OWNER'S MANUAL & INSTALLATION GUIDE

ecoTAC™
Salt-Free Hard Water Conditioner

PLEASE READ THIS MANUAL CAREFULLY BEFORE ATTEMPTING INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY VOID YOUR WARRANTY.

Congratulations on the purchase of your EcoTAC™ Salt-Free Hard Water Conditioner. You have purchased one of the finest hard water treatment systems on the market today. EcoTAC™ treatment systems use the latest in salt-free hard water conditioning media technology to reduce or eliminate hard water mineral scale. EcoTAC™ is an environmentally-friendly alternative to conventional water softeners to prevent the formation of hard water scale in your plumbing system, water treatment equipment, water heater, dishwasher, and more.

This manual is designed to provide owners, installers, and service technicians with detailed information about the installation, start-up, and operation of your new water treatment system.

The heart of your EcoTAC™ system is its highly-specialized Template Assisted Crystalization (TAC) media. To ensure optimal performance and life of your TAC media, it is important that these instructions be followed and that the system is operated within the technical specifications provided. Your warranty may be voided if you fail to follow these instructions and/or fail to operate your treatment device within the guidelines noted.

Your EcoTAC™ water treatment system is designed to offer low maintenance operation. No backwash is required. The media will need to be replaced every 3 to 5 years. As the TAC media is the most critical component to the success of your EcoTAC™ system, we strongly recommend that only authentic EcoTAC™ media be used to replace your media when the time comes.

Where is it made?
Treatment Tank, Optional Jacket and Internal Parts: USA
Control Valve, Bypass Assembly and Fittings: USA
TAC media: Germany
Assembly: Canada

All components are tested and certified against NSF/ANSI 61 for material requirements.

Table of Contents:

OPERATING CONDITIONS

The following chart provides guidance on the conditions required for successful operation of your EcoTAC™ system. Use of this equipment outside of these operating conditions may adversely affect the performance of your system, damage the TAC media, result in system damage including water leaks and resulting property damage, and may void your warranty.

It is very important to note that the presence of elevated levels of chlorine, iron, manganese, hydrogen sulfide, copper, and certain other contaminants can damage the TAC media, reducing its effectiveness and shortening its life. Chlorinated city water should be filtered through activated carbon to reduce free chlorine prior to TAC treatment. **Water exceeding any of the following levels should be pre-treated to reduce contaminant levels below the stated level:**

pH Range: 6.5 to 8.5
Chlorine: max. 3 ppm
Hydrogen peroxide: max. 0.5 ppm
Iron: max. 0.3 ppm
Manganese: max. 0.05 ppm
Copper: max. 1.3 ppm
Hydrogen Sulfide (H2S), Polyphosphates, and Oils: must be removed

Maximum Water Temperature: 43C (110F)
Do not allow TAC media or water to freeze*
Pressure Recommended: 15 to 80 psi**

	EcoTAC™ 10	EcoTAC™ 15	EcoTAC™ 20
Media Volume	4 Litres	6 Litres	8 Litres
Maximum recommended water flow rate based on hardness level of:			
up to 15 grains/gallon (255ppm or mg/l):	10 GPM	15 GPM	20 GPM
16-20 grains/gallon (256-345ppm or mg/l):	7.5 GPM	11 GPM	14.5 GPM
21-25 grains/gallon (346-425ppm or mg/l):	6 GPM	9 GPM	12 GPM

If your water hardness is greater than 25 grains per gallon or 425 ppm (mg/l), please call for sizing recommendation.

* the unit cannot be subjected to freezing conditions or water leaks and severe damage to the system and/or your property could occur.

** if your home water pressure is greater than 80 PSI, you should have a pressure reduction valve installed by a certified plumber prior to installing this product.

