

Prepared by:-	M.Davies	Approved by:-		Date: 15/09/14
REV NO:-	1			
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These instructions cover both HTP pumps mounted on a reservoir as illustrated below in fig 1 and also HTP-PU pumps which are supplied without a reservoir – see separate section at the end of these instructions for further details of requirements.

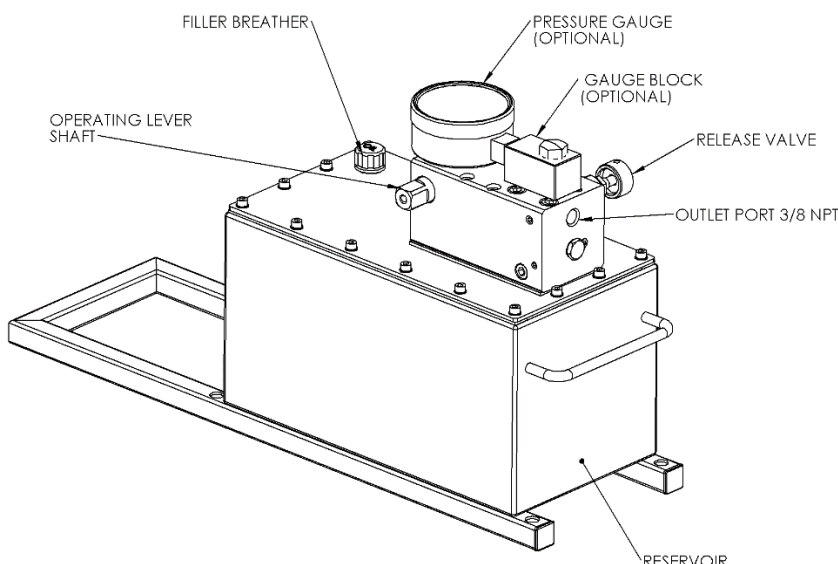


Fig 1. HTP pump features

SAFETY PRECAUTIONS.

- All equipment used must be rated for the same operating pressure. DO NOT mix high and low pressure components in the same circuit.
- Ensure the pump reservoir is of sufficient capacity for the required operation. This is to avoid the risk of injecting air into the pressurised system.
- Do not exceed the rated pressure capacity of the pump. The pump is fitted with a factory set pressure relief valve set to approximately 20% above the maximum pressure to prevent overload. Do not attempt to adjust this valve.
- Use a pressure gauge wherever possible. The optional pressure gauge is easily fitted to the pump.
- Only use hoses and fittings in good condition. A factor of safety on hoses of a minimum of 2 and preferably 4 is recommended.
- Visually inspect all equipment before use for signs of damage or wear. Any defective or suspect equipment should be repaired or replaced immediately.

• **SELECTION TABLE**

Model No.	Max pressure (bar)	Low pressure displacement (cm ³)	High pressure displacement (cm ³)	Optional pressure gauge kit
HTP100	100	49	20	HTP100GK
HTP300	300	49	7	HTP300GK
HTP500	500	49	4	HTP500GK
HTP700	700	49	3	HTP700GK
HTP1000	1000	49	2	HTP1000GK

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OPERATING FLUIDS

The HTP pump will operate with hydraulic oil, lubricating oil, water and a variety of other fluids compatible with NBR seals. For the use of other fluids, please consult Hi-Force, as special seals may be required.

PREPARATION.

Fill the pump reservoir to within approximately 25mm of the top with clean fluid of the chosen type.

Fit the hose to the pump outlet using suitable pipe sealant on the threads or PTFE tape on the threads. The outlet port thread is 3/8" NPT. Tighten to 2-3 turns from finger tight condition.

Fit the operating lever to the square pump shaft at a suitable angle. Ensure that the lever is free to turn through its full operating arc and does not hit any obstruction. Secure with screw and washer provided.

PRIMING THE PUMP

- Open the release valve by turning anticlockwise and operate the pump handle several times until all sounds of air bubbles in the reservoir cease and the pump operates smoothly.
- Close the release valve by turning fully clockwise. Do not use excessive force or any tools. Direct the free end of the hose into a suitable container and operate the pump lever until bubble free fluid flows out of the end of the hose. Open the release valve.
- Connect the free end of the hose to the system to be tested.
- Precautions must be taken to vent air out of the system under test. The procedure for this will vary depending on the system in question. It can be very dangerous to pressure test a system containing air pockets.

OPERATION

- Once all preparations have been made, close the release valve by turning fully clockwise. Do not use excessive force or any tools.
- Operate the pump lever and the pump will start to operate in low pressure mode. When the pressure reaches approximately 20 bar the handle effort will become quite high. At this point stop downwards motion of the handle and lift the handle slightly at any point in the pump stroke. This will cause the pump to switch over into high pressure mode. The lever effort will then be much lower, but the displacement will then be also lower as in the table above. NOTE: It will not be possible to switch the pump into high pressure mode before the 20 bar changeover pressure is reached.
- To release pressure turn the release valve anticlockwise. The flow can be regulated by varying the degree of opening of the release valve.
- Note: although the pump is fitted with a factory set pressure relief valve, do not rely on this device to prevent over pressurisation. Use a suitable pressure gauge instead.

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