

# FLEXCON INDUSTRIES LIMITED PRODUCT WARRANTY

## PRODUCTS COVERED: THERMAL EXPANSION TANKS MANUFACTURED AND DISTRIBUTED BY FLEXCON INDUSTRIES

**Important:** Read carefully the installation, operating and maintenance instructions manual ("Manual") to avoid serious personal injury and/or property damage and to ensure safe use and proper care of this Product.

**Warranty** - Warranty is extended to all purchasers of the new product. The warranty is non-transferable. Flexcon warrants to the purchaser or first user of the new Product that at the time of manufacture, the Product is free from defect in material or workmanship for one (1) year from the date of manufacture. Any warranty claim must be made within one (1) year (unless another time period is set forth in the Manual), measured from the date of manufacture.

In the event of a breach of the foregoing warranty and upon proper and timely notification to Flexcon, Flexcon will at its option either: make repairs to correct any defect in material or workmanship, or supply and ship either new or used replacement parts or products. Flexcon will not accept any claims for, nor will Flexcon be responsible for, any other costs including labor.

**Exclusions** - This warranty does not cover any failure or problem unless it was caused by a defect in material or workmanship. In addition, this warranty shall not apply:

- If the Product is not correctly installed, operated, repaired or maintained as described in the Manual provided with the Product.
- To any failure or malfunction resulting from (i) misuse or abuse, (ii) improper or negligent handling, shipping (by anyone other than Flexcon), storage, use or operation, or (iii) damages to the tank caused by lightning, floods, fire, freezing or any other environmental condition.
- To damages caused by any unauthorized alteration to the Product, or any attempt to repair tank leaks or parts.
- To any failure or problem resulting from the use of the Product for any purpose other than those specified in the Manual.
- If the Product is used anywhere except the United States, its territories or possessions, or Canada.
- To labor costs, shipping charges, service charges, delivery expenses, administrative fees or any costs incurred in removing or reinstalling the Products.
- To any claims submitted to Flexcon or a Flexcon authorized distributor or dealer more than 30 days after expiration of the applicable warranty time period described in this Warranty;
- To any repair or replacement costs not authorized in advance by Flexcon.

**Warranty Limitations** - All implied warranties including the implied warranties of merchantability and fitness for a particular purpose are specifically disclaimed.

**Limitations of Remedies** - The remedies contained in this warranty are the purchaser's or first user's exclusive remedies. In no circumstances will Flexcon be liable for more than, and purchaser's first user's remedies shall not exceed, the price paid for the Product. In no case shall Flexcon be liable for any special, indirect, incidental or consequential damages, whether resulting from non-delivery or from the use, misuse, or inability to use the Product or from defects in the product or from Flexcon's own negligence or other tort. These exclusions apply regardless of whether such damages are sought for breach of warranty, breach of contract, negligence, strict liability, in tort or under any other legal theory. Excluded damages include, but are not limited to, inconvenience, loss or damage to property, mold, loss of profits, loss of savings or revenue, loss of use of the Products or any associated equipment, facilities, buildings or services, downtime, and the claims of third parties including customers.

**What To Do If You Have a Problem Covered By This Warranty** - You must notify the authorized Flexcon distributor or dealer who sold you the Product within 30 days of the event leading to the Warranty claim. Any covered Warranty service must be authorized by the Flexcon distributor or dealer which sold you the Product. If you do not receive a prompt response, call Flexcon directly at 781.986.2424. Notice of a Warranty claim should be submitted within 60 days of the event leading to the claim by the authorized distributor/dealer to Flexcon at the following address:

Flexcon Industries, Warranty Claim Dept., P.O. Box 782, Randolph, MA 02368

Before Flexcon determines to provide any replacement part or Product, it may, as a pre-condition to making such a determination, require that the warranty claimant ship the Product, postage prepaid, to an authorized Flexcon distributor, or to Flexcon, and provide proof of purchase evidenced by the original sales receipt.