CONFIRM THAT YOUR WATER CONDITIONS MEET THE OPERATING CONDITIONS ON PAGE 3 BEFORE COMMENCING THE INSTALLATION PROCESS. IF IN DOUBT, CALL YOUR DEALER FOR ADVICE. INSTALLED UNITS CANNOT BE RETURNED.

INSTALLATION

We recommend that you read the entire installation instructions before commencing the actual installation. While we strongly recommend that a licensed plumber perform all installation work, a mechanically-inclined homeowner can install an EcoTAC™ system. In all cases, it is critical that the installation be done in accordance with these instructions and all applicable plumbing codes. Be sure to obtain all required permits. If these instructions and the applicable codes are in conflict, the relevant plumbing/electrical code shall be followed. Equipment failure, personal injury, or property damage can result if this equipment is not installed properly.

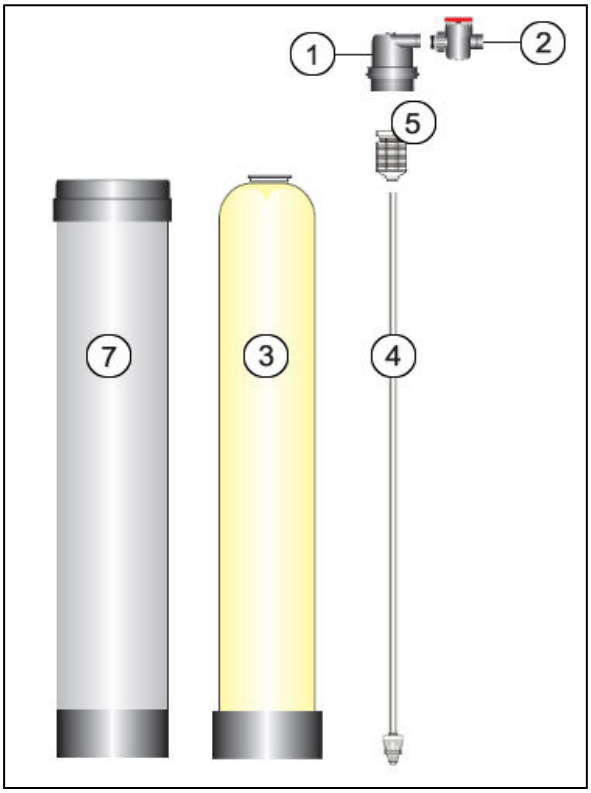
Step 1. – Pre-Installation Inspection

Inspect all of the components that you received with your unit. You should have received the following:

1. Pre-Assembled Treatment Unit Consisting of:

    1. Valve
    2. Bypass Assembly
    3. Treatment Tank
    4. Lower Distributor / Riser Tube Assembly
    5. Upper Locking Stack Screen
    6. EcoTAC™ media (pre-loaded in the tank)*
    7. Tank Jacket Kit (OPTIONAL)

2. Connection Fittings – the standard fittings provided are 1" MNPT thread. If selected at time of purchase, you may have received the optional 1" SharkBite® quick-connect fittings with your unit.



***Please note: There is only a small amount of EcoTAC™ media in the treatment tank. This is completely normal and is necessary to allow the required freeboard to permit the media bed to completely fluidize during operation. See Operating Conditions section on Page 3 for the**

media quantity applicable to your model. When water begins to flow into the bottom of the treatment tank, the EcoTAC™ media is lifted and disbursed throughout the treatment tank in a fluidized bed which enhances contact with the calcium and magnesium ions in the water. A contact time of only a few seconds is required for the treatment of up to 25 grains per gallon (approx. 425 ppm or mg/l) of hardness. Since the system is operated in a fluidized upflow configuration, the system will not clog with sediment and no backwashing is required.

Step 2. – Select an Installation Location

We strongly recommend an interior installation. If an exterior installation location is selected, the unit should be protected by a suitable enclosure which prevents exposure to sunlight, extreme heat, and cold. The system cannot be allowed to freeze or severe system damage could occur. The system should not be installed in direct sunlight as long-term exposure to UV light could damage components of the system.

