FLEXTRON®

THERMAL & HYDRONIC EXPANSION TANKS

- Save Energy & Water
- Protect Home Appliances & Fixtures
- Prevent Dangerous Pressure Build Up

HIGH GRADE STEEL CONSTRUCTION

Thermal Expansion Tanks For Hot Water Heaters

- **Prevent dangerous pressure build up.**
- **Protect household appliances and fixtures.**
- **Save energy and water.**

HIGH GRADE STEEL CONSTRUCTION

MADE IN ITALY

5 YEAR LIMITED WARRANTY

Thermal Expansion Tanks

Model Number	Tank Size	Tank Weight	Connection Size (NPT)	Dimensions (LxWxH)	Acceptance Volume	UPC Code
FTT5	2.1 gal	6 lbs	3/4"	13" x 9" x 9"	1.4 gal	80459513077
FTT12	4.8 gal	10 lbs	3/4"	16" x 11" x 11"	3.3 gal	80459513078
FTT18	6.3 gal	11 lbs	3/4"	18" x 12" x 13"	4.3 gal	80459513079

Material Description

Shell	Carbon Steel
Connection	Stainless steel
Diaphragm	Butyl
Color	Almond

Operating Conditions

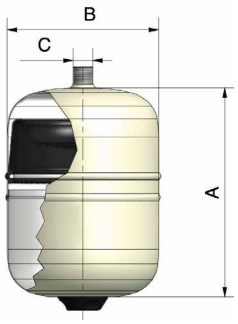
Max. Operating Pressure	150 psi
Operating Temperature	210° F
Factory Precharge	40 psi
Warranty	5 years

Dimensional Data

Model	A	B	C
FTT5	11"	7.9"	3/4"
FTT12	13.7"	10.6"	3/4"
FTT18	15.4"	11.8"	3/4"

Technical Features

- All tanks are NSF61 Certified
- MIG welding eliminates interior rough spots and sharp edges
- Each tank is factory leak tested
- 150 psi max pressure rating
- External baked epoxy-polyester coating provides a durable appliance finish
- Exclusive polypropylene liner eliminates internal corrosion
- Protected precharge valve eliminates potential leak path



What is Thermal Expansion?

When heated, water expands. Under normal circumstances, a 40 gal hot water heater creates roughly an additional half gallon of water when heated (with no demand).In the past this expanded water would flow back into the public water supply. However, in many countries, where applicable by code, a backflow preventer is required, creating a closed system and a new problem as this extra half gallon of water is not compressible.

Potential Problems Without an Expansion Tank

Failure to use a thermal expansion tank may void the warranty of the water heater as it can lead to premature failure of the water heater:

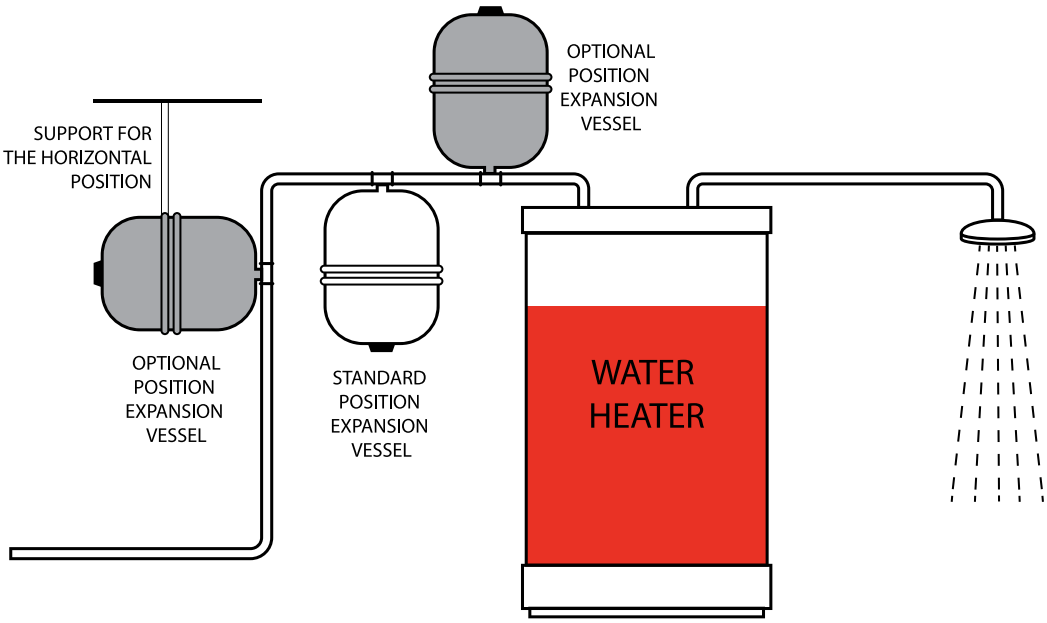
This warranty shall apply only when the water heater is installed and operated in accordance with the manufacturer and used in an open system or in a closed system with a properly sized and installed thermal expansion tank.

