

OWNER'S MANUAL

ECOWATER
S Y S T E M S®

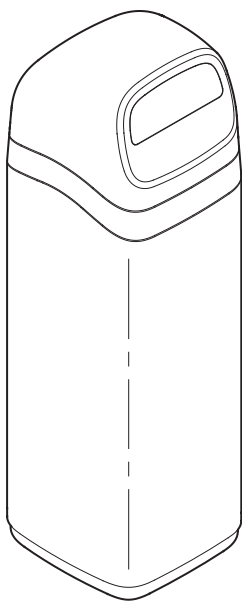


Your Water. Perfected.

How to install, operate and maintain your

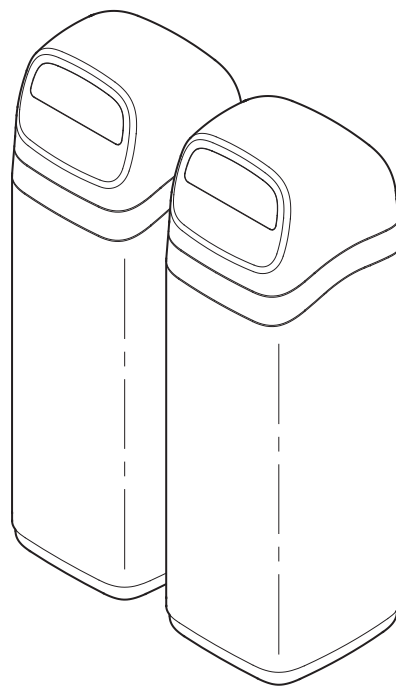
EcoProTechT
Anti-Scale System

Model **ETF2300SM10**



EcoProTechT Plus
2-Tank Anti-Scale System
with Carbon Filtration

Model **ETF2302SM10C**

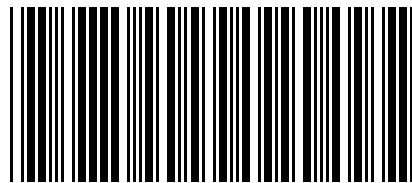


Point-of-entry systems tested and certified
by the Water Quality Association against
NSF/ANSI Standard 372 for low lead content.



Designed, Engineered &
Assembled in the U.S.A.

EcoWater Systems LLC
P.O. Box 64420, St. Paul, MN 55164-0420
www.ecowater.com



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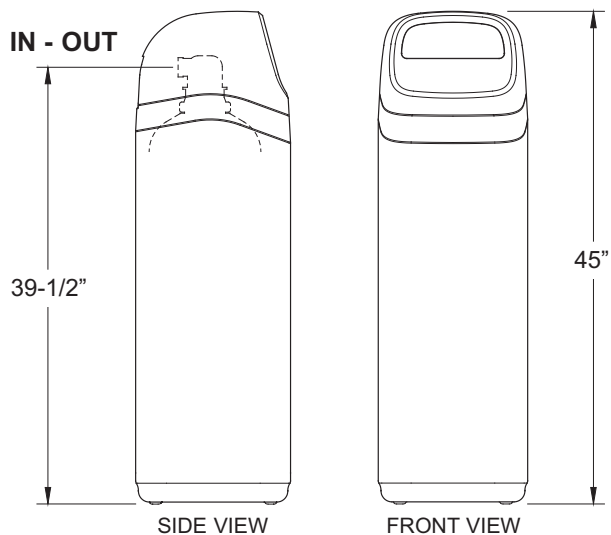
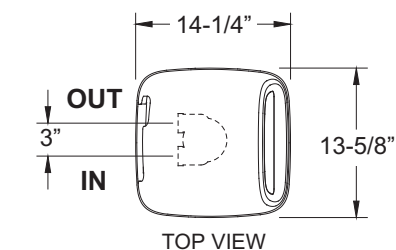
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SPECIFICATIONS

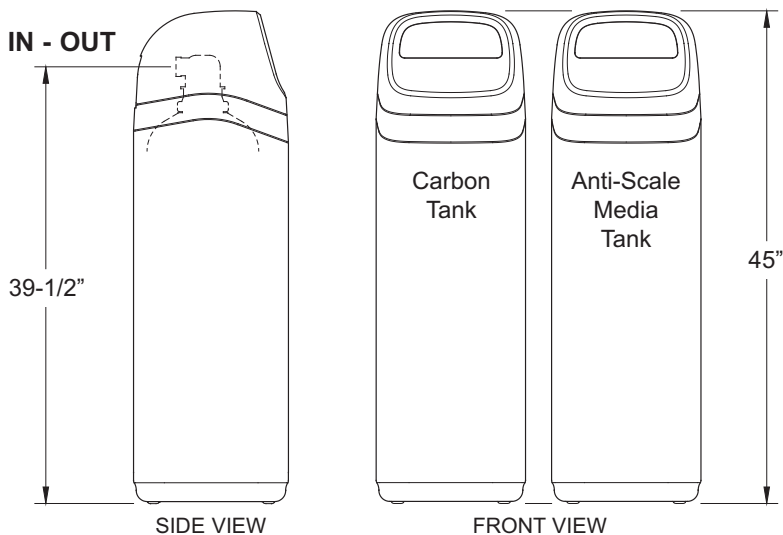
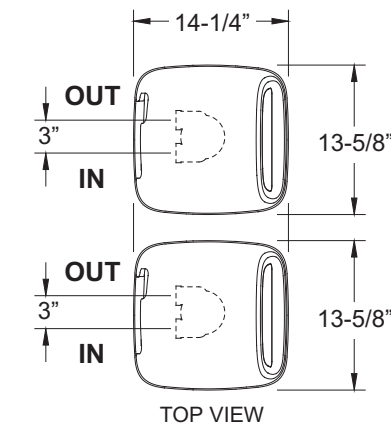
Model	ETF2300SM10	ETF2302SM10C
Nominal Mineral Tank Size	10" dia. x 35" tall (1)	10" dia. x 35" tall (2)
Amount of PTT Anti-Scale Media	4.3 lbs. (1.95 kg)	4.3 lbs. (1.95 kg)
Amount of Activated Carbon	—	14 lbs. (6.35 kg)
Amount of HDPE Pellets	3 lbs. (1.36 kg)	6 lbs [3 lbs./tank] (2.72 kg)
Service Flow Rate	10 gpm (37.8 L/min.)	
Maximum Flow Rate	15 gpm (56.8 L/min.)	
Supply Water Pressure Limits (min./max.)	20 - 125 psi (137.9 - 861.8 kPa)	
Water Temperature Limits (min./max.)	40 - 120 °F (4 - 49 °C)	

