# Installation Requirements

## LOCATION REQUIREMENTS

Consider all of the following when selecting an installation location for the water conditioner.

- Do not locate the water conditioner where freezing temperatures occur. The temperature of the water supply to the conditioner must be 40-100°F. Do not install on hot water. Freezing temperatures or hot water damage voids the warranty.
- To condition all water in the home, install the water conditioner close to the water supply inlet, and upstream of all other plumbing connections, except outside water pipes. Outside faucets should remain on hard water to avoid wasting conditioned water and salt.
- A nearby drain is needed to carry away regeneration discharge (drain) water. Use a floor drain, laundry tub, sump, standpipe, or other options (check your local codes). See “Air Gap Requirements” and “Valve Drain Requirements” sections.
- The water conditioner works on 24 V DC electrical power, supplied by a direct plug-in power supply (included). Provide nearby a 120 V, 60 Hz electrical outlet in accordance with NEC and local codes.
- Always install the water conditioner between the water inlet and water heater. Any other installed water conditioning equipment should be installed between the water inlet and water conditioner (See Figure 4 below).
- Avoid installing in direct sunlight. Excessive sun heat may cause distortion or other damage to non-metallic parts.

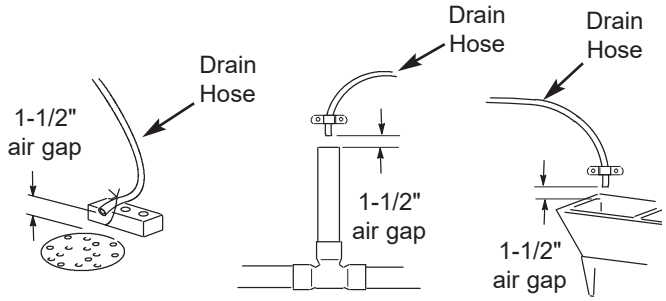
## PLUMBING CODES

All plumbing must be completed in accordance with national, state, and local plumbing codes.

> In the state of Massachusetts: The Commonwealth of Massachusetts plumbing code 248-CMR shall be adhered to. A licensed plumber shall be used for this installation.

## AIR GAP REQUIREMENTS

A drain is needed for regeneration water (See Figure 3). A floor drain, close to the water conditioner, is preferred. A laundry tub, standpipe, etc. are other drain options. Secure valve drain hose in place. Leave an air gap of 1-1/2" between the end of the hose and the drain. This gap is needed to prevent the backflow of sewer water into the water conditioner. Do not put the end of the drain hose into the drain.