Other possible problems include: dangerous high pressure, leaky fittings and valves, collapsed center flues and/or flames coming out of combustion chamber and the safety relief valve releasing water.

Installation Options for Thermal Expansion Tanks

Installation Location

- Install on the cold water side after the pressure reducing valve and between the backflow preventer and the water heater.
- Do not install in an area where leakage could cause property damage.
- The tank can be installed either vertically or horizontally. However, if the tank is to be installed horizontally, then it must be fully supported independent from the piping. Failure to do so will void the warranty.



Hydronic Expansion Tanks For Heating Systems

- **Prevent dangerous pressure build up.**
- **Protect safety valves from failing.**
- **Save energy and water.**

HIGH GRADE STEEL CONSTRUCTION

MADE IN ITALY

5 YEAR LIMITED WARRANTY

Hydronic Expansion Tanks

Model Number	Tank Size	Tank Weight	Connection Size (NPT)	Dimensions (LxWxH)	Acceptance Volume	UPC Code
FTH15	2.1 gal	4.6 lbs	1/2"	9" x 9" x 13"	1.4 gal	80459513060
FTH30	4.8 gal	6.8 lbs	1/2"	12" x 12" x 16"	3.0 gal	80459513075
FTH60	6.3 gal	9.1 lbs	1/2"	13" x 13" x 17"	3.9 gal	80459513076
FTH90*	13.2 gal	21.3 lbs	3/4"	16" x 16" x 21"	8.1 gal	80459529654

*Includes Stand

Additional Description

Shell	Carbon Steel
Connection	Carbon Steel
Diaphragm	SBR Synthetic Rubber
Color	Gray

Operating Conditions

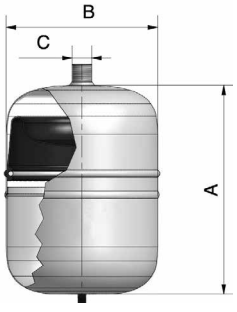
Max. Operating Pressure 2.1 gal	75 psi
Max. Operating Pressure 4.8 gal	60 psi
Max. Operating Pressure 6.3 gal	60 psi
Max. Operating Pressure 13.2 gal	60 psi
Operating Temperature	210° F
Factory Precharge	12 psi
Warranty	5 years

Dimensional Data

Model	A	B	C
FTH15	11.6"	8.7"	1/2"
FTH30	14.8"	11.4"	1/2"
FTH60	16.3"	12.8"	1/2"
FTH90	20.9"	16.0"	3/4"

Technical Features

- Certified synthetic SBR rubber diaphragm
- MIG welding eliminates interior rough spots and sharp edges
- Each tank is factory leak tested to ensure tank integrity
- All diaphragms designed to maximize drawdown
- External baked epoxy-polyester coating provides a durable appliance finish
- Welded side outlet allows easy and quick installation
- Protected pre charge valve eliminates potential leak path
- Low profile tank design with full membrane depth eliminates stretching of diaphragm, providing increased life cycle



The **FTH90** is designed with built-in stand

What is Hydronic Expansion?