DIMENSIONS

Model
ETF2300SM10



Model
ETF2302SM10C


FIG. 1

HOW THE ANTI-SCALE SYSTEM WORKS

Hard water forms “scale” deposits in plumbing. These deposits are composed of calcium carbonate (CaCO_3) and magnesium carbonate (MgCO_3). As scale builds up over time, it can clog plumbing and coat the heating element in your water heater, significantly reducing its efficiency and life.

Unlike a traditional water softener which uses ion exchange media to remove calcium and magnesium ions from the water, the EcoProTechT system converts them into a crystalline form that is less prone to forming scale. This system does not require water for backwashing and does not discharge water to the drain.

Since the EcoProTechT system does not require the addition of salt or chemicals, it is practically maintenance free. The system may benefit from having PTT anti-scale media added every few years by your EcoWater dealer, based on your water use and water conditions.

INSPECT SHIPMENT

The parts required to install the Anti-Scale System are included with the unit. Thoroughly check the system for possible shipping damage and parts loss. Remove and discard (or recycle) all packing materials.

SAFETY GUIDES

- Follow the installation instructions carefully. Failure to install the system properly voids the warranty.
- Before you begin installation, read this entire manual. Then obtain all the materials and tools you will need to make the installation.
- Check local plumbing codes. The installation must conform to them.
- Use only lead-free solder and flux for all sweat-solder connections as required by state and federal codes.
- Use care when handling the system. Do not turn upside down, drop, or set on sharp protrusions.
- Recommended maximum allowable inlet water pressure is **125 psi**. Use a pressure reducing valve if necessary.
- This system is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

WHERE TO INSTALL THE SYSTEM

- Place the system as close as possible to the pressure tank (well system) or water meter (city water).
- Connect the system to the main water supply pipe upstream of the water heater. **Do not run hot water through the system.** The temperature of water passing through the system must not be above **120°F**. Damage caused by hot water is not covered by the warranty.
- Do not install the system where freezing temperatures could occur. Damage caused by freezing is not covered by the warranty.
- Keep outside faucets on untreated water to conserve media capacity.
- Put the system in a place water damage is least likely to occur if a leak develops. The manufacturer will not repair or pay for water damage.
- If installing in an outside location, you must take the steps necessary to assure the system is as well protected from the elements, contamination, vandalism, etc., as when installed indoors.
- Avoid installing in direct sunlight. Excessive sun heat may cause distortion or other damage to non-metallic parts.

TOOLS, PIPE & FITTINGS, OTHER MATERIALS YOU WILL NEED

- Plastic inlet and outlet fittings included with the system allow water flow equivalent to 1 inch nominal pipe. To maintain full valve flow, 1” pipes to and from the system fittings are recommended. Do not reduce the pipes to less than 3/4” size.
- Use copper, brass or PEX plastic pipe and fittings.
- ALWAYS install the included bypass valve, or 3 shut-off valves. Bypass valves let you turn off water to the system for repairs if needed, but still have water available to the house pipes.

