

# SHURFLO® ACCUMULATOR TANK: MODEL 182

## INSTALLATION MANUAL

The SHURFLO Accumulator tank is a bladder type pressure storage vessel and/or pulsation-dampening device designed to hold water under pressure. The accumulator tank provides additional water storage to assist the pump in meeting the total demands of the system. It extends pressure switch-controlled pump life by reducing pump on-off pulsation.

### NOTES

**This product is not recommended for use with a 4900 or 5900 Series Smart Sensor Pump.**

■ 40 psi [2.7 bar] pressure for long-term storage, shipping, or during system non-use.

■ It is recommended the pre-charge be checked seasonally, or any time the accumulator does not appear to be functioning properly. Temperature extremes and changes in altitude can affect accumulator pressure and performance. Use a standard tire pressure gauge to check the pressure. The valve stem cap **MUST** be tight to prevent air leakage.

■ The accumulator may be placed anywhere in the pressurized side of the plumbing. It should be installed

after the pump and before any filters or check valves that can add backpressure to the pump or system. The ports are nondirectional in flow and do not have to be plumbed in line (one side can be capped).

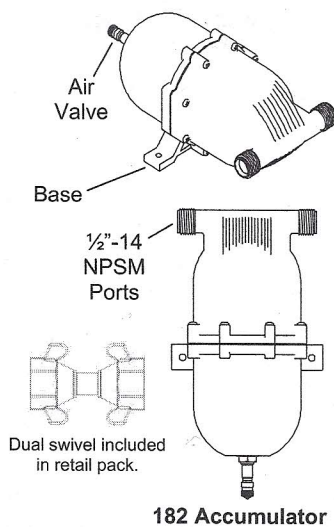
■ The accumulator can be mounted in any position. However, for complete sanitizing/winterizing, the recommended mounting position is with pre-charge valve stem up. Do not freeze or mount near a high heat source.

■ Threaded fittings (plastic/nylon only) should be torqued approximately 1/2 to 1 turn after hand-tightened. Never exceed 6 ft/lbs [88 Nm] of torque on the ports. Plumb the system using high pressure (2x pump rating), braided, flexible tubing to minimize vibration/noise.

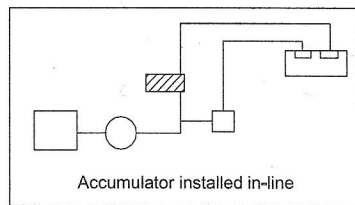
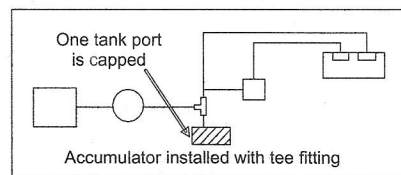
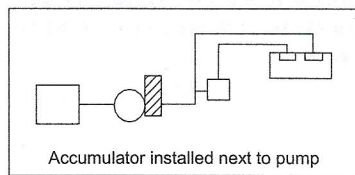
### RV/MARINE APPLICATIONS WITH PRESSURE SWITCH-CONTROLLED PUMPS

The accumulator contributes to longer pump life, less noise, less amperage draw, and reduced water pulsation. The most efficient use of the accumulator occurs with the pre-charge set at the **SAME** pressure as the pump's pressure switch "turn on" setting. Typically, a 45 psi [3 bar] pump will turn on around 30 psi [2.07 bar]. Therefore, the pre-charge should also be 30 psi [2.07 bar]. The pre-charge **MUST** be set in a "static" condition (pump off and at least one water fixture opened).

Depending on pre-charge pressure to the accumulator, in relation to the pump turn on/off pressures, stored liquid is about 2 to 4 oz. [60-120 ml]. If accumulator tank pre-charge exceeds pump turn on pressure, the liquid volume is reduced.



### Typical Accumulator Installations



**In-line installation:** Screw in included fittings on tank and cut 1/2" flex line on outlet side of pump. Use hose clamps to tighten hose to fittings.

**Tee installation:** Water does not need to go through accumulator. Cap one end of tank and install as shown. Tank still adds pressurized volume to system.



## PRODUCT SPECIFICATIONS

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|                                    |                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Maximum Working Pressure:</b>   | 125 psi [8.6 bar]                                                                         |
| <b>Pre-Charge Pressure:</b>        | Models 182-100 & 182-200: 30 psi [2.07 bar]<br>Models 182-102 & 182-202: 20 psi [1.4 bar] |
| <b>Total Volume: (gas/liquid):</b> | 21 oz. [620 ml]                                                                           |
| <b>Temperature Range:</b>          | 34-120°F [1-49°C]                                                                         |
| <b>Diameter:</b>                   | 3 3/4" [95 mm]                                                                            |
| <b>Length:</b>                     | 8 3/4" [22 cm]                                                                            |
| <b>Listings:</b>                   | CSA & NSF listed                                                                          |
| <b>Housing Material:</b>           | Nylon                                                                                     |
| <b>Bladder Material:</b>           | Butyl                                                                                     |
| <b>Ports:</b>                      | 1/2-14NPSM-Male                                                                           |
| <b>Mounting Bracket:</b>           | Two 7/32" [5.3 mm] Ø holes at 4-1/16" [103 mm] centerline apart                           |

## WATER HAMMER APPLICATIONS

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When used as a dampening device/water hammer or noise suppressor, the pre-charge should be set at the operating (dynamic) pressure. Place a gauge in the offending plumbing where the accumulator can be mounted. Adjust the valve so the noise is generated and read the pressure. Set the pre-charge to the observed pressure, remove the gauge, and install the accumulator. Refer to SHURFLO Service Bulletin #1024 for more application information.

## WINTERIZING

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To winterize, drain all water from the system. Blow system out with low-pressure air, or add potable water anti-freeze. **NEVER** use automotive anti-freeze. Death or severe injury can occur.

## TESTING AIR PRESSURE

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Check air pressure with pump off and one or more faucets open [no water pressure in the system]. Adjust pressure as needed. If unit leaks water from air valve or does not hold pressure, unit must be replaced.

**NOTE: There are no replacement parts or kits for this accumulator. If it is not working, it must be removed or replaced.**

## TROUBLESHOOTING

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### DOES NOT FUNCTION; PUMP CYCLES RAPIDLY

Check air pressure. Add or remove air as necessary.

### WATER LEAKS FROM VALVE

Diaphragm is torn or has a hole. Replace accumulator.

### DOES NOT HOLD AIR PRESSURE

Screws loose, air valve, torn/hole in diaphragm. Replace accumulator.

### LEAKS FROM FITTINGS OR PORTS

Check fitting connection. Ports must seal on internal port taper, Ports should not be sealed on threads with NPT fittings



## WATER PURIFICATION

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