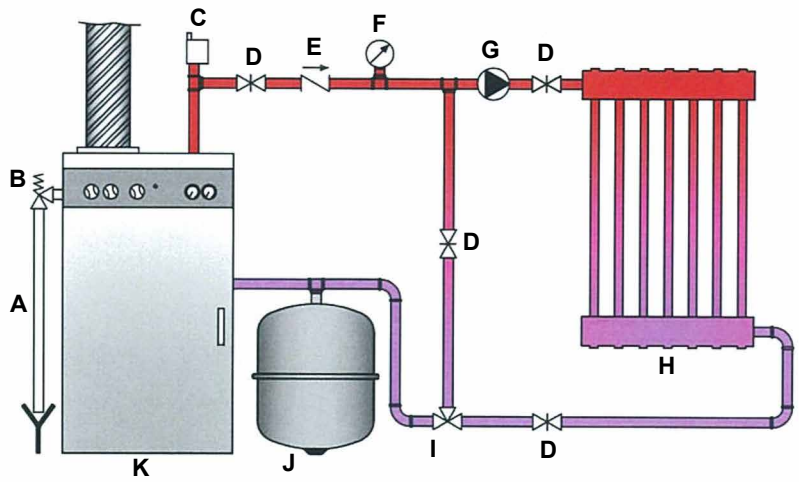
Hydronic expansion tanks are diaphragm type tanks designed to keep system pressures below relief valve settings. Hydronic expansion tanks absorb the expansion of water in residential or commercial hydronic (forced hot water) heating and cooling systems. Without hydronic expansion tanks, the system will quickly over-pressurize resulting in added stress to the various system components. Hydronic expansion tanks protect safety valves from failing or wearing out quickly, avoids valve stem and ball seal leaks, prevents wasted BTU's and vastly extends water heater life.

Hydronic Expansion Tanks

With Flextron's line of expansion tanks, Flextron offers a full range hydronic expansion tanks. All of the tanks are diaphragm hydronic expansion tanks produced with an SBR diaphragm in accordance with CE Norm 97/23 for non-potable heating systems.

Installation for Hydronic Expansion Tanks

Flextron Hydronic Expansion Tanks must be installed by a qualified, licensed professional in accordance with local plumbing codes. Maintenance inspections of the complete heating system should be performed by a licensed plumber annually. The tank's pre-charge should be tested and adjusted to the correct pressure as needed.



A - Draining
B - Safety Valve
C - Air Bleeder
D - Gate Valve
E - Backflow Preventer
F - Pressure Gauge
G - Pump
H - Utilities
I - Mixing Valve
J - Flextron Expansion Vessel
K - Boiler

E-SERIES
Thermal Expansion Tanks For Hot Water Heaters

- **Prevent dangerous pressure build up.**
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- **Save energy and water.**

5 YEAR LIMITED WARRANTY

E-Series Thermal Expansion Tanks

Model Number	Tank Size	Tank Weight	Connection Size (NPT)	Dimensions (LxWxH)	Acceptance Volume	UPC Code
E-FTT5	2.1 gal	4.7 lbs.	3/4"	12.5"x8"x8"	0.9 gal	80459540542
E-FTT12	4.8 gal	8 lbs.	3/4"	15"x11"x11"	3.2 gal	80459540543
E-FTT18	6.3 gal	10.4 lbs.	3/4"	16.75"x11.5"x11.5"	4.5 gal	80459540544

Material Description

Shell	Carbon Steel
Connection	Stainless steel
Diaphragm	Butyl
Color	Almond

Operating Conditions

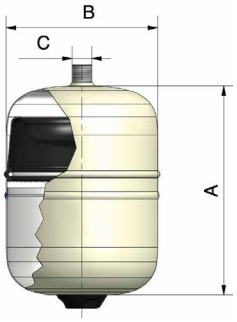
Max. Operating Pressure	150 psi
Operating Temperature	200° F
Factory Precharge	40 psi
Warranty	5 years

Dimensional Data

Model	A	B	C
E-FTT5	12.5"	8"	3/4"
E-FTT12	15"	11"	3/4"
E-FTT18	16.75"	11.5"	3/4"

Technical Features

- All tanks are NSF61 Certified
- MIG welding eliminates interior rough spots and sharp edges
- Each tank is factory leak tested to ensure tank integrity
- 150 psi max pressure rating
- 3 layer electrostatically applied coating provides a durable appliance grade finish
- Exclusive polypropylene liner eliminates internal corrosion
- Protected precharge valve eliminates potential leak path



E-SERIES
Hydronic Expansion Tanks For Heating Systems

- **Prevent dangerous pressure build up.**
- **Protect safety valves from failing.**
- **Save energy and water.**

