H pump range - replacing the seal:
cartridge seal type 5620D

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: Torque wrench with socket - across flats 28mm (M16 locknut), 34mm (M24 locknut),46mm (M36 locknut), Engineers pliers, Hide mallet, Open ended spanner - across flats 17 & 19mm, Special centering clips, Allen key - 2.5mm, 3mm & 10mm across flats.

1) Isolate the motor (*1*) from the power supply.
2) Disconnect the inlet, outlet and quench connections. Remove the shaft guard *(15)*.

Risk of contact with liquid being pumped.

ATTENTION 3) Refit the seal cartridge centering clips (these were supplied with the instruction manual).

4) Unscrew the clamp ring handle (*8*) by several turns and lift the clamp ring (*7*) over the flanged adaptor (*5*).
5) Remove the cover (*18*).
6) Unscrew the impeller locknut (22) with the spanner (right hand thread).
7) Slide the impeller vane plate (*20*) and (where fitted) the back plate (*19*) forward off the shaft (*14*) by maintaining an even pressure. Hitting the impeller can cause serious damage.
8) Remove the key (*21*) from the pump stub shaft (*14*).
9) Loosen the cartridge drive collar grub screws, ensuring that they are clear of the cartridge bore.
10) Remove the housing plate screws *(6)*, and gently pull the housing plate and cartridge assembly out of the flanged adaptor.
11) Remove the cartridge screws *(44)* to release the cartridge from the housing plate. The cartridge can be inspected.
12) Remove the flanged adaptor *(5)*.

Reassembling the Pump

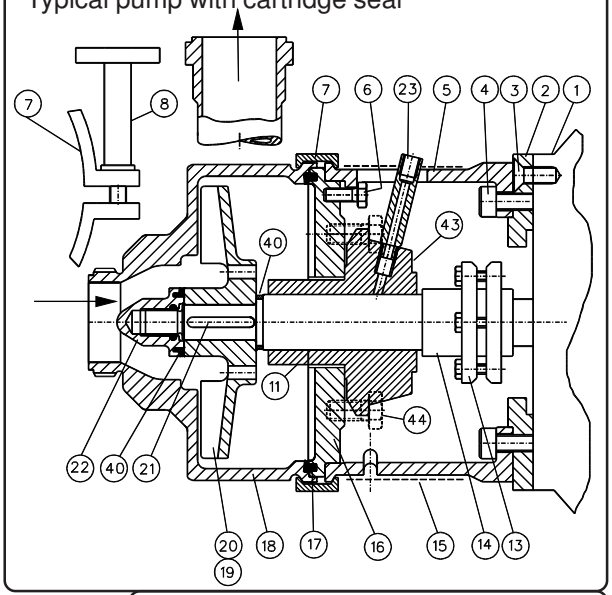
1) Replace the flanged adaptor *(5)*.
2) Fit the cartridge seal *(43)* (see page S2).
3) Refit the key (*21*) into the pump stub shaft (*14*) and refit the impeller joint ring *(40)*.
4) Slide the impeller back plate (*19*) (where fitted) and the vane plate (20) onto the pump stub shaft.
5) Screw on the impeller locknut (*22*) (right hand thread) and tighten to the specified torque (see table).
6) Refit the cover (*18*).
7) Fit the clamp ring (*7*) into position and tighten the clamp ring handle (*8*), ensuring that the clamp ring is correctly located.
8) Connect the inlet, outlet and quench.

ATTENTION Remove the seal cartridge centering clips before start-up.

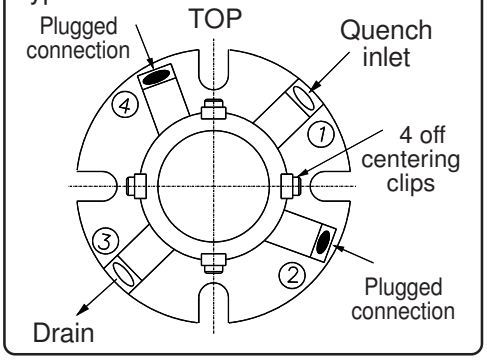
9) Refit the shaft guard *(15).*
10) Check that the quench is operating and that the pump is flooded with liquid.

ATTENTION This check should be done after seal installation and after any period of pump shut down. Dry running will cause overheating and may damage the mating surfaces.