PLAN HOW YOU WILL INSTALL THE SYSTEM

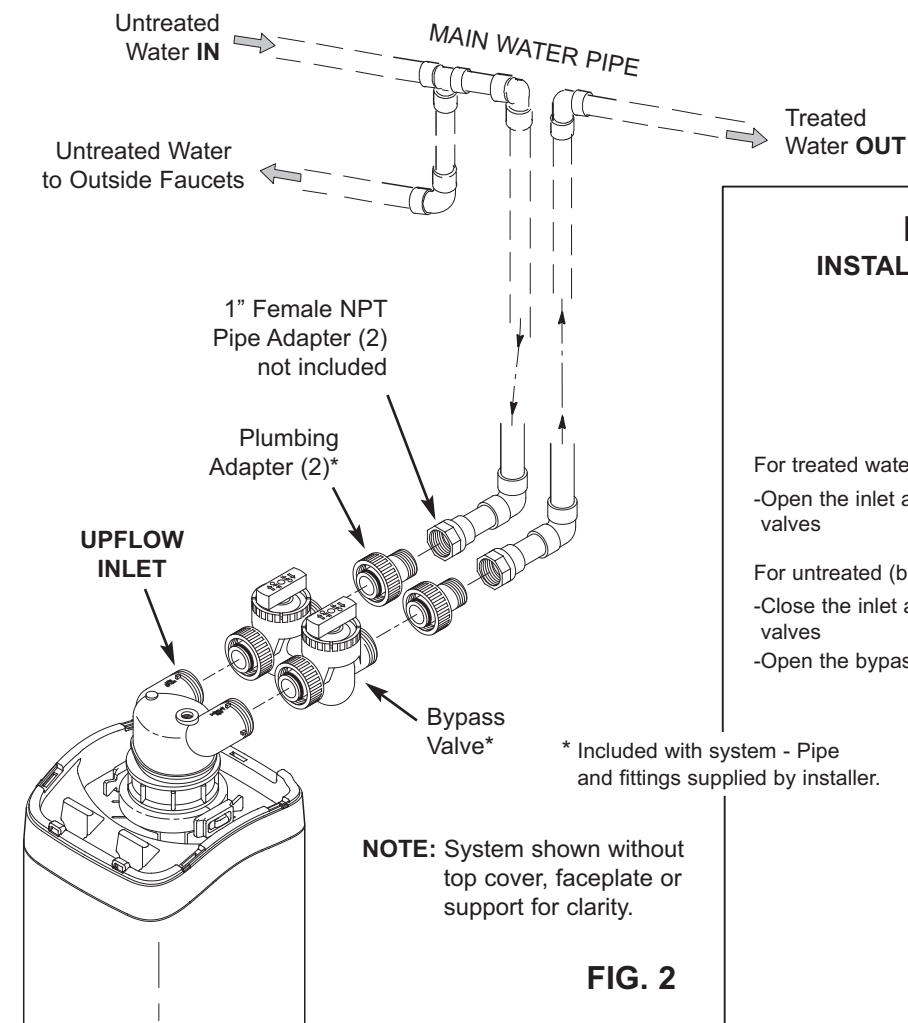
You must first decide how to run in and out pipes to the system. Look at the house main water pipe at the point where you will connect the system. Is the pipe soldered copper, glued plastic, or threaded brass/galvanized? What is the pipe size?

Now look at the typical installation illustrations on pages 4 & 5. Use them as a guide when planning your particular installation. **Be sure to direct incoming, untreated water to the “UPFLOW INLET” port.**

For 2-tank Model ETF2302SM10C, you must install the carbon tank UPSTREAM of the anti-scale media tank, as shown on page 5.

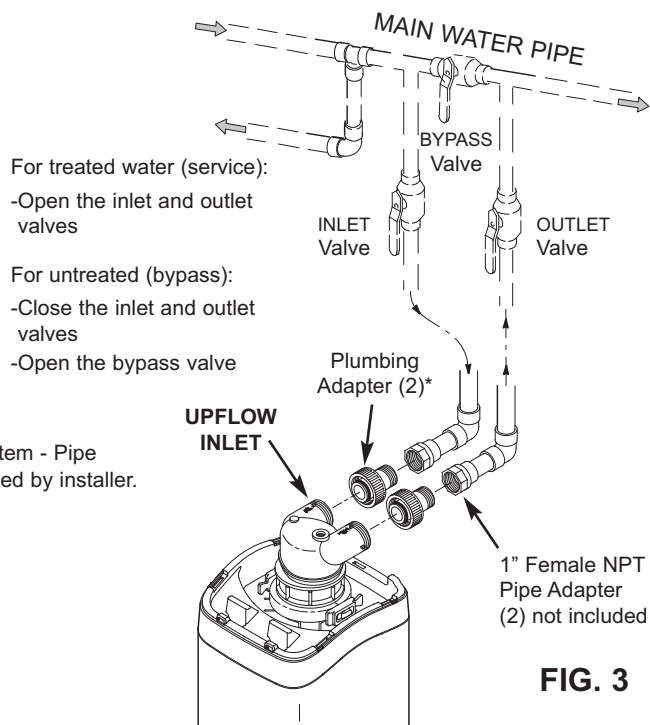
Model ETF2300SM10

INSTALLATION USING INCLUDED BYPASS VALVE



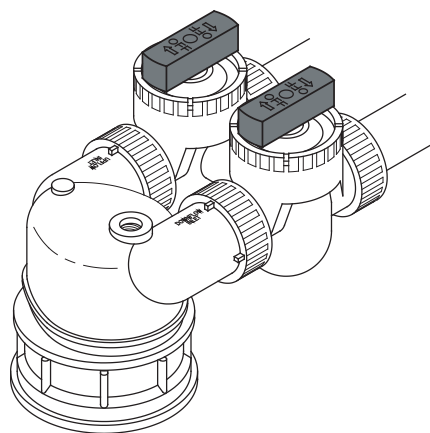
Model ETF2300SM10

INSTALLATION USING 3-VALVE BYPASS



BYPASS VALVE OPERATION

SERVICE
(water flows through Anti-Scale System, and then to house plumbing)



BYPASS
(water flows to house plumbing without going through Anti-Scale System)