In most cases, the EcoTAC™ unit should be located AFTER the expansion tank and all other water treatment devices EXCEPT an ultraviolet (UV) sterilizer (if applicable), and BEFORE the hot water heater. If possible, it is also generally desirable to place the EcoTAC™ unit AFTER the plumbing branch off to your outdoor irrigation water so as to increase the life of your media by not processing water used only for irrigation purposes.

Select a location for installation of your EcoTAC™ unit that is in close proximity to the main incoming water lines of the building. The location should have a firm, level surface with sufficient space for the treatment tank and valve. Ensure that there will be adequate space surrounding the unit to facilitate maintenance.

Step 3. – Prepare the Treatment Tank

For your convenience, we have pre-assembled the main treatment system for you. Inspect the optional tank jacket cover if you purchased one to make sure it has not been misaligned during shipping. If it has, adjust accordingly.

Ensure that the tank itself is vertical and plumb. If it appears that the tank is leaning and not perfectly perpendicular to the ground, adjust the black base on the tank until the tank is plumb. The easiest way to do this is to lift the tank and tap the base on a firm surface. The black base fits tightly on the bottom of the tank but it is not glued – it is only a friction fit.

Please note that the tank must be installed in a vertical position, it cannot be placed on its side!

Step 4. – Turn off the Water & Electric Water Heaters

If you have a conventional electric water heater or an on-demand (tankless) electric water heater, we highly recommend that you turn off the electricity to the heater while installing any water treatment equipment. Following completion of the entire installation, restore the water flow by turning on the household main water valve and allow all air to be purged from the plumbing system

before turning the power back on to your water heater. Failure to follow this procedure could result in serious, permanent damage to the heating elements in your water heater.

Turn off the household main water shutoff valve. Open several plumbing fixtures inside the home to drain as much water out of the plumbing system as possible.

Step 5. – Install Pre-Filters (if applicable)

If you purchased pre-filters for your system to remove sediment and/or chlorine or any other contaminants prior to your EcoTAC™ system, you should install them now. Follow the instructions that came with your pre-filters. Teflon® tape should be the only sealant used on the threaded plumbing connections of the pre-filters.

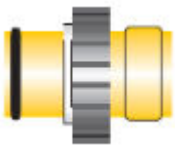
Step 6. – Connect Installation Fittings to Bypass

A bypass assembly is included with your system and was pre-attached to the tank valve for you at our factory. If you ever need to disconnect your system from your plumbing system for maintenance, the bypass assembly can be placed in the bypass position and the valve and tank can be disconnected from the plumbing system using the threaded fittings without turning off the water supply.

Also included with your system will be a set of connection fittings. There are 2 different types of connection fittings:

The standard connection type is a 1" MNPT threaded fitting, and is pictured here:

The second is an optional 1" SharkBite® quick-connect style fitting, and is pictured here:



The SharkBite® fittings can only be used with pipe/tubing certified to the following specifications:
PEX (ASTM F876, CSA B137.5)
Copper (ASTM B88)
CPVC (ASTM D2846, CSA B137.6)

The SharkBite® fittings have an integral Tube Support Liner that is effective in supporting PEX tubing to ensure the o-ring seals correctly on the outside of the PEX tubing. The Tube Support Liner is not required with copper and CPVC tubing, however, these 2 types of tubing fit over the Tube Support Liner easily and hold it against the tube stop so it does not need to be removed.

If you are unfamiliar with the use of SharkBite™ fittings, you can read full connection instructions online at:

www.cashacme.com/prod_literature.php

The optional SharkBite® fitting has not been tested for compliance with California Proposition 65, so this fitting should not be installed in California.

