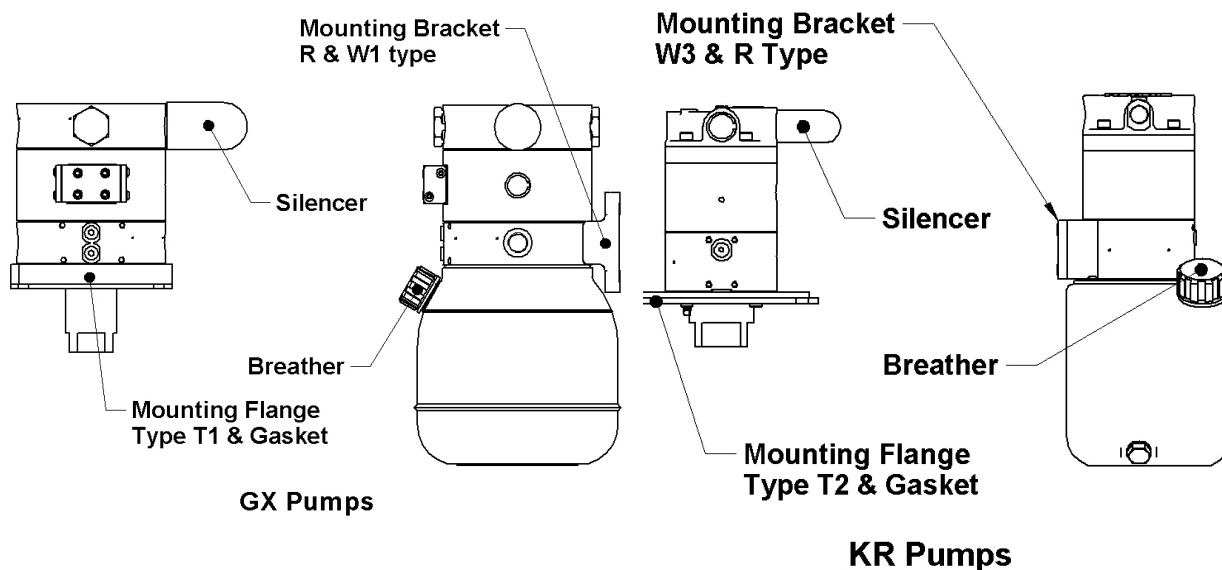


Installation

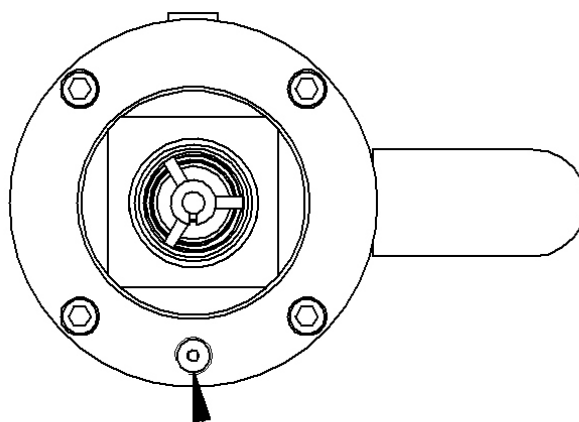
The HEYPAC GX and KR series pumps are rugged, high quality products and their long service life can be assured by correct installation.



Installation

1. Attach mountings, if supplied with pump, as shown using bolts supplied.
2. R1, R2, R5 and R5ST reservoir equipped units must be mounted with their axis vertical, with reservoir below pump. R3 and R4 reservoir equipped units should be mounted with their axis horizontal with foot mounting bracket below the pump. All other units may be mounted to suit the application.
3. A suitably sized air filter (25 micron rated) regulator with auto drain *must* be connected as close as possible to the pumps air inlet. The pneumatic drive and control system of the pump are pre-lubricated (& self-lubricating), so an air line lubricator is *not* required. If the air supply already has a lubricator fitted and it is not possible to be removed then two matters must be considered; a) the air line lubricant must always be present otherwise premature wear of air valve seals will take place and the air valve may malfunction, b) the air-line lubricant must be of adequate lubricity, most air-line lubricants are too thin. If for any reason lubrication has ceased the air valve should be re-lubricated with the correct grade of HEYPAC grease.

4. A suitable compressed air dump valve should be fitted immediately before the air filter regulator. It is recommended that when the pump is not in use the compressed air is vented to atmosphere immediately rather than allowing the air pressure to gradually decay over a period of time. This will ensure trouble free re-starting of the pumps after long periods of inactivity.
5. A suitable flow control valve must be fitted to prevent over speeding if the pump is to be used at or near maximum flow rate.
6. As hydraulic pressure cannot be reduced by relieving air supply pressure, it may be convenient to incorporate a pressure release valve downstream.
7. A suction strainer is supplied with all pumps that are mounted to reservoirs. The standard suction strainer is rated at approximately 150 micron. A 40 micron rated strainer is available as an option. Please note that pumps without reservoirs (models OO, T & W) are supplied without strainers. An extended suction tube kit, which includes a strainer, can be supplied for T configuration pumps that are to be tank mounted. Suction lines should be of a size to handle twice the rate of output flow as the pump only draws fluid in on alternate strokes.
8. Reservoirs must be fitted with breathers and filled with *CLEAN* fluid. With R type units it may be easiest to remove the reservoir from the pump, fill the reservoir and then refit the reservoir to the pump.
9. HEYPAC pumps will run on a wide variety of fluids, but it is the responsibility of the user to ensure that the system fluid is compatible with the pump. Fluids that have been successfully pumped include: Mineral oils, vegetable oils, water glycol solutions, phosphate and silicate esters, liquefied petroleum gases, water and many others.
10. For non R type units the seal drain connection must be piped to the system reservoir. This is integral on R type pumps.



Seal Drain

11. In addition to the suction strainers fitted to some models of pump it is *recommended* that pressure and return line filters be fitted to the pump. A range of 10 micron rated return line filters are available to suit KR and GX series pumps.
12. Due to the pumps' ability to maintain pressure at zero flow we *recommend* the use of either zero leak or ultra-low leakage directional valves, such as poppet construction type, to protect the pump from excessive cycling, premature wear, unnecessary energy consumption and reduce noise levels.

Start Up

1. The reservoir may need to be re-filled several times during initial starting. It is safe and sensible practice to fill the system and purge it of air at relatively low pressure.
2. Increase air pressure from zero until the unit pumps steadily (about 1.5 bar). Pay close attention to the oil level in reservoir at all times, stop and re-fill if the fluid level approaches the minimum mark. Cycle any control valves to promote purging of air from cylinders or motors. Pause occasionally to allow air in the fluid to clear.
3. Some systems may require an air vent between the pump & other parts of the circuit.
4. Ensure that the reservoir is not overfilled at any time, such that retraction of cylinders etc. will cause overflow.
5. Finally, gradually increase the air pressure until the required hydraulic working pressure is achieved.

Operation

1. Do not exceed the rated output of the unit.
THE MECHANISM IS ROBUST ENOUGH TO WITHSTAND SHORT PERIODS OF OVERSPEEDING, BUT CONTINUED ABUSE WILL EVENTUALLY CAUSE FAILURE.
2. Use as low an air pressure as is practical (within the limits of 1.5 to 7 bar for GX series pumps and 1.5 to 8.5 bar for KR series pumps). This will save energy, achieve quieter running and extend service life.
3. Do not allow hydraulic over pressure to be fed back into the pump from any pressure intensifying effects which may be present in the circuit. (e.g. differential ram areas and the like)