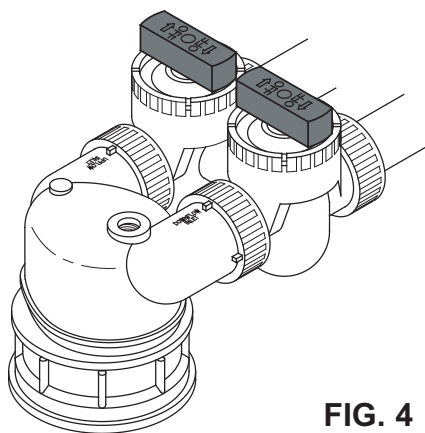
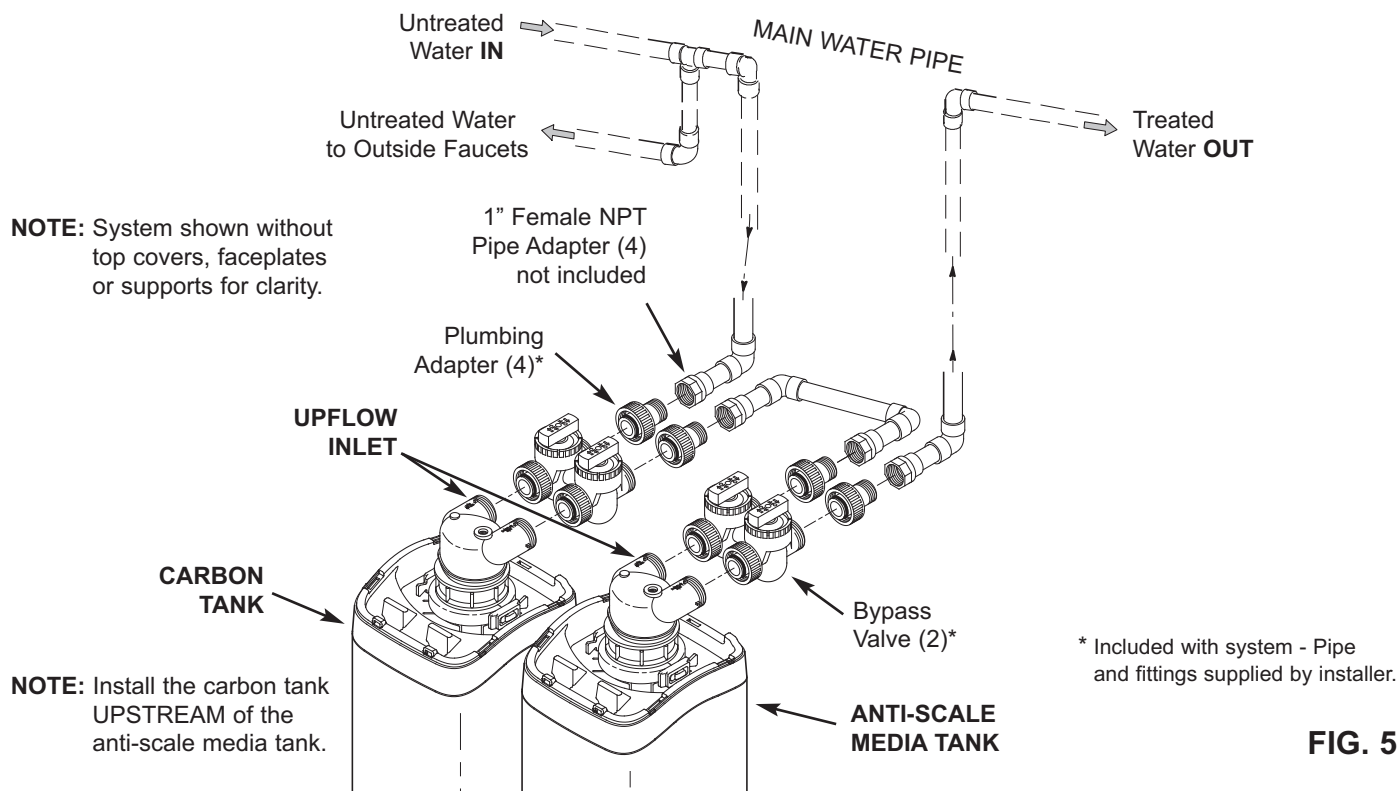
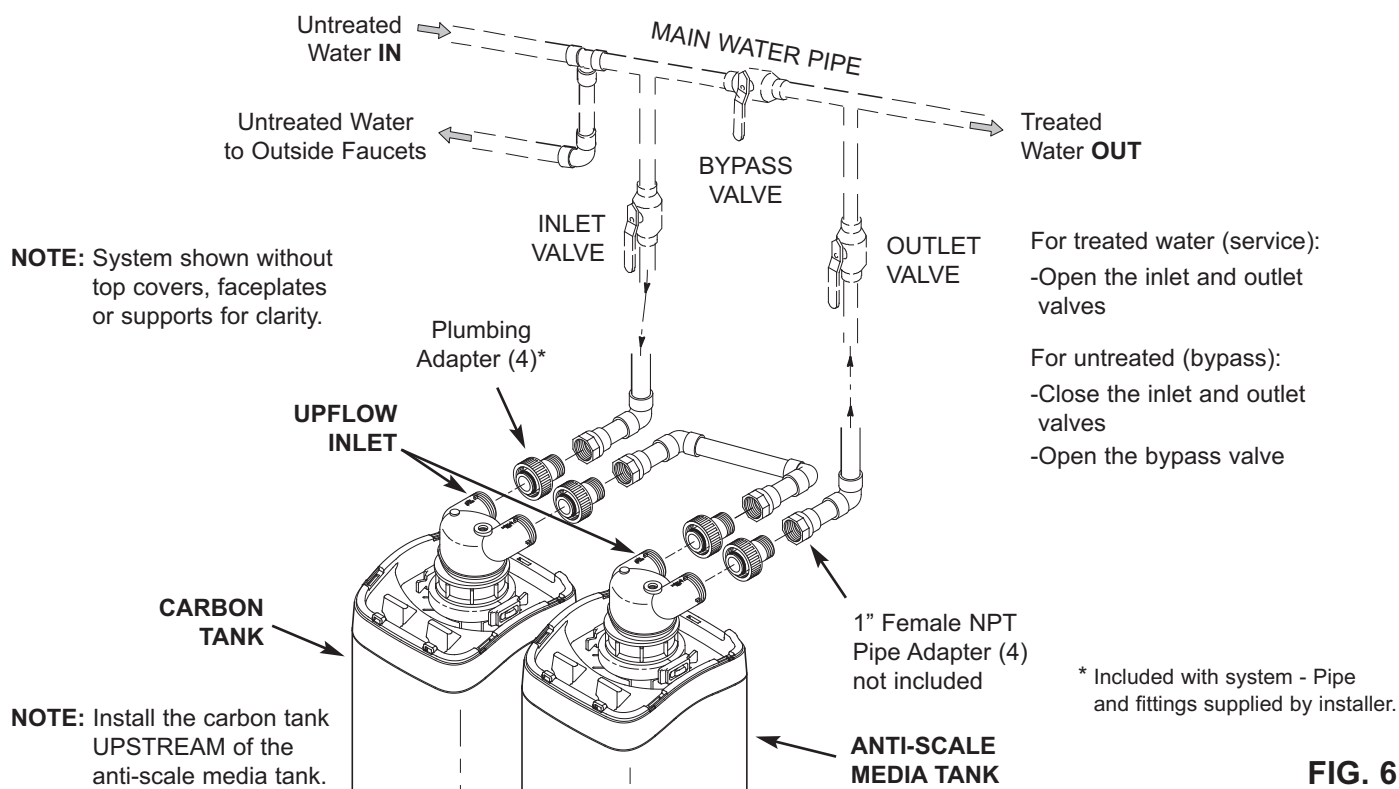


