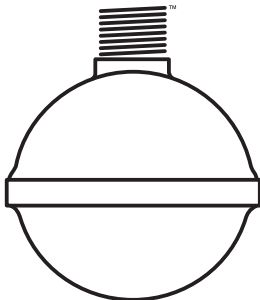




THERMAL EXPANSION TANK

FOR POTABLE WATER
INSTALLATION & OPERATION INSTRUCTIONS

Model ST-1



NOTE: Inspect for shipping damage. Notify freight carrier or store where purchased immediately if damage is present. To avoid risk of personal injury and property damage, if the product appears to be malfunctioning or shows signs of corrosion, call a qualified professional immediately. Current copies of the product manual can be viewed at www.amtrol.com. Use proper safety equipment when installing.



THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO POTENTIAL PERSONAL INJURY AND OTHER HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO REDUCE THE RISK OF PERSONAL INJURY AS WELL AS PROPERTY DAMAGE.

WARNING READ CAREFULLY THE PRODUCT INSTALLATION, OPERATING AND MAINTENANCE MANUAL. FAILURE TO FOLLOW THE INSTRUCTIONS AND WARNINGS IN THE MANUAL MAY RESULT IN SERIOUS OR FATAL INJURY AND/OR PROPERTY DAMAGE, AND WILL VOID THE PRODUCT WARRANTY. THIS PRODUCT MUST BE INSTALLED BY A LICENSED PROFESSIONAL. FOLLOW ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS, IN THE ABSENCE OF SUCH CODES, FOLLOW THE CURRENT EDITIONS OF THE NATIONAL PLUMBING CODE AND NATIONAL ELECTRIC CODE, AS APPLICABLE.

WARNING This Product, like most Products under pressure, may over time corrode, weaken and burst or explode, causing serious or fatal injury, leaking or flooding and/or property damage. To minimize risk, a licensed professional must install and periodically inspect and service the product. A drip pan connected to an adequate drain must be installed if leaking or flooding could cause property damage. Do not locate in an area where leaking could cause property damage to the area adjacent to the appliance or to lower floors of the structure.

WARNING The recurrence of pressure buildup may indicate that this unit is in need of replacement. Operating a plumbing system in this condition presents the risk of damage and leaks.

WARNING RUPTURE OR EXPLOSION HAZARD. Do not expose Product to freezing temperatures or water temperatures in excess of 140°F. Failure to properly size the product or follow these instructions may result in excessive strain on the system and may lead to product failure, serious or fatal personal injury, leakage and/or property damage. **USE ONLY WITH RESIDENTIAL POTABLE WATER SYSTEMS.**

WARNING A relief valve must be installed to prevent pressure in excess of local code requirement or maximum working pressure of 150 psig, whichever is less. At least once every 3 years or if discharge is present, a licensed professional should inspect the temperature and pressure relief valve and replace if corrosion is evident or the valve does not function. **FAILURE TO INSPECT THIS VALVE AS DIRECTED COULD RESULT IN UNSAFE TEMPERATURE OR PRESSURE BUILD-UP WHICH CAN RESULT IN PRODUCT FAILURE, SERIOUS INJURY OR DEATH AND/OR SEVERE PROPERTY DAMAGE AND VOID THE PRODUCT WARRANTY.**

WARNING Chlorine & Aggressive Water: The water quality can significantly influence the life of this product. You should test for corrosive elements, acidity, total solids and other relevant contaminants, including chlorine and treat your water appropriately to insure satisfactory performance and prevent premature failure.

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY
IMPORTANT GENERAL SAFETY INFORMATION -
ADDITIONAL SPECIFIC SAFETY ALERTS APPEAR IN THE FOLLOWING INSTRUCTIONS.

Application

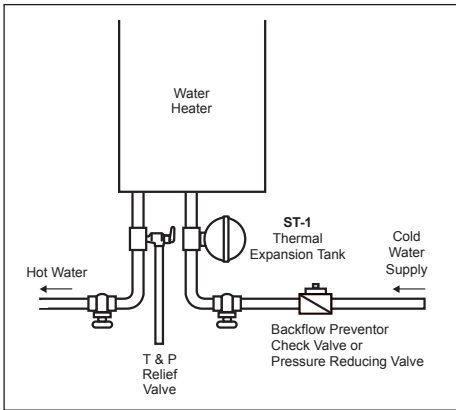
The ST-1 expansion tank is for use on tankless, residential on-demand water heaters with a total water content of 2 gallons or less and a maximum set point of 140°F. Do not use with larger storage-type water heaters, as these will exceed the capacity of the ST-1.

Installation

1. Install the expansion tank on the cold water supply line to the water heater at a point between the water heater and backflow preventer or other one-way device (Figure 1).
2. Once the expansion tank is installed, check the cold water supply line for any leakage. Make repairs if necessary.

4. To relieve initial thermal expansion, slightly open a hot water faucet. Continue until water heater temperature is satisfied. Once heater is at its operating range, no further bleeding of expanded water is required.
5. The water heater and expansion tank will now be operational. The expansion tank will control pressure increases caused by thermal expansion to a level below the water heater relief valve setting. **FOR USE ON TANKLESS RESIDENTIAL ON DEMAND WATER HEATERS WITH A TOTAL WATER CONTENT OF 2 GALLONS OR LESS AND A MAXIMUM SET POINT OF 140° F. NON-ADJUSTABLE PRECHARGE.**

Figure 1. Typical Installation



PSI	Volume (cu.in.)	Weight (lb.)
.00	0.00	.87
20.00	3.92	1.01
40.00	5.77	1.07
60.00	7.43	1.13
80.00	8.17	1.16
100.00	8.63	1.18
120.00	9.00	1.19
140.00	9.27	1.20
150.00	9.27	1.20

3. Before the initial firing of the water heater, open a hot water fixture and draw for one minute to purge air. Next, close and open the fixture in 30 second intervals, repeating three times to flush the tank and piping. Finally, turn the water heater temperature control to desired ending temperature (see water heater instructions). Do not set temperature higher than the expansion tank maximum.

Maintenance

A licensed professional should check the complete system, including the expansion tank, yearly and more frequently as the system ages.

Warranty

ST-1 Model: Seven (7) Year Limited Warranty
Visit www.amtrol.com for complete warranty details.



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