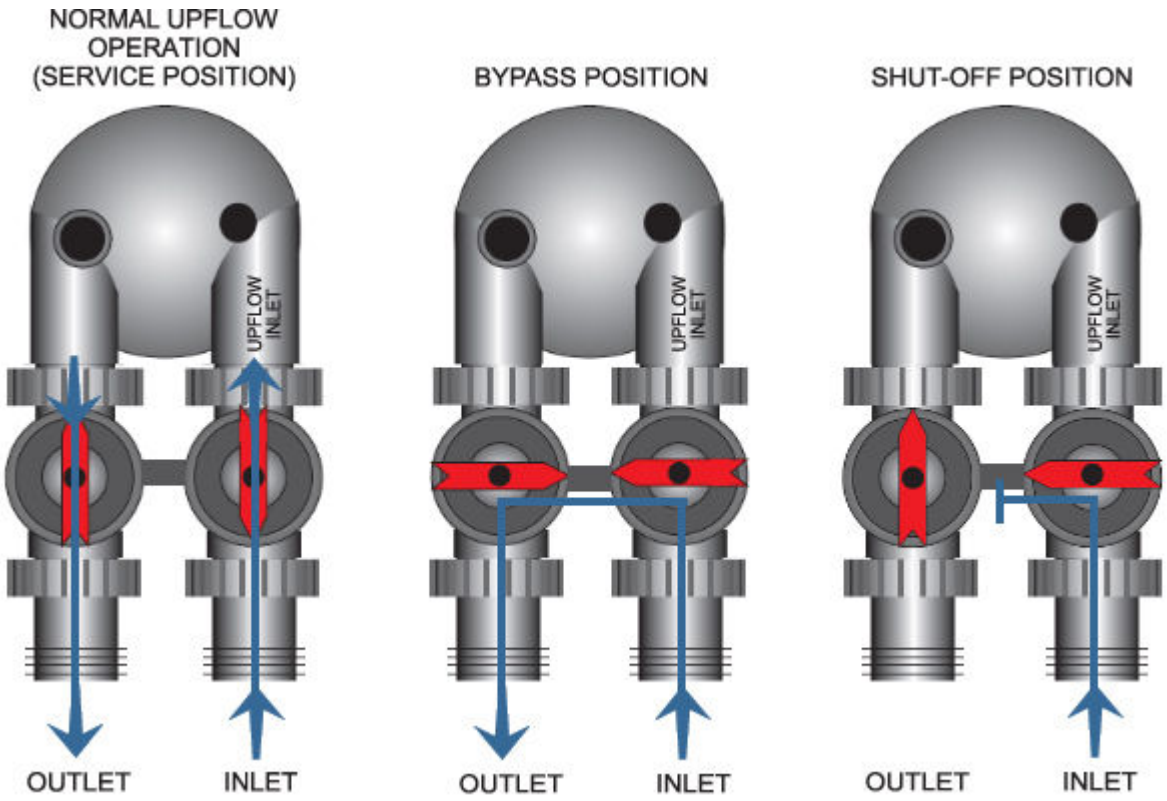
SharkBite® is a registered trademark of Reliance Worldwide Corporation, Cash Acme Division

Slide your connection fitting into the bypass with the black o-ring end facing inward until it stops. Screw the fitting nut onto the threaded portion of the bypass assembly. Hand tighten only.

Step 7. – Complete Plumbing Connections

Plumb your main incoming and outgoing water lines using suitable pipe, fittings, elbows, etc. as necessary to create a tidy, secure connection to the fittings. Be sure to follow all local plumbing codes. Regardless of the fittings included with your system, they are designed to accommodate minor plumbing misalignments, but they are not designed to support the weight of the system or the plumbing. Teflon® tape is the only sealant to be used on the threaded plumbing connections of the standard fitting.

NOTE: the inlet MUST be connected to the side of the valve marked "UPFLOW INLET" as shown in the diagram below. The outlet should be connected to the side of the valve marked "DOWNFLOW INLET." The red arrows on the bypass controls indicate the water flow direction for a DOWNFLOW system and should be ignored. The EcoTAC™ is an UPFLOW system.