FIG. 4

2-Tank Model ETF2302SM10C
INSTALLATION USING INCLUDED BYPASS VALVES



2-Tank Model ETF2302SM10C
INSTALLATION USING 3-VALVE BYPASS



1. TURN OFF WATER SUPPLY

- Close the main water supply valve near the well pump or water meter.
- Shut off the electric or fuel supply to the water heater.
- Open high and low faucets to drain all water from the house pipes.

2. INSTALL BYPASS VALVE AND/OR PLUMBING ADAPTERS:

- If installing a single bypass valve, thread the bypass valve, with lubricated o-ring seals in place, onto the head inlet and outlet ports (See Figs. 2 & 5). Tighten the collars by hand for a leak-tight seal.
 - OR -

- If installing a 3-valve bypass system, thread the included plumbing adapters, with lubricated o-ring seals in place, onto the head inlet and outlet ports (See Figs. 3 & 6). Tighten the collars by hand for a leak-tight seal.

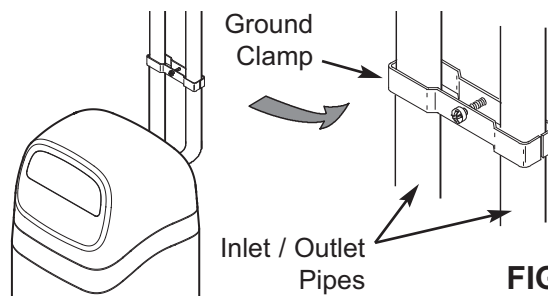
3. COMPLETE PLUMBING TO AND FROM THE SYSTEM

Using the "Typical Installation Illustrations" on pages 4 and 5 as a guide, observe all of the following cautions while you connect inlet and outlet plumbing:

- For 2-tank Model ETF2302SM10C, you must install the **carbon** tank **UPSTREAM** of the anti-scale media tank (See Page 5).
- Be sure incoming, **untreated water** is directed to the **UPFLOW INLET** port. It may be necessary to plumb a crossover if the water pipe's flow is from right to left.
- Be sure to install bypass valve(s).
- If making a soldered copper installation, do all sweat soldering before connecting pipes to the included plastic adapters. Torch heat will damage plastic parts.
- Use pipe joint compound on all external pipe threads.
- When turning threaded pipe fittings onto plastic fittings, use care not to cross-thread.
- Support inlet and outlet plumbing in some manner (use pipe hangers) to keep the weight off of the head adapters.

4. COLD WATER PIPE GROUNDING

The house cold water pipe (metal only) is often used as a ground for the house electrical system. The 3-valve bypass type of installation, shown in Figures 3 and 6, will maintain ground continuity. If you use the plastic bypass, continuity is broken. To restore the ground, do either step **4a** or **4b** following.