**Replacement Product Warranty** - In case of replacement of a Product or any component part, Flexcon reserves the right to make changes in the design, construction, or material of the substitute components or products, which shall be subject to all of the terms and limitations of this Warranty, except that the applicable warranty periods shall be reduced by the amount of time the warranty claimant owned the product prior to submitting notification or the warranty claim.

Owners Record Keep for later use

Serial number (see tank data label at bottom of tank): \_\_\_\_\_

Model (see tank data label at bottom of tank): \_\_\_\_\_

Date Installed: \_\_\_\_\_

Installer Name: \_\_\_\_\_

Telephone number: \_\_\_\_\_

Retain copy of cancelled check and installation receipt





# INSTALLATION, WARNINGS, AND OPERATION INSTRUCTIONS

## FLEX 2 PRO, POTABLE WATER EXPANSION TANKS

### 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 features a butyl rubber diaphragm and polypropylene liner to separate the system water from the tank's inner walls and pre-charge. The system connection is stainless steel and the tank is finished with an appliance quality paint to minimize corrosion.

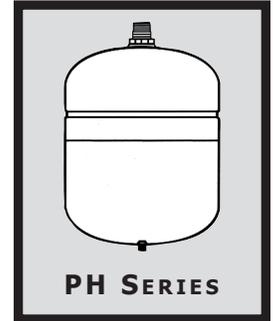
### WHAT IT DOES

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 heater's 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 enters the tank and is released back into the system on demand. The goal is to avoid dripping relief valves and improve the safety of the system.

### ⚠️ 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 and those on the Flexcon website which are updated on a regular basis. This product must be inspected annually 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 in the system. 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. Do not adjust the pre-charge of the expansion tank with the system under pressure. Failure to follow these instructions is UNSAFE and 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 that allows for easy access, visual inspection and where water leakage will not cause property damage. Installation must include a 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 will void the warranty and may result in personal injury 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 product's performance and lifespan can be significantly and adversely impacted by aggressive water conditions. A water test should be conducted at regular, periodic intervals specifically looking for corrosive water, acids and other relevant water contaminants which if present must be treated immediately and appropriately. The system piping must be properly grounded to earth and a dielectric union is recommended in the installation. Failure to follow these instructions may result in serious injury or death and 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](http://www.flexconind.com).



**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

**INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SERIOUS INJURY OR DEATH.**

### ⚠️ CAUTION

**INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY OR RESULT IN PROPERTY DAMAGE.**



**Note:** PH Series tanks are certified to NSF Standard 61 Domestic Hot, but are suitable for temperatures up to 200° F.



300 Pond Street, Randolph, Massachusetts 02368, Call 1.781.986.2424, Fax 1.781.986.2029, [www.flexconind.com](http://www.flexconind.com)

The Reliable Source®

These instructions and warnings are subject to periodic updates on the Flexcon website [www.flexconind.com](http://www.flexconind.com) and should be regularly reviewed by the consumer for important safety and instruction updates.

# 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. **Failure to properly adjust the pre-charge will shorten the life expectancy of the product.**