5 YEAR LIMITED WARRANTY

E-Series Hydronic Expansion Tanks

Model Number	Tank Size	Tank Weight	Connection Size (NPT)	Dimensions (LxWxH)	Acceptance Volume	UPC Code
E-FTH15	2.1 gal	4.25 lbs	1/2"	12.5"x8"x8"	1 gal	80459540546
E-FTH30	4.8 gal	7.5 lbs	1/2"	15"x11"x11"	3.2 gal	80459540547
E-FTH60	6.3 gal	9.75 lbs	1/2"	16.75"x11.5"x11.5"	4.5 gal	80459540548
E-FTH90S*	13.2 gal	23.2 lbs	1/2"	24.4"x16.2"x16.2"	11.3 gal	80459540545

*Includes Stand

Additional Description

Shell	Carbon Steel
Connection	Carbon Steel
Diaphragm	EPDM Rubber
Color	Gray

Operating Conditions

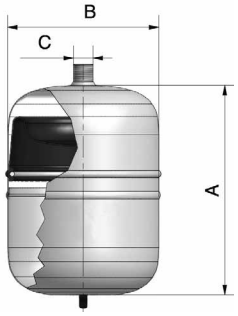
Max. Operating Pressure 2.1 gal	150 psi
Max. Operating Pressure 4.8 gal	150 psi
Max. Operating Pressure 6.3 gal	150 psi
Max. Operating Pressure 13.2 gal	150 psi
Operating Temperature	240° F
Factory Precharge	12 psi
Warranty	5 years

Dimensional Data

Model	A	B	C
E-FTH15	12.5"	8"	1/2"
E-FTH30	15"	11"	1/2"
E-FTH60	16.75"	11.5"	1/2"
E-FTH90S	24.4"	16.2"	1/2"

Technical Features

- EPDM Rubber Diaphragm
- MIG welding eliminates interior rough spots and sharp edges
- Each tank is factory leak tested to ensure tank integrity
- All diaphragms designed to maximize drawdown
- 3 layer electrostatically applied coating provides a durable appliance grade finish
- Protected pre charge valve eliminates potential leak path
- Low profile tank design with full membrane depth eliminates stretching of diaphragm, providing increased life cycle



The **E-FTH90S** is designed with built-in stand

General Instructions For Installation

SHUT OFF THE ELECTRIC POWER AND THE WATER SUPPLY TO THE SYSTEM. MAKE SURE THE SYSTEM IS COOLED AND NOT PRESSURIZED TO AVOID SCALDING AND / OR SERIOUS BODILY INJURY.

• Inspect the product for any damage that may have occurred during shipping. If evident damage is detected, notify the freight carrier and reseller immediately, and do not install the tank.

• Ensure that access to the installation area is restricted. Do not install where children are present or may be present.

• Use caution and always wear protective gloves and safety goggles during installation and maintenance of the expansion tank. Use suitable and appropriate lifting tools when positioning and installing the tank.

• Do not install the tank outdoors. The tank may only be installed in enclosed and well aerated areas and must be placed far from heat sources, electric generators and any other element that may damage the tank. Install in an area that allows for easy access and inspection of the tank.

• Depending on the model, the weight of the expansion tank filled with water can be supported by the system piping. To avoid overloading the pipes and possibly breaking or offsetting the pipe connections, it is important that the piping is supported by suitable bracing (strapping, hanger, brackets). If the tank does not have a support base, and is installed horizontally, it must be properly supported along the entire length of the tank.

• Before using any FLEXTRON accessory to hang the expansion vessel on a wall, check that the wall itself can sustain the weight of a full expansion vessel, as it will fill with system liquid. This will add considerable weight to the tank during normal operation.

• Before installing the expansion tank, remove the plastic cap on the air valve of the tank and using a controlled manometer verify that it has the correct factory set pre-charge (with a tolerance of ± 20%). Adjust the tank pre-charge to the required value (do not over-pressurize) and replace and tighten the plastic cap on the air valve. Only adjust the tank when empty of water.

• Install the tank at the point specified by the system design, specifications and instructions, preferably in a vertical position with the connection in downward direction (please see Installation schemes). Install the tank in the following places:

INSTALLATION IN CLOSED HYDRAULIC HEATING (HYDRONIC) SYSTEMS

The tank must be installed on the runback piping, please see the following installation scheme.