- Use the EcoWater ground clamp kit (not included) to make a jumper across the inlet and outlet pipes (See Figure 7).
- Install a #4 copper wire across the removed section of main water pipe, securely clamping at both ends – parts not included.

5. FLUSH PIPES AND TEST FOR LEAKS

CAUTION: To avoid water or air pressure damage to system inner parts, be sure to do the following steps exactly as listed:

- Fully open two treated water faucets, one cold and one hot, nearby the system.
- Place bypass valve(s) into BYPASS position. On a single valve, turn both handles perpendicular to water flow (See Fig. 4). On a 3 valve system, close the inlet and outlet valves, and open the bypass valve (See Figs. 3 & 6).
- Fully open the house main water pipe shutoff valve. Observe a steady flow from both opened faucets.
- Close both faucets.
- Check your plumbing work for leaks and, if any are found, fix right away. Be sure to observe previous caution notes.
- Turn on the gas or electric supply to the water heater. Light the pilot, if applicable.

6. START UP PROCEDURE

- Place bypass valve(s) into SERVICE position, **EXACTLY** as follows:
 - Single Bypass Valve:** Turn the outlet (marked downflow inlet on head) handle parallel to water flow. **SLOWLY**, turn the upflow inlet handle parallel to water flow, pausing several times to allow the system to pressurize slowly.
 - 3 Valve Bypass:** Fully close the bypass valve and open the outlet valve. **SLOWLY**, open the inlet valve, pausing several times to allow the system to pressurize slowly.
- Check all connections for leaks.
- Fully open a cold water faucet, downstream from the system, and allow 50 gallons of water to pass through the system. This should take at least 20 minutes. Close the faucet.

PROCEDURE FOR ADDING PPT ANTI-SCALE MEDIA

1. Bypass the system by turning both bypass handles perpendicular to the flow of water (See Fig. 8).
2. Slowly loosen the installation collars between the bypass valve and in/out head (See Fig. 9), allowing pressure to escape from system.
3. When both installation collars between bypass and in/out head are completely loosened from the in/out head, pull the system away from the bypass valve.
4. Holding the tank neck adapter with a strap wrench, unscrew the in/out head from the tank neck adapter (See Fig. 10). Once the in/out head is completely unscrewed, check to see whether the riser pipe (See Fig. 10) is still inserted in the in/out head. Remove it by lifting the in/out head enough to grasp the riser pipe and pull it free from the head.
5. Using a hose or tube that is 3/4" O.D. or less, siphon the water from the mineral tank through the riser pipe. This will prevent the top-bedding HDPE from floating out of the tank as the water rises when adding media.
6. Remove clips and clamps (See Fig. 11), and lift tank neck adaptor and top distributor from the tank neck. Be careful not to lose the o-rings.
7. Plug, cap or tape the open top of the riser pipe (See Fig. 11) to prevent media from entering the riser pipe.

IMPORTANT: Media entering the riser pipe will restrict flow and increase system pressure drop significantly.

8. Use a funnel that either fits around the riser pipe or alongside of it and fits inside of the tank neck.
9. Add PPT anti-scale media to the tank. Systems are shipped from the factory with 4.3 lbs. of media. Replacement media is supplied in 1.5 lb. containers (P/N 7353755).
10. Uncover the riser pipe and reassemble the system in reverse order, making sure that all o-rings are in place.

NOTE: The riser pipe (See Fig. 10) may have been pulled up from the bottom of the mineral tank. If this has happened, the in/out head may not engage the threads of the neck adapter. To correct this, apply air or water pressure to the riser pipe. This will move the media at the bottom of the tank, allowing the riser pipe to be lowered to the bottom of the mineral tank.