## 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.

# INSTALLATION

## LOCATION

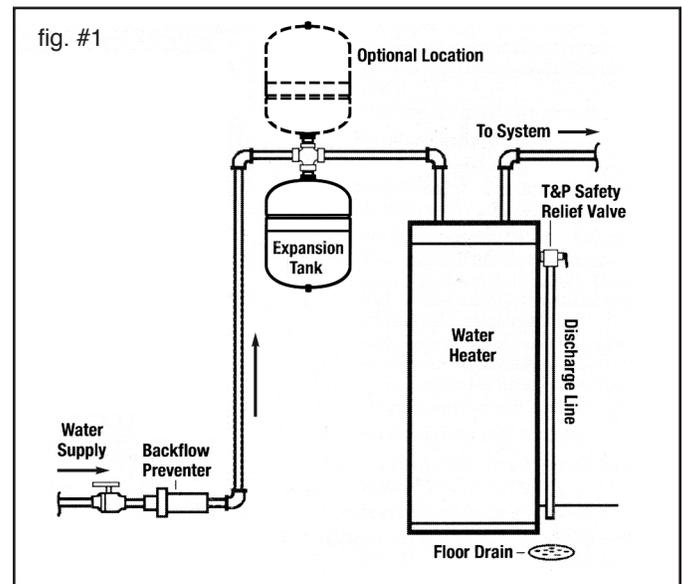
Select a location where a water leak will not cause property damage and provides adequate means for water drainage. This expansion tank and the associated piping may in time leak. The manufacturer is not responsible for any water damage that may occur in association with the expansion tank installation.

**⚠ WARNING** 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.

The tank is designed to be supported by the system piping. Make sure that there is adequate means of supporting the system piping and if necessary add strapping, brackets or pipe hangers.

**DO NOT INSTALL THIS EXPANSION TANK IN THE HORIZONTAL POSITION.**

Install the expansion tank in 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. **DO NOT USE TEFLON TAPE.**



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.

# MAINTENANCE

This expansion tank and the entire system must be checked annually by a qualified professional.

Visually examine the tank and its connection to the system piping looking for any signs of water leakage or corrosion on the exterior of the tank or the connection.

**⚠️ WARNING** If this expansion tank shows any visible signs of leaking, corrosion or rusting, the tank must be replaced immediately to avoid personal injury or property damage. Do not adjust the tank air pressure if there are any signs of corrosion on the tank. Failure to follow these instructions may result in serious injury or death and/or property damage.

# SPECS / DIMENSIONS

## MATERIALS OF CONSTRUCTION

- *Tank:* 16 gauge cold rolled steel
- *Finish:* Appliance quality paint for indoor or outdoor installation
- *Water chamber:* 100% butyl rubber, lined with polypropylene
- *Connection:* Stainless Steel
- *Testing:* High pressure, seam weld, helium, final precharge check
- *Air valve:* Brass valve with o-ring seal
- *Warranty:* One year

## DIMENSIONS & CAPACITIES

Model	Total Tank Volume		A Height		B Diameter    Connection		C	Total Weight	
	gal	liters	in	cm	in	cm		lbs	kilos
	PH 5	2.1	8	11.6	30.00	8.00		20.00	3/4" MNPT
PH 12	4.8	18	14.5	37.00	11.00	28.00	3/4" MNPT	10.0	4.6
PH 25	9.0	32	18.9	48.10	12.50	31.80	3/4" MNPT	15.40	7.0

Maximum working pressure 150 psig. Maximum working temperature, internal & external 200° F. Tank pre-charge 40 psig.  
 NOTE: Ph Series tanks are certified to NSF Standard 61 Domestic Hot, but are suitable for temperatures up to 200° F.

## QUICK SIZING CHART

Water Heater Size/Volume	Maximum Water Temperature			
	130° F	140° F	160° F	180° F
30 GALLONS	PH 5	PH 5	PH 5	PH 5
40 GALLONS	PH 5	PH 5	PH 5	PH 5
50 GALLONS	PH 5	PH 5	PH 5	PH 12
60 GALLONS	PH 5	PH 5	PH 5	PH 12
80 GALLONS	PH 5	PH 12	PH 12	PH 12
100 GALLONS	PH 12	PH 12	PH 12	PH 25
120 GALLONS	PH 12	PH 12	PH 12	PH 25
150 GALLONS	PH 12	PH 12	PH 25	PH 25
175 GALLONS	PH 12	PH 25	PH 25	PH 25

Sizing based on water heater recovery from 40F, water supply pressure of 60 PSIG, and relief valve set at 150 PSIG. Adjust tank precharge to equal incoming water pressure.

