Before You Start

HOW THE WHIRLPOOL® 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 Whirlpool® Anti-Scale 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 Whirlpool® Anti-Scale System does not require the addition of salt or chemicals, it is practically maintenance free. The system may benefit from having anti-scale media added every few years, based on your water use and water conditions.

INSPECT SHIPMENT

The parts required to install the Whirlpool® 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.

Packing List

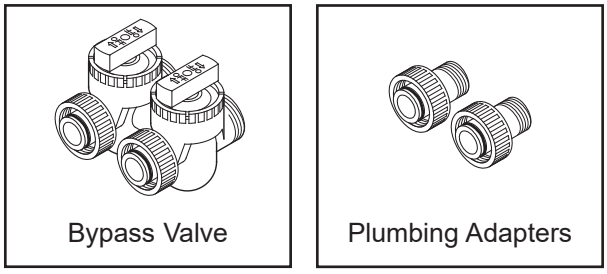

FIG. 2

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 (49°C). 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 effectively sheltered 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 (2.54 cm) nominal pipe. To maintain full valve flow, 1" (2.54 cm) pipes to and from the system fittings are recommended. Do not reduce the pipes to less than 3/4" (1.9 cm) 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 page 5. Use them as a guide when planning your particular installation. Be sure to direct incoming, untreated water to the “UPFLOW INLET” port.