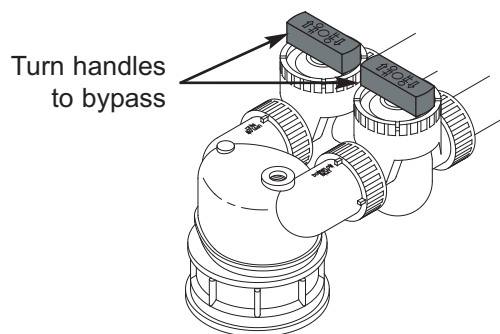


FIG. 8

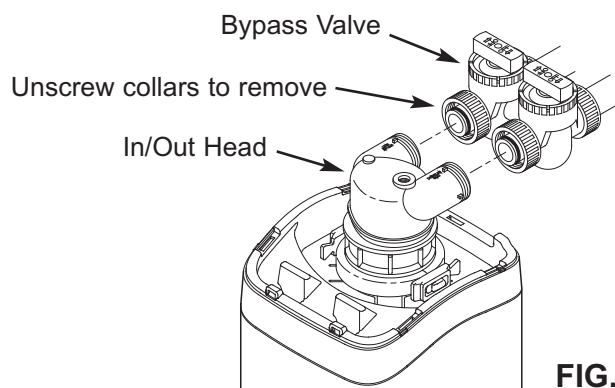


FIG. 9

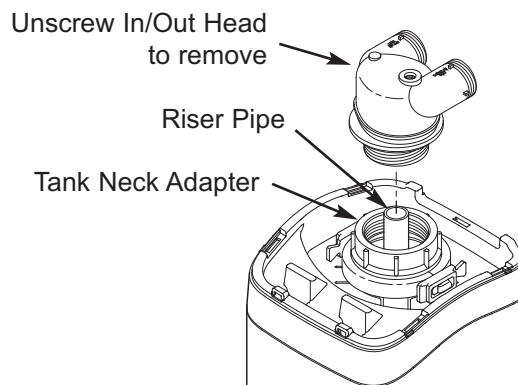


FIG. 10

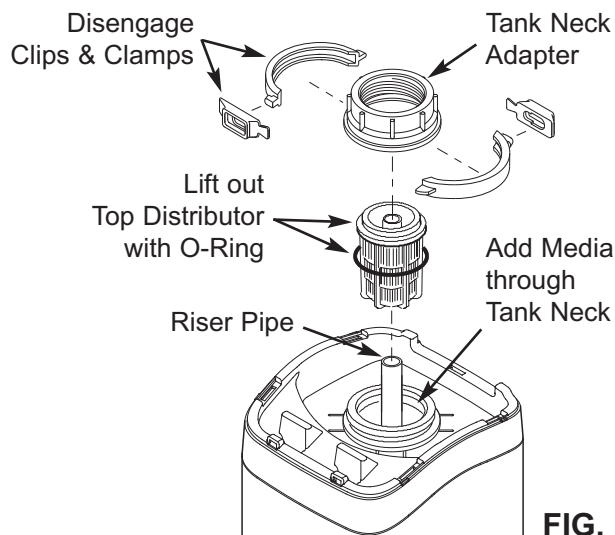
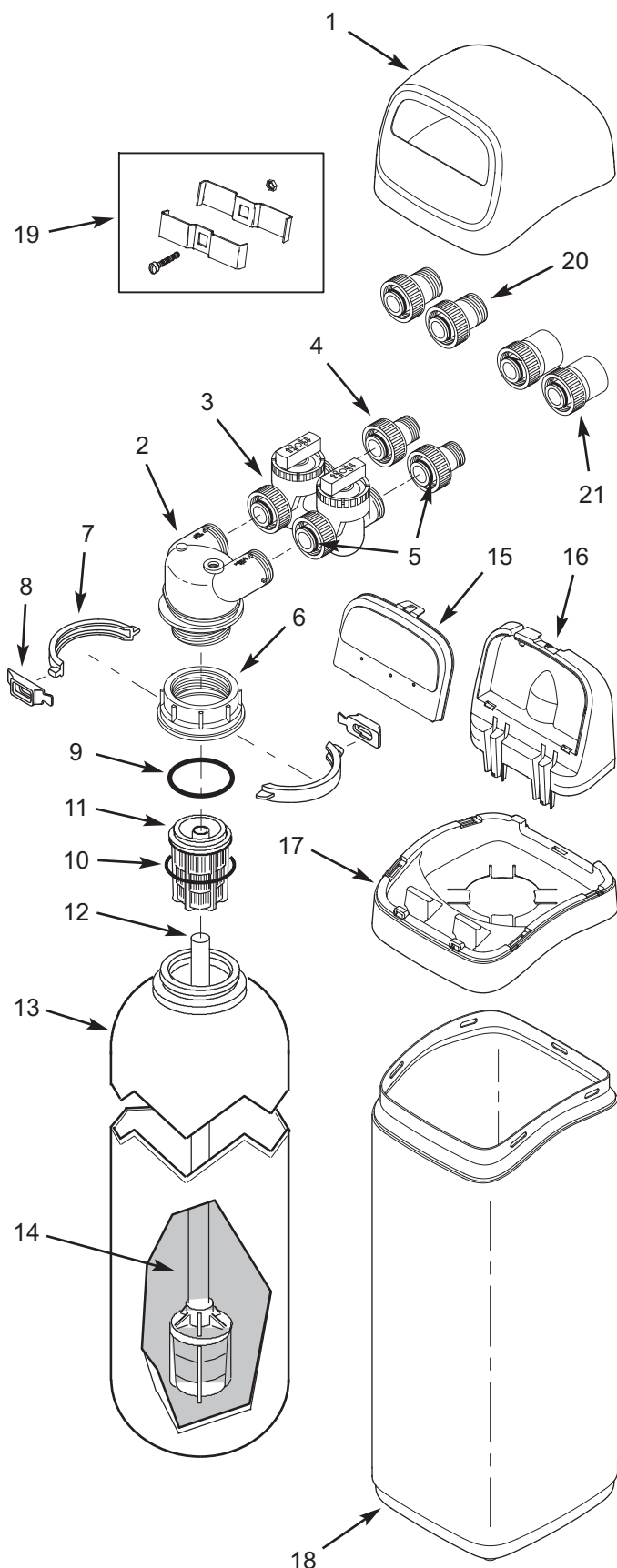