**FLOOR DRAIN** **STANDPIPE** **LAUNDRY TUB**

**FIG. 3**

## THE PROPER ORDER TO INSTALL WATER TREATMENT EQUIPMENT

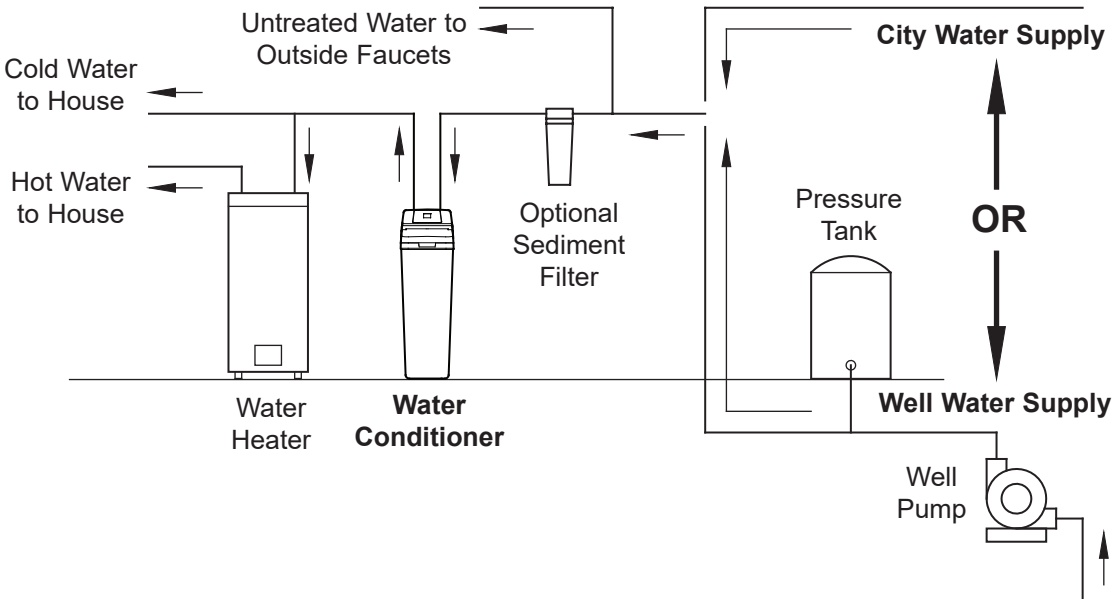



**FIG. 4**

# Installation Requirements

## VALVE DRAIN REQUIREMENTS

Using the flexible drain hose (included), measure and cut to the length needed. Flexible drain hose is not allowed in all localities (check your plumbing codes). If local codes do not allow the use of a flexible drain hose, a rigid valve drain run must be used. Purchase a compression fitting (1/4 NPT x 1/2 in. minimum tube) and 1/2" tubing from your local hardware store. Plumb a rigid drain as needed (See Figure 6).

**NOTE:** Make the valve drain line as short and direct as possible.

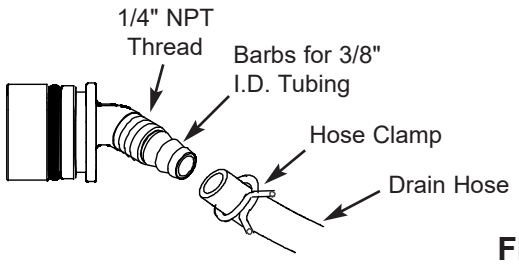



**FIG. 5**

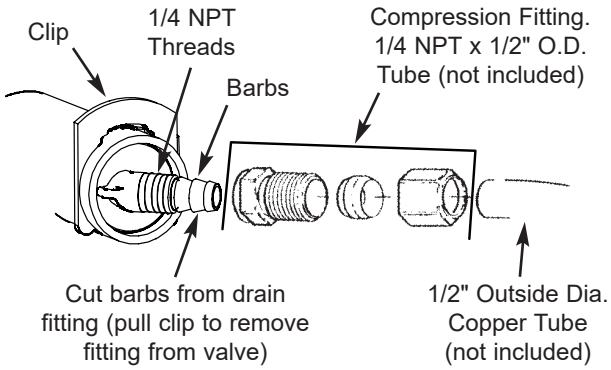



**FIG. 6**

## INLET / OUTLET PLUMBING OPTIONS

Always install either a single bypass valve (provided), as shown in Figure 7, or, if desired, parts for a 3 valve bypass system (not included) can be purchased and assembled, as shown in Figure 8. Bypass valves allow you to turn off the water to the softener for maintenance if needed, but still have water in house pipes.

Use:

- Copper pipe
- Threaded pipe
- PEX (Crosslinked Polyethylene) pipe
- CPVC plastic pipe
- Other pipe approved for use with potable water

**IMPORTANT:** Do not solder with plumbing attached to the single bypass valve. Soldering heat will damage the plastic valve.