Typical pump with cartridge seal



Type 5620D



Pump model	*Locknut torque (Nm)*
H & CH	*90 (M16 locknut)* *140 (M24 locknut)* *180 (M36 locknut)*

Replacing the Cartridge seal - type 5620D

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.

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

Tools required: Diluted soft soap solution, Allen key - 2.5mm, 3mm & 10mm across flats, Open ended spanner - across flats 17 & 19mm, Special centering clips.

Removing the old seal:

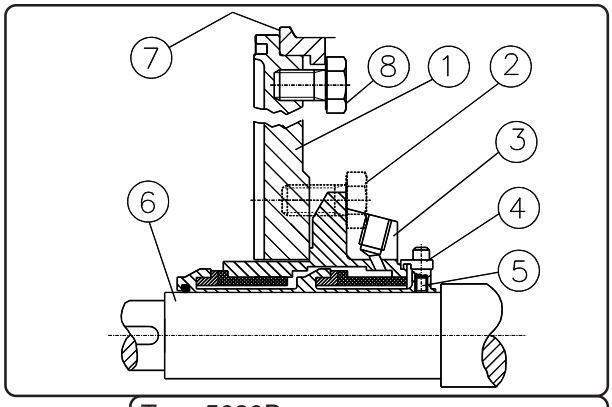
Dismantle the pump and seal as described on page S1.

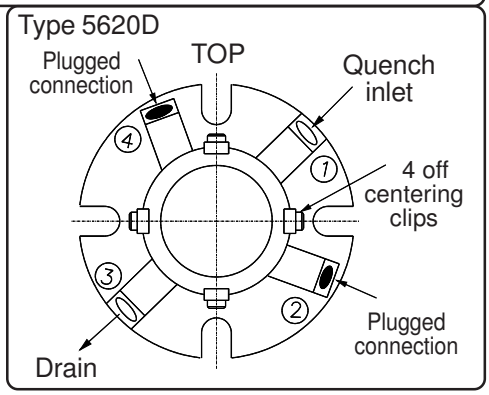
Fitting the new seal:

1) Ensure all components are clean. Any sharp edges on the shaft shoulder or keyway should be removed.
2) If the cartridge is new, carefully remove the protective coating. Do NOT remove the centering clips *(4)* yet.
3) Ensure that the cartridge grub screws are clear of the cartridge bore, and check that the gland plate gasket is undamaged and in position.
4) Fit the cartridge *(3)* onto the housing plate *(1)* with the cartridge screws *(2)* - DO NOT TIGHTEN at this stage.
5) Lubricate the shaft *(6)* with a very slight smear of diluted soft soap solution. **Never use mineral oil, grease, vaseline,** etc, as it is **not** hygienic.
6) Slide the cartridge and housing plate assembly *(3,1)* onto the shaft *(6)*, locating the housing plate into the flanged adaptor *(7)*.
7) Fit the housing plate screws *(8)* - DO NOT TIGHTEN at this stage.
8) Fully tighten the cartridge screws *(2)* with an even pressure by tightening in an alternating pattern ¼ turns, 180° apart - do not overstress or distort the gland plate.

   For ease of access to the cartridge screws *(2)*, the cartridge and housing plate assembly *(3,1)* can be turned within the flanged adaptor *(7)*.
9) The housing plate *(1)* must be positioned with 'TOP' at the 12 o'clock position as shown in the diagram. The housing plate screws *(8)* can now be fully tightened.
10) Ensure that the quench inlet and drain connections are positioned as shown in the diagram.
11) Hold the housing plate *(1)* firmly in the flanged adaptor and lightly and evenly tighten the drive collar grub screws *(5)* to centralise the cartridge on the shaft. Then fully and evenly tighten the grub screws to a torque of 3 Nm.

ATTENTION Accurate tightening will avoid damage to the grub screws and eliminate seal movement on the shaft.





12) Remove and keep the centering clips for future use.

⚠ Centering clips must be removed before rotating the shaft by hand or starting the pump.

13) Connect the quench inlet and drain connections as shown in the diagram. Note: the connections fitted with plugs should not be removed.
14) Turn the shaft *(6)* by hand to ensure free rotation.
15) Reassemble the pump as described on page S1.
16) Before start-up, check that the quench is operating and that the pump is flooded with liquid.

ATTENTION This check should be done after seal installation and after any period of pump shut down. Dry running will cause overheating and may damage the mating surfaces.