VERY IMPORTANT

If possible, we recommend that PEX or CPVC pipe be used for all new plumbing pipe used in connection with the installation. This is because new copper water lines may release some copper ions into the water for several weeks after installation and these ions can have a negative impact on the EcoTAC™ media. To further minimize any problems with copper, avoid applying excess flux on the inner surfaces of the pipe and use a low-corrosivity water soluble flux listed under the ASTM B813 standard. For homes with significant newly installed copper pipes prior to the EcoTAC™ unit, it is recommended that installation of the system be postponed for 3-4 weeks to allow a protective coating to form on the new copper pipes.

If you wish to use copper piping and will be soldering the joints, DO NOT apply heat near your valve, bypass assembly, or connection fittings or serious internal damage to these parts could occur. Always solder joints with these components detached.

Note: If your water pipes are metal (galvanized or copper), they may be used to ground electrical systems, appliances, or your phone line. If this is the case, be sure to install regulation ground clamps to the metal pipe on each side of the EcoTAC™ unit and connect a jumper wire between the 2 clamps (#4 gauge solid copper wire recommended). Consult a certified electrician or plumber if you are unsure.

Step 8 – Initial Start-up and Leak Testing

Ensure that the bypass is in the bypass position (see picture on Page 7). Turn on the main water supply. Open a cold water tap nearby and let the water run for a few minutes or until the system is free of foreign material (usually solder) and air that may have resulted from the installation. If you used copper pipes for the installation, flush for at least 10 minutes. After flushing, close the water tap. Inspect your plumbing connections for leaks and repair any leaks found before proceeding.

Open the bypass valve to the service position (see picture on Page 7). Slowly open a cold water faucet nearby and let the water run at a low flow rate for about 30 seconds allowing some water to enter the treatment tank. Close the faucet and allow the water to sit for 15 minutes to pre-soak the media. After allowing the media to soak, slowly open the faucet once gain and run the water for a few minutes until the system is purged of all air that may have resulted from the installation. Repeat for other faucets in the home starting at the highest elevation and working down to the

lowest point until all air is purged. The initial flow of water may be slightly discolored. This is normal and will go away quickly.

Inspect your plumbing connections for leaks and repair any leaks found before proceeding.

It is now safe to turn the electricity back on to your water heater.

Congratulations! Your system is now ready to provide treated water to your home!

If you have a tank-style water heater, it will still contain untreated water for a few days, but your cold water lines will begin dispensing treated water right away.

WHAT TO EXPECT IN THE FIRST FEW WEEKS

During the first 1-6 weeks after the installation of the EcoTAC™ conditioner, a de-scaling effect whereby existing hard water scale previously built-up in the plumbing system is released, will often occur. Over time, this will enhance performance of water heating equipment and restore flow performance of plumbing fixtures. However, it may be necessary to clean out your faucet aerators and showerhead periodically during this period to remove pieces of scale that have dislodged from your pipes. This effect will stop once the pipes have been de-scaled.

After installation of EcoTAC™, low or phosphate-free cleaning products (for clothes and dishwashing) are recommended to achieve optimum results. Modern surfactant or detergent based, liquid soaps are preferred over old-fashioned caustic solid soaps.

Water heaters

Existing mineral accumulations in your water heater may also de-scale after the installation of EcoTAC™. We recommend that you clean out this material by opening the bottom drain valve on the hot water heater 30 to 60 days after installation of EcoTAC™. Be sure to turn off the electricity to your water heater before draining your tank. Follow the manufacturer's instructions for draining and flushing the tank. The good news is that a clean water heater uses much less electricity or gas to keep the water hot!