An alternative location may be on the supply side, provided that the maximum working pressure and temperature limits are kept.

⚠ WARNINGS

• The system in which the expansion tank is installed must have a pressure-limiting device (pressure relief valve), sized and installed in accordance with local codes.

• To prevent corrosion due to stray and galvanic currents, the system must be grounded properly in accordance with local electrical and plumbing codes and standards. If needed, the tank may be provided with dielectric joints after careful evaluation of the characteristics of the installation.

• Other possible causes for pin-holing and corrosion phenomena must be evaluated, including the water's chemical, physical and thermal characteristics, the presence of oxygen or melted salts and the use of devices made of different materials (e.g. carbon steel and stainless steel, carbon steel and copper) within the system. All of these factors must be considered by the manufacturer of the complete system and by the personnel in charge of installation and maintenance, taking into account all local plumbing, electrical and safety standards and regulations.

• Water quality may affect the lifespan of expansion tanks. Water may require treatment to ensure the correct performance and complete lifespan of the expansion tank. If installed near the sea, damage from salty air may occur.

• Do not use this tank with the following fluids: (a) chemicals, solvents, petroleum products, acids, bases or any other substance that may be detrimental to the tanks itself, (b) explosive, extremely flammable, flammable, toxic, or oxidizing fluids.

• Only use this tank with not dangerous fluids and having a vapor pressure greater than 7.25 psi above the normal atmosphere pressure (14.7 psi) at the maximum working temperature of the expansion tank.

• Do not use this tank with water containing sand, clay, particulates or other solid substance that may damage the tank (particularly the internal coating) and / or clog its connecting pipes.

• Proper means must be provided in order to prevent air from accumulating in the chamber of the tank (water side) connected to the system.

• The tank and the connected system must be protected against below-freezing temperatures by using proper antifreeze (if for use with non-potable water, see above) or installing the tank in suitable indoor areas.

• Do not use this expansion tank for any purpose other than the purpose for which it was intended.

• The expansion tank, piping and connections may leak water or other liquids over time. Therefore, the expansion tank must be installed in a suitable technical room capable of supporting the weight of the vessel filled with water and that must have adequate drainage and protection such that any leakage will not damage the surrounding area and will not cause scalding injuries. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PROPERTY, INJURIES OR SCALDING IN CONNECTION WITH THIS EXPANSION TANK.

• THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES TO PROPERTY AND / OR INJURIES DUE TO IMPROPER TRANSPORT, HANDLING, INSTALLATION OPERATION OR MAINTENANCE OF THE TANK.

• As in all plumbing products, bacteria can grow in the expansion tank, especially during times of non use. The local health and safety office must be consulted regarding any measures the personnel in charge of service and maintenance takes to safely disinfect the plumbing system. DO NOT USE ABRASIVE DETERGENTS OR OTHER SUBSTANCES THAT MAY CAUSE DAMAGE TO THE TANK OR CONTAMINATION OF DRINKING WATER. IF BACTERIA CONTAMINATION IS DETECTED, IT MAY BE ADVISABLE TO REPLACE THE TANK.

• DO NOT drill, open, heat with flames or tamper with the tank in any way.

• In the event it is necessary to change the factory pre-charge, specialized technicians should calculate and determine the new pre-charge. The calculation must ensure that, for all foreseeable working conditions, the specified limits (particularly the maximum working pressure) are never exceeded and that all local codes and standards are observed.

WARNING -DO NOT OVER-PRESSURIZE- EXPLOSION HAZARD. The pre-charge should never exceed 50% of the maximum working pressure. The new value of the pre-charge pressure (user set) must be written in the appropriate space on the label that is permanently affixed to the tank.

• Make sure that the system layout allows for future maintenance and provides sufficient access and working space around the system to allow for replacement of components whenever necessary.

• If vibration is likely to occur in the vicinity, proper means must be provided in order to insulate the expansion tank from vibrations (e.g. installation on a resilient mount).

• The tank can only be disposed of at selective waste collection authorized centers, in accordance with local codes and standards.