Typical Installation Illustrations

Model WHASC
INSTALLATION USING INCLUDED BYPASS VALVE

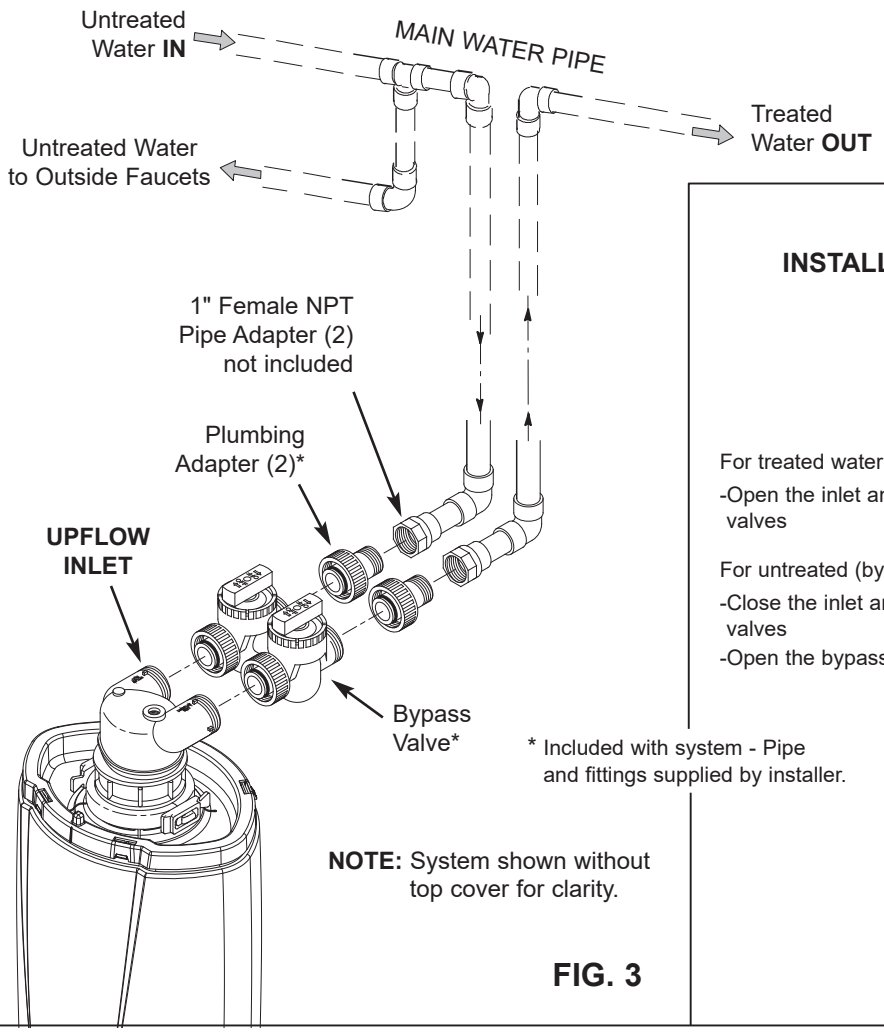

FIG. 3

Model WHASC
INSTALLATION USING 3-VALVE BYPASS

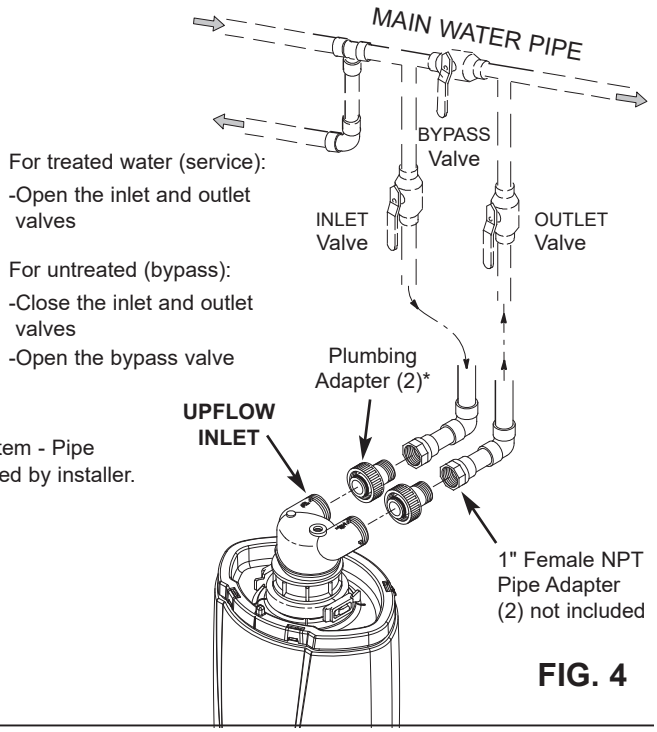

FIG. 4

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)

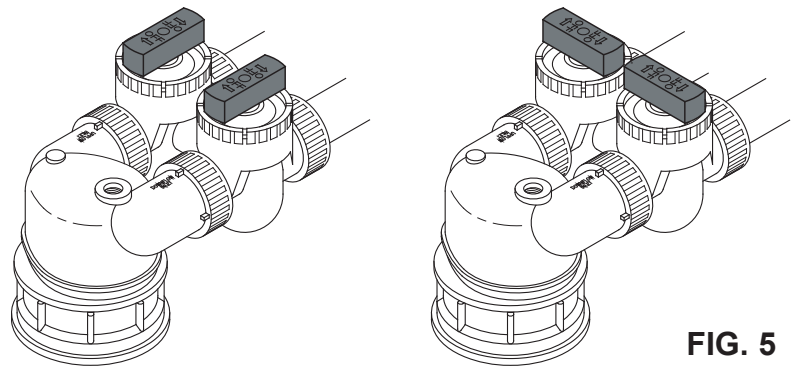

FIG. 5

Installation Instructions

1. TURN OFF WATER SUPPLY

a. Close the main water supply valve near the well pump or water meter.

b. Shut off the electric or fuel supply to the water heater.

c. Open high and low faucets to drain all water from the house pipes.

2. REMOVE TOP COVER:

a. Unsnap the top cover from the rim by pulling back on both corners at the bottom of the rear opening. Lift off the top cover and either set it aside or hang it from the post on the rim (See Fig. 6).