### SINGLE BYPASS VALVE

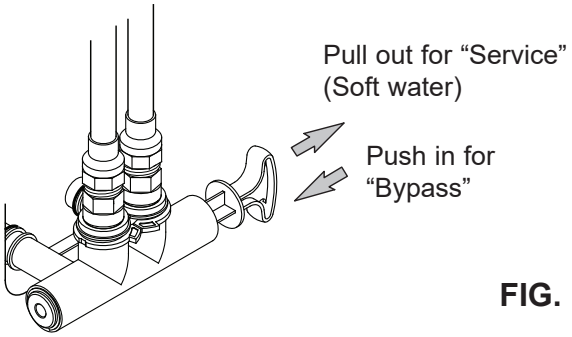



**FIG. 7**

### 3 VALVE BYPASS

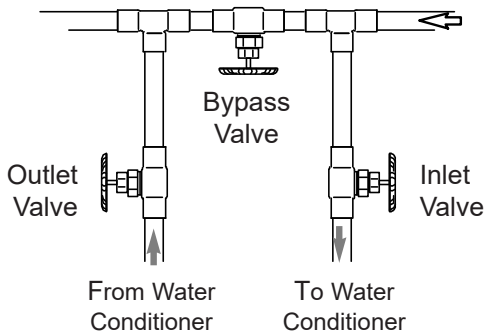
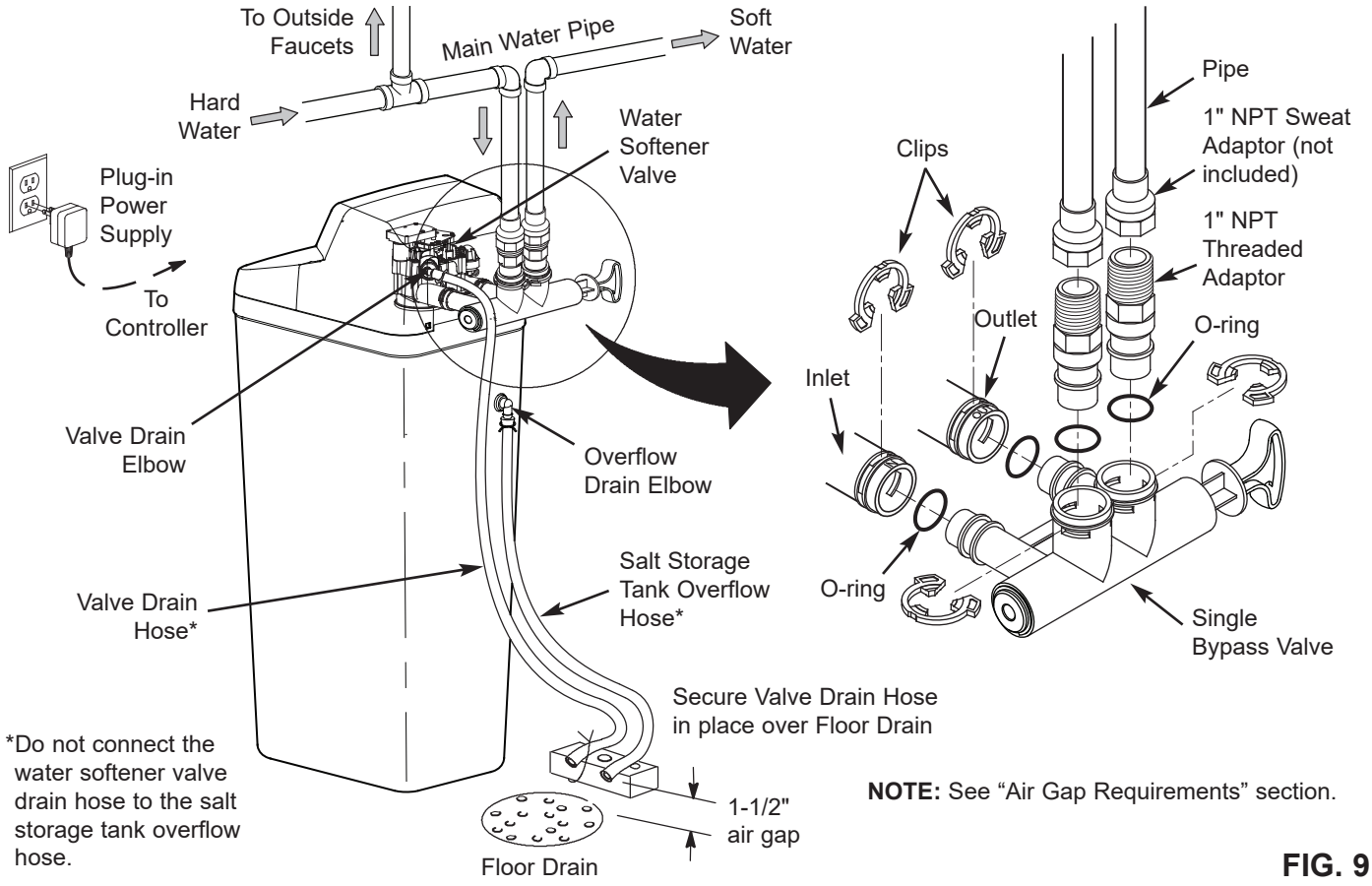



