

### ABSTRACT

This document will provide the procedure for replacing the Burgmann MG-1 mechanical seals in your HOMA pump.

### PROCEDURE

#### Removal

Damage to the seal faces can occur very easily as the material very brittle. It is best to have the new seal available before proceeding with scheduled maintenance as the seal can be broken upon removal very easily if not handled properly.

- (1) Drain the oil chamber by removing the drain plug or seal probe. The oil chamber may have become pressurized. Care should be taken when removing drain plug. Cover plug with rag when loosening and allow pressure to escape.
- (2) Remove the volute and impeller to access the mechanical seal. On some smaller models the impeller will hold the rotating portion of the seal in place.
- (3) Remove the circlip holding the rotating portion of the seal in place.
  - a. Smaller seals may be removed by hand by grasping by the seal spring and pulling.
  - b. Larger seals will require the use of large flat bladed screw drivers at opposing sides and a gentle even prying to remove. Pry bars may be required as the seal sizes increase.
- (4) The stationary portion of the seal may be removed using a small screwdriver.
  - a. Gently place the screwdriver between the seal material and the casting pushing the screwdriver towards the elastomer. Give the screwdriver a gentle twist while pulling the screw driver towards the end of the shaft.
  - b. If this is insufficient, the pressure cover will need to be removed carefully and the stationary seal pushed out from its seat from behind.

The upper seal will be removed in the same manner as the lower seal.

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## Installation

Keep seals wrapped until they are to be installed. Do not handle seal faces as premature damage can occur due to contamination by the oils from the skin. Use soft lint free tissue to clean the seal faces when necessary.

Installation of new seals may require a few tools to make the job easier:

- a) Rubbing alcohol or similar lubrication that will dry out
- b) PVC pipe cut squarely that will fit over the shaft closely without binding
- c) Snap-ring pliers
- d) A cleaning product to clean parts where mechanical seal elastomer will make contact.

The use of a hammer is not recommended. Oil and grease should not be used as a lubricant for installing mechanical seals, to do so will damage the shaft and seals and will void warranty.

- (1) Clean the seat of the stationary seal location.
- (2) Clean shaft and check for any burrs or surfaces that will damage the elastomer of the seals. **Do not touch the mating surfaces of the seals with your bare hands or fingers use a tissue or other soft lint free cloth when handling the seals.**
- (3) Lubricate the o-ring or rubber cup with appropriate solution.
- (4) Slide the stationary seal down the shaft and press the elastomer into the seat.
  - a) PVC pipe of appropriate size may be used to press the seal in place by hand.
- (5) Lubricate the inside of the bellows with appropriate solution
  - a) For larger seals the shaft should be lubricated as well

Note: Support the lower ring supporting the spring when pushing the seal in place. Failure to do so may cause the seal components to come apart.
- (6) Slide the rotating seal down the shaft with a twisting motion as it is pushed on.
  - a) PVC pipe of appropriate size may be used to press the seal in place by hand
  - b) Care should be taken so that when the seal faces mate it is done gently, as the faces could shatter if they are mated abruptly
- (7) The pressure cover can be reinstalled if unassembled and the lower seal be installed by following the same procedure as for the upper seal.
- (8) Fill the oil chamber with the proper oil type and quantity and check for leaks.
  - a) Rotate the shaft by hand while checking for leaks.