Expansion Tanks Limited Warranty

5 YEAR LIMITED WARRANTY

FLEXTRON®

Products Covered: FTT5, FTT12, FTT18 FTH15,FTH30,FTH60, FTH90, E-FTT5, E-FTT12, E-FTT18 E-FTH15,E-FTH30,E-FTH60, E-FTH90S tanks. This warranty cannot be transferred – it is extended only to the original purchaser or first user of the product. By accepting and keeping this product you agree to all of the warranty terms and limitations of liability described below. The warranty is not valid if the purchaser does not follow the terms of payment agreed to with FLEXTRON.

IMPORTANT WARNING - READ CAREFULLY THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS MANUAL ("MANUAL") to avoid serious personal injury and/or property damage and to ensure the safe use and proper care of this product.

Who Receives FLEXTRON's Product Warranty: all purchasers or first user of the new product; the warranty is non-transferable.

What Is Covered By This Warranty: FLEXTRON warrants to the purchaser or first user of the new product that, at the time of manufacture, the product is free from defects in material and workmanship. Any warranty claim must be made within 5 years of original purchase, unless another time period is agreed between FLEXTRON and the purchaser, measured from the time the product was manufactured.

What FLEXTRON Will Do If You Have A Covered Warranty Claim: in the event of a breach of the foregoing warranty, FLEXTRON will, at its option, either make repairs to correct any defect in material or workmanship or supply and ship new replacement parts or products. FLEXTRON will not accept any claims for labor, property damage or other costs.

What This Warranty Does Not Cover - Exclusions And Limitations: this warranty does not cover any claim unless it was caused by a defect in material or workmanship during the warranty period. In addition, this warranty shall not apply:

- If the product is not correctly installed, operated and maintained as described in the manual provided with this warranty;
- To any failure or malfunction resulting from abuse (including freezing); improper or negligent: handling, shipping (by anyone other than FLEXTRON), storage, use, operation, accident; or alteration, lightning, flood or any other environmental condition;
- To any failure or problem resulting from the use of the product for any purpose other than those specified in the accompanying manual or alteration of any part of the product;
- This warranty does not cover labor costs, shipping charges, service charges, delivery expenses, administrative fees or any costs incurred in removing or reinstalling the product;
- This warranty does not cover any claims submitted to FLEXTRON or a FLEXTRON-authorized distributor or retailer more than 15 days after expiration of the applicable warranty time period described in this warranty;
- This warranty does not cover repair or replacement costs not authorized in advance by FLEXTRON;
- This warranty also does not cover corrosion on mild steel flanges (stainless steel flanges must be used).

THESE WARRANTIES ARE GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. NO FLEXTRON REPRESENTATIVE OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY WARRANTY OTHER THAN THOSE EXPRESSLY CONTAINED IN THIS WARRANTY AGREEMENT.

Additional Warranty Limitations: ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY DISCLAIMED. Some states do not allow limitations on how long an implied Warranty lasts, so the above limitation may not apply to you.

Limitations Of Remedies: THE REMEDIES CONTAINED IN THIS WARRANTY ARE THE PURCHASER'S / FIRST USER'S EXCLUSIVE REMEDIES. UNDER NO CIRCUMSTANCES WILL FLEXTRON BE LIABLE FOR MORE THAN, AND PURCHASER / FIRST USER'S REMEDIES SHALL NOT EXCEED, THE PRICE PAID FOR THE PRODUCT. IN NO CASE SHALL FLEXTRON 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 FLEXTRON'S OWN NEGLIGENCE OR OTHER TORT. This exclusion applies 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. Such 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. Some states do not allow the limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

What To Do If You Have A Problem Covered By This Warranty: any covered warranty service must be authorized by FLEXTRON. Contact the person from whom you purchased the product, who must receive a written authorization from a FLEXTRON distributor or from FLEXTRON. The following documentation must be supplied in order to receive authorization:

- The “Schedule of returns” sheet duly filled by the purchaser / first user;
- Reports, photos etc. describing the problem. If you do not receive a prompt response, call FLEXTRON directly at 877.659.FLEX. Notice of a warranty claim should be submitted by the authorized distributor to FLEXTRON at the following address:

FLEXTRON
Phone: 877.659.FLEX Fax: 877.659.3551 / POB 217 Port Reading, New Jersey 07064

Before FLEXTRON decides 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 FLEXTRON distributor, or to FLEXTRON, 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, FLEXTRON 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 limitation 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 of the warranty claim.

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www.flextronusa.com
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