**FIG. 8**

# Installation Instructions

## TYPICAL INSTALLATION




*Do not connect the water softener valve drain hose to the salt storage tank overflow hose.

**NOTE:** See “Air Gap Requirements” section.

**FIG. 9**

# Installation Instructions

## TURN OFF WATER SUPPLY

**1**. Close the main water supply valve, located near the well pump or water meter.

**2**. Open all faucets to drain all water from house pipes.

**NOTE:** Be sure not to drain water from the water heater, as damage to the water heater elements could result.

## INSTALL THE BRINE TANK OVERFLOW ELBOW

Install the brine tank overflow grommet and elbow in the 13/16" diameter hole in the back of the salt storage tank sidewall.

**NOTE:** The brine tank overflow elbow accepts either 1/2" or 3/8" I.D. hose.

## MOVE THE WATER CONDITIONER INTO PLACE

**⚠ WARNING**

**Excessive Weight Hazard**

**Use two or more people to move and install or uninstall water softener.**

**Failure to do so can result in back or other injury.**

**1**. Move the water conditioner into the desired location. Set it on a solid, level surface.

**IMPORTANT:** Do not place shims directly under the salt storage tank to level the conditioner. The weight of the tank, when full of water and salt, may cause the tank to fracture at the shim.

**2**. Visually check and remove any debris from the water conditioner valve inlet and outlet ports.

**3**. Make sure the turbine assembly spins freely in the “out” port of the valve.

**4**. If not already done, put a light coating of silicone grease on the single bypass valve o-rings.

**5**. Push the single bypass valve into the conditioner valve as far as it will go. Snap the two large holding clips into place, from the top down as shown in Figures 11 & 12.