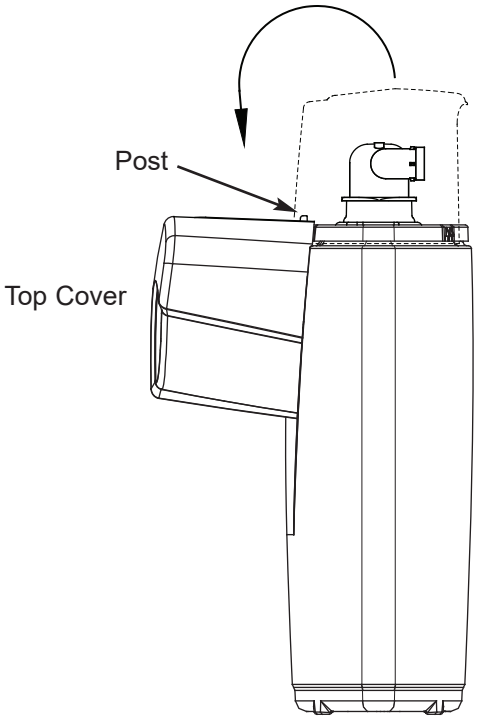

FIG. 6

3. INSTALL BYPASS VALVE AND/OR PLUMBING ADAPTERS:

a. 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 Fig. 3). Tighten the collars by hand for a leak-tight seal.

- OR -

b. 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 Fig. 4) Tighten the collars by hand for a leak-tight seal.

⚠ WARNING

Electrical Shock Hazard

Prior to installation on metallic plumbing, securely install two grounding clamps and a #4 copper wire per installation instructions.

Failure to follow these instructions can result in death or electrical shock.

4. COLD WATER PIPE GROUNDING

IMPORTANT: 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 Figure 4, will maintain ground continuity. If you use a plastic bypass valve at the unit, continuity is broken. To restore the ground, do the following:

a. Install a #4 copper wire across the removed section of main water pipe, securely clamping it at both ends (See Figure 7) - parts not included

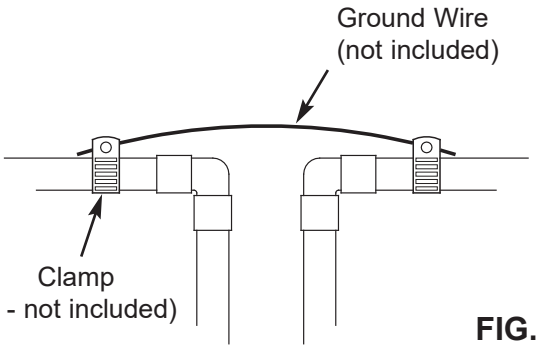

FIG. 7

Installation Instructions

5. COMPLETE PLUMBING TO AND FROM THE SYSTEM

Using the “Typical Installation Illustrations” on the previous page as a guide, observe all of the following instructions while you connect inlet and outlet plumbing:

- 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 system.

6. FLUSH PIPES AND TEST FOR LEAKS

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

a. Fully open two treated water faucets, one cold and one hot, nearby the system.

b. Place bypass valve(s) into BYPASS position. On a single valve, turn both handles perpendicular to water flow (See Fig. 5). On a 3 valve system, close the inlet and outlet valves, and open the bypass valve (See Fig. 4).

c. Fully open the house main water pipe shutoff valve. Observe a steady flow from both opened faucets.

d. Close both faucets.

e. Check your plumbing work for leaks and, if any are found, fix right away. Be sure to observe all instructions in the previous section, “Complete Plumbing to and from the System”.

f. Turn on the gas or electric supply to the water heater. Light the pilot, if applicable.

7. START UP PROCEDURE

a. 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.

b. Check all connections for leaks.

c. Fully open a cold water faucet, downstream from the system, and allow 50 gallons (190 liters) of water to pass through the system. This should take at least 20 minutes. Close the faucet.

d. Snap the top cover back in place on top of the rim.

Adding Anti-Scale Media

PROCEDURE FOR ADDING ANTI-SCALE MEDIA

1. Remove the top cover as described on page 6.

2. Bypass the system by turning both bypass handles perpendicular to the flow of water (See Fig. 8).

3. Slowly loosen the installation collars between the bypass valve and in/out head (See Fig. 9), allowing pressure to escape from system.

4. 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.

5. 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.

