



Installation Instructions WHV Series Thermal Expansion Tank

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Operation

This thermal expansion tank is designed to maintain safe water pressures in a domestic water heating system that utilizes a backflow preventer or check valve. It utilizes a butyl rubber diaphragm and polypropylene liner to separate the system water from the tanks inner walls and pre-charge. The system connection is all stainless steel to prevent corrosion and the tank is finished with an appliance quality paint to minimize external corrosion.

What it does

Adding a backflow preventer, water meter with a check valve, or any other no return valve to a domestic water heating system creates a closed loop system. When water heats up, it expands which can cause unsafe operating pressures and cause nuisance operation of the water heaters safety relief valve.

Adding a thermal expansion tank to the cold water inlet of the water heater creates a reservoir for the expanded water. Water safely enters the tank and is released back into the system on demand. This eliminates dripping relief valves and more importantly makes for a safer system.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

WARNING

This product must be installed by a qualified professional following all local and national plumbing and electrical codes. Read and understand fully the instructions included here in this manual. This product must be periodically inspected by a qualified professional for any signs of corrosion or leakage and replaced immediately if these signs are present. Failure to follow these instructions may result in serious injury or death and or property damage and will void the product warranty.

WARNING

Explosion Hazard!

This expansion tank is designed for water storage at a maximum pressure of 150 psi and a maximum temperature of 200°F. A properly sized pressure relief valve set at a maximum of 150 psi must be installed on the water heater. This tank is shipped with a pre-charge of 40 psi and any adjustment to the pre-charge must be done prior to installation and at ambient temperature. Do not adjust the pre-charge of this tank if the product is corroded or damaged or shows any signs of diminished integrity. The maximum allowable pre-charge in this expansion tank is 80 psi. Failure to follow these instructions is UNSAFE and may result in serious injury or death and or property damage.

WARNING

This tank is intended for use on potable water systems only and any other use may be dangerous and will void the warranty. This products performance and lifespan can be significantly impacted by aggressive water conditions. A water test should be conducted specifically looking for corrosive water, acids and other relevant water contaminants which if present must be treated appropriately. The system piping must be properly grounded to earth. A dielectric union may be required in the system. Failure to follow these instructions may result in serious injury or death and or property damage.

CAUTION

This expansion tank and the associated piping may in time leak. This tank must be installed in a location where water leakage will not cause property damage and there must be means for adequate drainage. This tank must not be installed in a location that is subject to freezing. This tank must be installed in the vertical position. The manufacturer of this product is not liable or responsible for any water damage associated with the installation and or failure of this product. Failure to follow these instructions may result in personal injury or property damage.

WARNING

CALIFORNIA PROPOSITION 65 WARNING!

This product contains a chemical known by the State of California to cause cancer and birth defects or other reproductive harm.

(California installer-California law requires that this notice be given to the consumer/end user of this product.)

For more information, contact the manufacturer at www.flexconind.com.

Tank Specifications

Model	Capacity Gallons	Maximum Acceptance Volume	System Connection	Dimensions (inches)		Weight (lbs)
				Diameter	Height	
WHV 50	15	6.0	1" FNPT	16	21.7	32
WHV 75	20	8.0	1" FNPT	16	28.8	39
WHV120	33	13.3	1" FNPT	16	42.8	57
WHV165	44	17.7	1 1/4" FNPT	21	36.2	72
WHV320	81	32.6	1 1/4" FNPT	21	62.0	123

Maximum Working Pressure 150 PSI
 All tanks are precharged to 40 PSIG
 All tanks are certified to NSF Standard 61



Note: WHV Series tanks are certified to NSF Standard 61 Cold, but are suitable for temperatures up to 200°F

BEFORE INSTALLATION

Product inspection

Visually inspect the product for any signs of damage that may have occurred during transportation. If the tank is dented, bent or scratched, return the product to the original purchase point for replacement.

Pre-charge adjustment

This expansion tank is shipped from the factory with a pre-charge of 40 psi. Any adjustments to the factory pre-charge must be done prior to initial tank installation and with 0 psi pressure on the system. **DO NOT ADJUST THE PRE-CHARGE OF THE EXPANSION TANK WITH THE SYSTEM UNDER PRESSURE!**

The expansion tank should be pre-charged to the incoming system water pressure but must not exceed 80 psi.

To adjust tank precharge

Remove the protective cap from the air valve.

Check the tank pre-charge pressure using a standard tire pressure gauge.

If required add air to the tank using a manual bicycle tire pump until the proper pre-charge pressure is reached.

Replace the protective cap on the air valve.

WARNING This tank must be installed according to your local plumbing code. It should be installed on the cold water inlet to the water heater. A 150 PSI relief valve must be installed in the water heater. A pressure reducing valve may also be required if the incoming water pressure exceeds 80 PSI. The expansion tank, piping, and your connections may in time leak. Select a location where a water leak will not damage the surrounding area. The manufacturer is not responsible for any water damage in connection with this expansion tank.

WARNING Before beginning installation, disconnect or shut off the electrical power source to the water heater. Shut off the water supply to the system and remove all water pressure from the system. Failure to follow these instructions may result in serious injury or death and or property damage.

INSTALLATION

Install the expansion tank by teeing into the incoming water line to the water heater between the water heater and the backflow preventer or check valve (see Fig. 1). Adequate thread sealant (pipe dope) must be added to ensure a leak free installation.

Before turning on the water supply to the system, open a hot water faucet to prevent any damage to the water heater and remove air from the system piping.. Turn on the water supply and inspect the installation for water leaks paying close attention to the connection between the expansion tank and the piping.

Follow the water heater manufacturer's instructions for proper start-up of the heater and the system.

Typical Installation

Figure 1

