. Then the pre-assembled dynamic –unite can be fitted to the shaft.



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