

INSTRUCTION SHEET

PULSATION DAMPENERS



Filling and Gauging Instructions



PART NUMBER	DESCRIPTION
30940	Complete Filling and Gauging Assembly
30941	Hex wrench
6099	Pressure Gauge, 1/8" BSP, 3500 psi, backmount

INSTALLATION

⚠ WARNING

Do not charge pulsation dampeners with oxygen. Oxygen may cause an explosion causing personal injury, death or property damage.

1. Use nitrogen only when charging pulsation dampeners, DO NOT USE OXYGEN.
2. Use proper charging tools to charge pulsation dampeners.
3. Charge pulsation dampener within specifications stated on data sheet to assure proper pulsation dampening and prevent failure of bladder.

SELECTION: The pulsation dampener should be selected to match the flow and pressure requirements of the system and satisfy the liquid compatibility.

INSTALLATION: The pulsation dampener should be mounted directly onto the pump discharge manifold for optimum pulsation dampening and to avoid system vibration damage.

OPERATION: The pulsation dampener should be precharged with **dry nitrogen only**.

A standard pulsation dampener is precharged to 450 psi, however, it may be adjusted to offer more precise control of pulsation in critical applications such as reverse osmosis.

At a temperature of 70° F, optimum dampener performance is obtained when the precharge is calibrated at 50% of the system operating pressure.

Note: When operating at lower temperatures, the precharge pressure should be 15% higher, or 65% of system operating pressure. When operating at higher temperatures, precharge pressure should be 15% lower, or 35% of the system operating pressure.

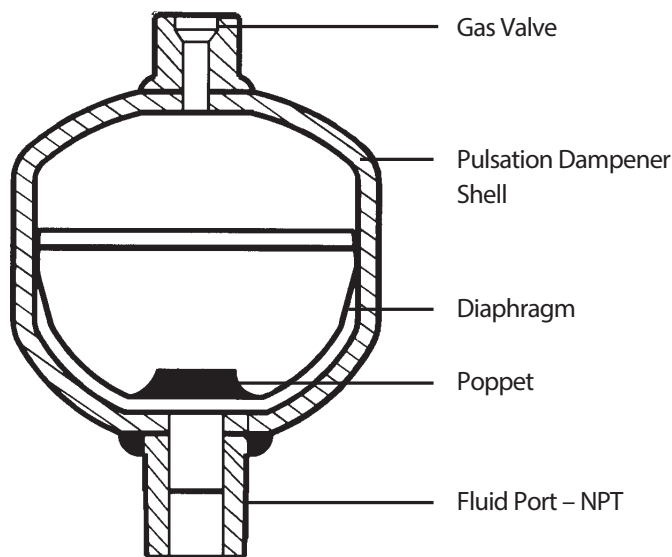
Note: Up to 50 psi of the precharge pressure can be lost during the checking of your precharge.

FILLING AND GAUGING

The following steps are for checking the precharge of the pulsation dampener and recharging if there is a loss of pressure or a need for adjustment.

NOTICE: A gas pressure regulator must be mounted between the nitrogen tank and the hose connection from the Filling and Gauging Assembly. The regulator will enable you to regulate the precharge pressure and prevent excessive pressure from being transmitted directly to the pulsation dampener. OVER PRESSURIZATION WILL VOID THE WARRANTY.

1. Before checking your precharge, **system pressure should be at zero**. TURN SYSTEM OFF.
2. Slightly loosen the sealed valve at the top of the pulsation dampener using a 6mm long handled hex wrench. Thread on the Filling and Gauging Assembly hand tight.
3. Be certain the side bleed valve on the Filling and Gauging Assembly is closed.
4. Slowly open the large "T" valve at the top of the gauging assembly until completely open. The gauge on the assembly will read the precharge pressure of the pulsation dampener.
5. Adjust the gas pressure regulator to its lowest pressure setting (counter-clockwise). Open the valve on the nitrogen tank by turning the knob counter-clockwise. Read the tank pressure on the first gauge.
6. If the reading on the gauge assembly is 50% of the system pressure, close (clockwise) the top "T" valve and proceed to step 9.
7. If the precharge is too high, keep the top "T" valve open and slowly open the small "T" valve on the side of the gauging assembly to bleed off some pressure.
8. If the pressure is less than 50% of the system pressure, slowly open (clockwise) the gas regulator valve until the desired precharge is reached on the second gauge.
9. When the gauge reads the required precharge, close the "T" valve on the top of the gauging assembly to lock the precharge in the pulsation dampener.
10. Back off (close) the gas regulator.
11. Proceed with opening the small side "T" valve on the gauging assembly to relieve (bleed-off) pressure in the assembly and on the second gauge on the gas regulator.
12. Close the side "T" valve on the Filling and Gauging Assembly and remove the assembly from the pulsation dampener.
13. Tighten the dampener sealed valve and resume operation.



Cat Pumps

Technical Services Department

PN 99SHT001 Rev B 21079 4/21