6. Using a hose or tube that is 3/4" (1.9 cm) O.D. or less, siphon the water from the mineral tank through the riser pipe. This will keep the top-bedding HDPE from floating out of the tank as the water rises when adding media.

7. Remove clips and clamps (See Fig. 11), and lift tank neck adaptor and top distributor from the tank neck. Be sure not to lose the o-rings.

8. Plug, cap or tape the open top of the riser pipe (See Fig. 11) to keep media from entering the riser pipe.

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

9. Use a funnel that either fits around the riser pipe or alongside of it and fits inside of the tank neck.

10. Add anti-scale media to the tank. Systems are shipped from the factory with 3 lbs. (1.36 kg) of media. Replacement media is supplied in 1.5 lb. (0.68 kg) containers (P/N 7353755).

11. 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.

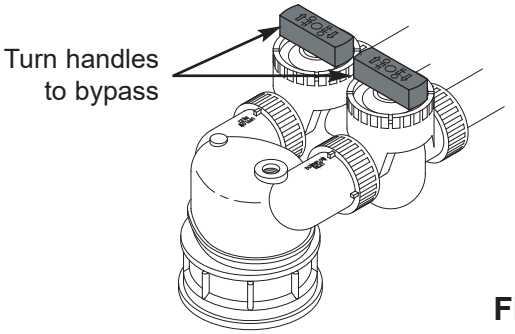

FIG. 8

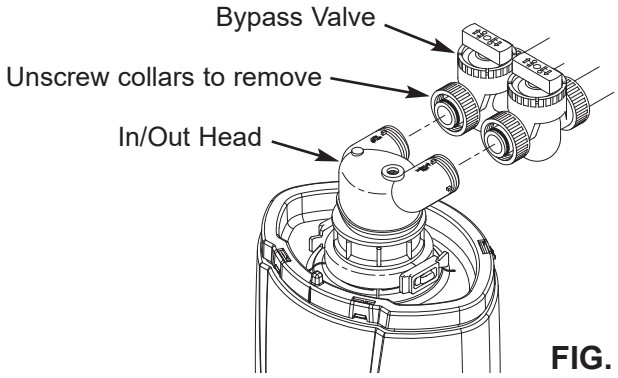

FIG. 9

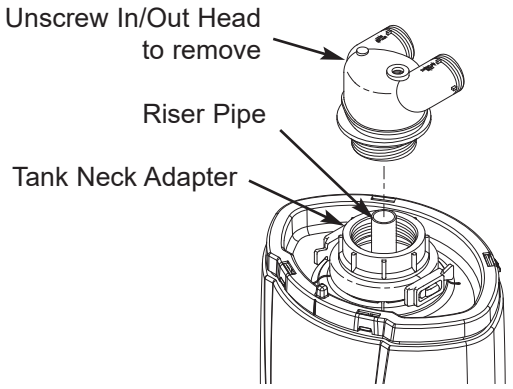

FIG. 10

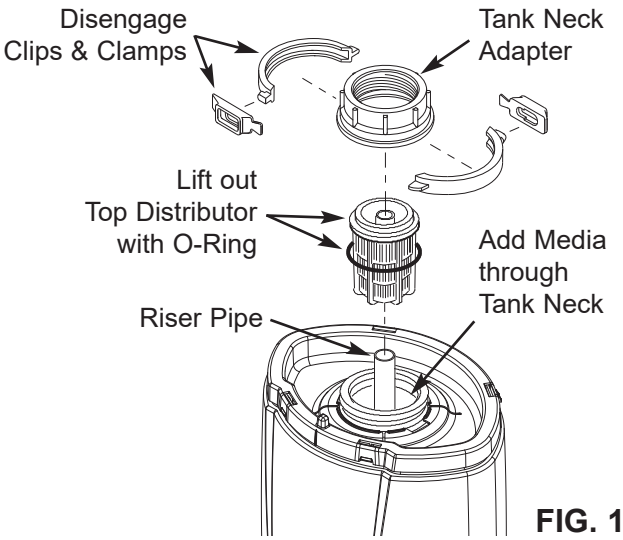

FIG. 11