Using your dishwasher after installing EcoTAC™

To accelerate de-scaling in your dishwasher, you may wish to put a cup of white vinegar in the upper basket during the washing cycle for the first few weeks. You can also use citric acid or a commercial product like CLR or Lime Away instead of the white vinegar. This will help dissolve the existing scale in the washer arms and inside surface of the dishwasher. You may need to do this until all of the scale in the plumbing is dissolved. If you are using harsh dishwashing detergents that have low ph, high chlorine, and phosphates, some of the nano-crystals formed by the EcoTAC™ system may break down and cause spotting on the dishes. We recommend that you reduce your soap usage as much as 50%, and that you use eco-friendly phosphate-free dishwashing detergents. Using an anti-spotting agent such as Jet-Dry® may also be useful.

A word about glass shower doors…

Over a few weeks you may see the existing scale slowly dissolve in your shower heads thereby increasing water flow. You may need to clean the inlet screen of your shower head during the first few weeks as mentioned above to remove some of the scale that is being removed from your pipes. We recommend that you first clean the shower from existing scale with a cleaning product that dissolves old scale that has built up before installation of the EcoTAC™ conditioner system. CLR or Lime Away are good cleaner choices for this purpose. We then recommend that you coat the walls in the shower, and your glass shower doors with Rainx, a commercial product used for automobile windshields. The Rainx allows the majority of the nano particles to be easily washed to drain. The few nano particles that are left can be easily wiped down because they can no longer adhere to the sides of the shower.

MAINTENANCE INFORMATION

The EcoTAC™ media in your system will need to be replaced every 3 to 5 years. Use only genuine EcoTAC™ media for replacement. Use of an alternative media may adversely affect the performance of the system.

For replacement media, visit: www.hpwater.com/ecotac.php or phone toll free 1-866-376-2690.

Complete media replacement instructions are provided with the replacement media.

WARRANTY

Your EcoTAC™ system components are warranted by HomePlus Products Inc. to be free of defects in material and workmanship for the periods stated below from the date of purchase provided that your system was purchased from an Authorized dealer; operated in accordance with operating conditions stated herein; and provided that it was installed in accordance with these instructions.

Valve and Bypass Assembly: 3 years
Treatment Tank: 10 years
TAC Media: 2 years
All other components: 1 year
This warranty applies only in Canada and the United States of America.

In the event that a part is deemed defective, the user must immediately inform HomePlus Products Inc. who will at its option furnish a new or factory re-manufactured part at no cost to the user.

The warranty does not cover shipping costs or any labour costs related to troubleshooting, installation or maintenance.

The warranty does not apply to the following situations: misuse; normal wear and tear; neglect; unauthorized repair or damage caused through installation, adaptation, modification; use in an improper manner or inconsistent with these operating and maintenance instructions; wear or deterioration due to environmental conditions; damage occurring during transit; mishandling; improper storage; incorrect supply of water; tampering or alteration; act of god; or any cause beyond the control of HomePlus Products Inc.

The original warranty period does not change in the event of part replacement by HomePlus Products Inc.

The warranty is issued exclusively to the original consumer purchaser of record and is not transferable.

The provisions of the foregoing warranty are in lieu of any other warranty, whether express or implied, written or oral (including any warranty of merchantability or fitness for a particular purpose). HomePlus Product Inc.'s liability arising out of the manufacture, sale, or supplying of the products or their use or disposition, whether based upon warranty, contract, tort, or otherwise, shall not exceed the actual purchase price paid by the authorized distributor or consumer for the product. In no event shall HomePlus Products Inc. be liable to the distributor or any other person or entity for special, incidental, consequential or punitive damages (including, but not limited to, property loss, loss of incomes, or loss of use damages) arising out of the manufacture, sale, or supplying of the products, even if HomePlus Products Inc. has been advised of the possibility of such damages or losses.

HomePlus will not be liable under this warranty for any fault or damage arising from defective workmanship, if the product has been modified by any person other than HomePlus Products Inc.

Proof of purchase is required for warranty service.

To report a warranty problem with your system, please call HomePlus Products Inc.
Toll free: 1-866-376-2690