

Dismantling the Pump



Pumps which convey hazardous liquids must be decontaminated before dismantling the pump. The appropriate personal protection equipment should be used.

Tools required: Open ended spanner - 13 mm across flats, Engineers pliers, Hide mallet, Torque wrench with socket - 22 mm across flats, Screwdriver - medium flat blade, Loctite activator 7649, Loctite retainer 242.



1) Isolate the motor (1) from the power supply.

2) Disconnect the inlet, outlet and flush connections.
Risk of contact with liquid being pumped.

3) Unscrew the clamp ring handle (8) by several turns and lift the clamp ring (7) over the flanged adaptor (5).

4) Remove the cover (18).

5) Unscrew the impeller locknut (22) with the socket (right hand thread). The impeller joint ring (40) is now exposed and can be inspected.

6) Slide the impeller (20) forward off the shaft (14) by maintaining an even pressure. Hitting the impeller can cause serious damage.

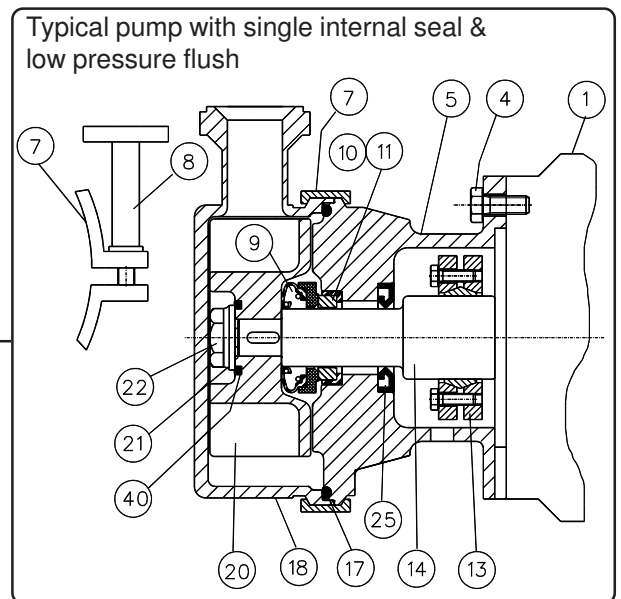
7) Remove the key (21) from the pump stub shaft (14).

8) The mechanical seal (9) is now accessible. Clean the shaft and slide the seal forwards off the shaft.

9) The face of the seal is now exposed and can be inspected.

10) To remove the seal seat assembly (10,11), unscrew the flush connectors (where fitted). Remove the flanged adaptor (5).

11) The seal seat (11), seat ring (10), and rotary seal (25) (where fitted) can be inspected.



Reassembling the Pump

1) Locate the seal seat assembly (10,11) and the rotary seal (25) in the flanged adaptor (5).

2) Fit the flanged adaptor (5) onto the motor (1) and tighten the flanged adaptor screws (4). Take care during assembly that the seal seat (11) does not contact the shaft (14) and become chipped.

3) Fit the mechanical seal (9) (see page S2).

4) Replace the key (21) in the pump stub shaft (14).

5) Fit the impeller joint ring (40) into the impeller (20) and slide the impeller onto the pump stub shaft (14).

6) Follow the Loctite instructions, and spray the Loctite activator 7649 onto the threads of the impeller locknut (22) and then apply the Loctite retainer 242.

Screw on the impeller locknut (22) (right

hand thread) and tighten with the socket to a torque of 25 Nm.

7) Refit the cover (18).

8) Fit the clamp ring (7) into position and tighten the clamp ring handle (8), ensuring that the clamp ring is correctly located.

9) Connect the inlet, outlet and flush connections (where fitted).

10) Before start-up, the flush (where fitted) must be running and the pump should be flooded with liquid at the seal faces, as dry running will cause overheating and may damage the mating surfaces.

Replacing the Seal - type 6D or 2100

ATTENTION Mechanical seals are precision products. Installation should be carried out to the laid down procedure. Seals should be installed in a clean environment with particular care given to the lapped and polished seal faces.

Notes: - For information on the seal fitted in your pump, please refer to the data sheet.

Tools required: Diluted soft soap solution, Seal fitting tube & sleeve (recommended for 2100 seal).

Removing the old seal:

Dismantle the pump and seal as described on page S1.

Fitting the new seal:

- 1) Ensure all components are clean. Any sharp edges on the shaft shoulder or keyway should be removed.
- 2) Fit the seat (2) into the seat ring (3) to form the seat assembly.
- 3) Press the seat assembly fully down into the recess in the flanged adaptor (1). Ensure that it is at right angles to the axis of the shaft and that the lapped sealing surface will face **towards** the mechanical seal assembly.
- 4) Fit the flanged adaptor (1) onto the motor and tighten the flanged adaptor screws. Take care during assembly that the seal seat does not contact the shaft and become chipped.
- 5) Ensure that the rubber bellows (4) are not cut or damaged during assembly.
- 6) Lubricate the inside sleeve of the bellows with a very slight smear of diluted soft soap solution. **Never use mineral oil, grease, vaseline, etc.**, as it is **not** hygienic and may degrade the rubber.
- 7) For Type 6D seals, ensure that the bellows (4) is fully inserted into the seal face (5).
- 8) Slide the seal unit onto the shaft until it makes contact with the seat (2), making sure that the bellows (4) is fully compressed - for type 2100 seals a fitting tube (6) is recommended for this operation.
- 9) Reassemble the pump as described on page S1.
- 10) Before start-up, the flush (where fitted) must be running and the pump should be flooded with liquid at the seal faces, as dry running will cause overheating and may damage the mating surfaces.

