**FLEXON INDUSTRIES LIMITED PRODUCT WARRANTY**

**PRODUCTS COVERED: THERMAL EXPANSION TANKS MANUFACTURED AND DISTRIBUTED BY FLEXON 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. Flexon 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 New Product which is 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 Flexon, Flexon 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. Flexon will not accept any claims for, nor will Flexon be responsible for, any 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 specifically excludes all of the defects that are listed below.
  - If the Product is not correctly installed, operated, repaired or maintained as described in the Manual provided with the Product.
  - If any failure or malfunction resulting from (i) misuse or abuse, (ii) improper or negligent handling, shipping (by anyone other than Flexon), storage, use or operation, or (iii) damage to the tank caused by lightning, floods, fire, freezing or any other environmental condition.
  - If any modifications made to the Product that are not authorized by Flexon or that are not shown in the Manual.
  - If the Product is used anywhere except the United States, its territories or possessions, or Canada.
  - If to any related costs, shipping charges, service charges, delivery expenses, administrative fees or any costs incurred in removing or reinstalling the Product.
  - If any repairs to the Product are made or tried by anyone other than Flexon.
  - If any repairs or replacement costs not authorized in advance by Flexon.

**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 circumstance will Flexon be liable for more than, and purchaser-first user's remedies shall not exceed, the price paid for the Product. In no case shall Flexon 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 Flexon's negligence or other fault. 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, loss, loss of profit, loss of savings or revenues, loss of use of the Product or any associated equipment, facilities, buildings or services, damage, and the claims of third parties including customers.

**What To Do If You Have a Problem with This Warranty** - You must notify the authorized Flexon distributor or dealer who sold you the Product of any malfunctions in the event leading to the Warranty Claim. Any covered Warranty service must be authorized by the Flexon distributor or dealer who sold you the Product. If you do not receive a prompt response, call Flexon 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 Flexon at the following address.

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

Before Flexon determines to provide any replacement part or Product, it may, at its pre-condition to making such a determination, require that the warranty claimant ship the Product, postage prepaid, to an authorized distributor, or to Flexon, 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, Flexon 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

**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 prevent corrosion. 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.

**PH Series**

This tank is designed for water storage at a maximum pressure of 150 psi and a maximum temperature of 200 F. A property sized pressure relief valve set at a maximum of 150 psi must be installed in the system. The 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 under pressure. Failure to follow these instructions is UNSAFE and may result in serious injury, death and/or property damage.

**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 property sized pressure relief valve set at a maximum of 150 psi must be installed in the system. The 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 under pressure. Failure to follow these instructions is UNSAFE and may result in serious injury, death and/or property damage.

**WARNING**

This expansion tank and the associated piping will be 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 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, death and/or property damage.

**CALIFORNIA PROPERTY 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. These instructions and warnings are subject to periodic updates on the Flexconind.com website at www.flexcon.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. If water pressure is above 80 psi, a pressure reducing valve must be used. Failure to properly adjust the pre-charge will shorten the life expectancy of the product.

If there are any visible signs of leakage, 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.

**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.

**To Adjust Pre-charge**
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 will 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 ONLY TEFLON TAPE.

**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.

**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

**Specs/Dimensions**

**Dimensions & Capacities**

<table>
<thead>
<tr>
<th>Model</th>
<th>Total Tank Volume</th>
<th>Height</th>
<th>Diameter</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>gal</td>
<td>in</td>
<td>in</td>
<td>in</td>
</tr>
<tr>
<td>PH 5</td>
<td>2.1</td>
<td>11.8</td>
<td>30.0</td>
<td>8.00</td>
</tr>
<tr>
<td>PH 12</td>
<td>4.8</td>
<td>14.5</td>
<td>37.0</td>
<td>11.00</td>
</tr>
<tr>
<td>PH 25</td>
<td>9.0</td>
<td>18.9</td>
<td>48.1</td>
<td>12.50</td>
</tr>
</tbody>
</table>

Maximum working pressure 150 psig. Maximum working temperature, internal & external 200°F. Tank pre-charge 40 psig.

**Quick Sizing Chart**

<table>
<thead>
<tr>
<th>Water Heater Size/Volume</th>
<th>Maximum Water Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 GALLONS</td>
<td>130°F PH 5</td>
</tr>
<tr>
<td>40 GALLONS</td>
<td>140°F PH 5</td>
</tr>
<tr>
<td>50 GALLONS</td>
<td>150°F PH 5</td>
</tr>
<tr>
<td>60 GALLONS</td>
<td>160°F PH 5</td>
</tr>
<tr>
<td>80 GALLONS</td>
<td>180°F PH 5</td>
</tr>
<tr>
<td>100 GALLONS</td>
<td>100°F PH 12</td>
</tr>
<tr>
<td>120 GALLONS</td>
<td>120°F PH 12</td>
</tr>
<tr>
<td>150 GALLONS</td>
<td>140°F PH 12</td>
</tr>
<tr>
<td>175 GALLONS</td>
<td>160°F PH 12</td>
</tr>
</tbody>
</table>

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