FIG. 11

SYSTEM EXPLODED VIEW

SYSTEM PARTS LIST

Key No.	Part No.	Description
1	7358802	Top Cover
2	7351753	Head, In/Out
3	7346805	Bypass Valve Assembly, includes o-rings (See Key No. 5)
4	7346790	Adapter, Plumbing, 1" NPT, pack of 2, includes o-rings (See Key No. 5)
5	7311127	O-Ring, 1-1/16" x 1-5/16", single
	7336410	O-Ring, 1-1/16" x 1-5/16", pack of 20
6	7342788	Adapter, Tank Neck
—	7331177	Tank Neck Clamp Kit (includes 2 ea. of Key Nos. 7 & 8)
7	↑	Clamp Section
8	↑	Retainer, Clamp
—	7112963	Distributor O-Ring Kit (includes Key Nos. 9 & 10)
9	↑	O-Ring, 2-7/8" x 3-1/4"
10	↑	O-Ring, 2-3/4" x 3"
11	7077870	Top Distributor
12	7105047	Repl. Bottom Distributor
13	7113066	Repl. Mineral Tank, 10" x 35"
14	7353755	PTT Anti-Scale Media, 1.5 lbs. (systems supplied with 4.3 lbs.)
	7301619	Activated Carbon, 27.5 lbs. (14 lbs. used in ETF2302SM10C, not used in ETF2300SM10)
	7351761	HDPE Pellets, 3 lbs. (3 lbs. used in ETF2300SM10 & 6 lbs. used in ETF2302SM10C)
15	7353373	Faceplate (order decal below)
■	7360257	Decal, Faceplate
16	7353381	Support, Faceplate
17	7353357	Rim, ETF2300SM10
	7357539	Rim, ETF2302SM10C
18	7353226	Shroud
19	7248706	Ground Clamp Kit *
20	7352822	Adapter, Plumbing, 1-1/4" NPT, pack of 2, includes o-rings *
21	7352830	Adapter, Plumbing, 1-1/4" & 1-1/2" PVC Solvent, pack of 2, incl. o-rings *

■ Not illustrated.

* Optional parts, not included with system.

To order parts, call your local EcoWater dealer or go to www.ecowater.com to locate a dealer in your area.

LIMITED WARRANTY

EcoWater Systems LLC Advantage Warranty
Series ETF2300SM10 / ETF2302SM10C Anti-Scale Water System

Congratulations! You have just purchased the highest quality water conditioning product on the market.

To whom is this warranty extended?

EcoWater Systems LLC warrants its products to the original owner and guarantees that the products will be free from defects in materials and workmanship from the original date of installation.

How does my warranty work?

If, during the respective warranty period, a part proves, after inspection by EcoWater, to be defective, EcoWater will, at its sole option repair or replace that part at no charge, other than normal shipping, installation or service charges.

What is covered by the warranty?

EcoWater Systems LLC guarantees that,

for the LIFETIME of the original owner, the MINERAL TANK will not rust, corrode, leak, burst, or in any other manner fail to perform its proper functions and that,

for a period of FIVE (5) YEARS after installation, the IN/OUT HEAD will be free of defects in materials and workmanship and will perform its normal functions and that,

for a period of FIVE (5) YEARS after installation, the ACTIVATED CARBON will reduce chlorine from municipal water supplies and that,

for a period of ONE (1) YEAR after installation, the PTT ANTI-SCALE MEDIA will be free of manufacturing defects and that,

for a period of ONE (1) YEAR after installation, ALL OTHER PARTS will be free of defects in materials and workmanship and will perform their normal functions.

How do I obtain warranty service?

Should you need service, your local, independent EcoWater Dealer is only a phone call away.

PHONE: _____

To obtain warranty service, notice must be given, within thirty (30) days of the discovery of the defect, to your local EcoWater Systems dealer.

If I need a part replaced after the factory warranty expires, is the replacement part warranted?

Yes, EcoWater Systems LLC warrants FACTORY REPAIRS as well as all REPLACEMENT PARTS for a period of 90 DAYS. This warranty does not include normal shipping, installation or service charges.

General Provisions

The above warranties are effective provided the water filter is operated at water pressures not exceeding 125 psi, and at water temperatures not exceeding 120°F; provided further that the water filter is not subject to abuse, misuse, alteration, neglect, freezing, accident or negligence; and provided further that the water filter is not damaged as the result of any unusual force of nature such as, but not limited to, flood, hurricane, tornado or earthquake. EcoWater Systems LLC is excused if failure to perform its warranty obligations is the result of strikes, government regulation, materials shortages, or other circumstances beyond its control.

THERE ARE NO WARRANTIES ON THE WATER FILTER BEYOND THOSE SPECIFICALLY DESCRIBED ABOVE. ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED TO THE EXTENT THEY MIGHT EXTEND BEYOND THE ABOVE PERIODS. THE SOLE OBLIGATION OF ECOWATER SYSTEMS LLC UNDER THESE WARRANTIES IS TO REPLACE OR REPAIR THE COMPONENT OR PART WHICH PROVES TO BE DEFECTIVE WITHIN THE SPECIFIED TIME PERIOD, AND ECOWATER IS NOT LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES. NO ECOWATER DEALER, AGENT, REPRESENTATIVE, OR OTHER PERSON IS AUTHORIZED TO EXTEND OR EXPAND THE WARRANTIES EXPRESSLY DESCRIBED ABOVE.

Some states do not allow limitations on how long an implied warranty lasts or exclusions or limitations of incidental or consequential damage, so the limitations and exclusions in this warranty may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state. This warranty applies to consumer-owned installations only.