**IMPORTANT:** Be sure the clips snap firmly into place so the single bypass valve will not pull out.

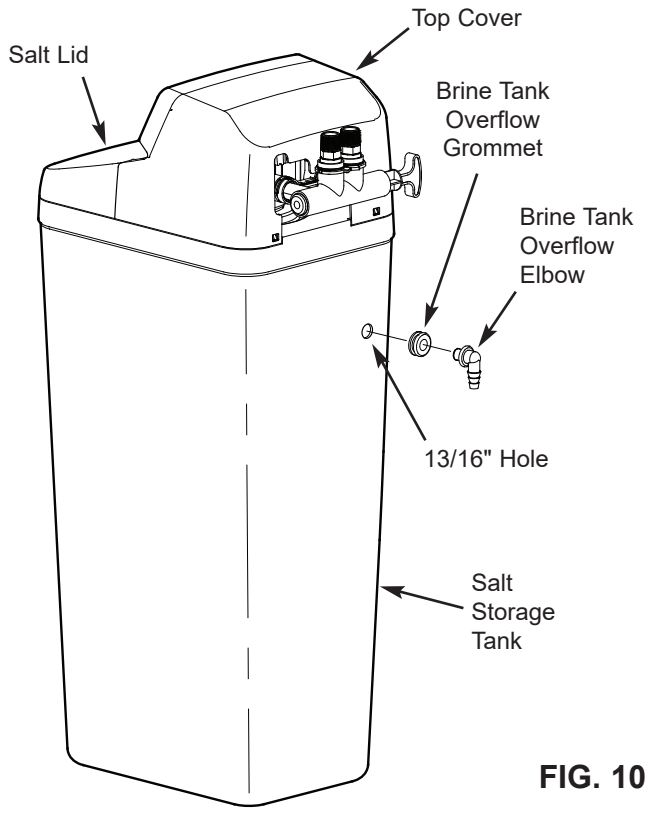



**FIG. 10**

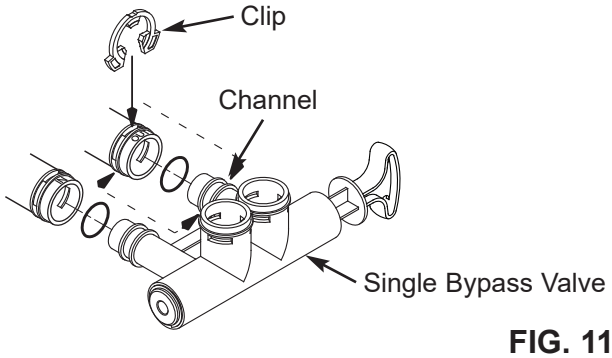



**FIG. 11**

### CORRECT ASSEMBLY

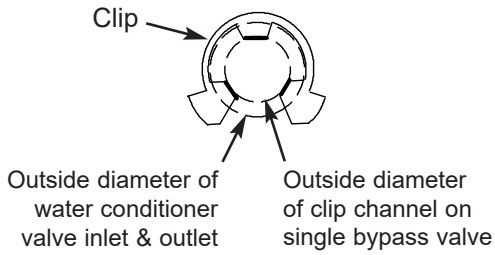



**FIG. 12**

**NOTE:** Be sure all 3 tabs of the clip go through the matching holes on the water conditioner valve inlet or outlet, and fully into the channel on the single bypass valve. Make sure that the tabs are fully seated.

# Installation Instructions

**⚠ 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.**

## GROUNDING INFORMATION (for Installations on Metal Pipe)

The house main incoming water pipe is often used to ground electrical outlets in the home. Grounding protects you from electrical shock. Installing the water conditioner with a plastic bypass valve will break this ground. Before beginning installation, purchase and securely install two grounding clamps and a #4 copper wire across the location where the conditioner will be, tightly clamping it at both ends, as shown in Figure 13.

**NOTE:** Check local plumbing and electrical codes for proper installation of the ground wire. The installation must conform to them. In Massachusetts, plumbing codes of Massachusetts shall be conformed to. Consult with your licensed plumber.

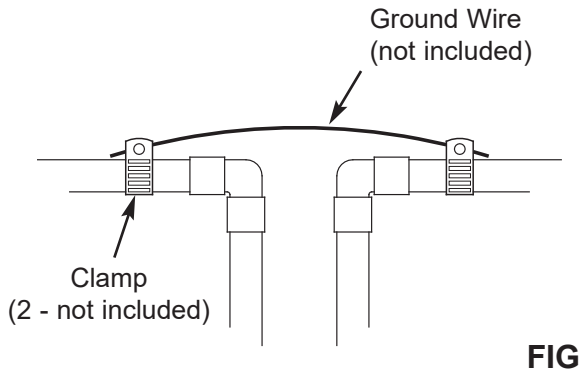



**FIG. 13**

## COMPLETE INLET AND OUTLET PLUMBING

Measure, cut, and loosely assemble pipe and fittings from the main water pipe to the inlet and outlet ports of the water conditioner valve. Be sure to keep fittings fully together, and pipes squared and straight.

Be sure hard water supply pipe goes to the water conditioner valve inlet side.

**NOTE:** Inlet and outlet are marked on the water conditioner valve. Trace the water flow direction to be sure hard water is to inlet.

**IMPORTANT:** Be sure to fit, align and support all plumbing to prevent putting stress on the water conditioner valve inlet and outlet. Stress from misaligned or unsupported plumbing may cause damage to the system.

Complete the inlet and outlet plumbing for the type of pipe you will be using.

## INSTALL VALVE DRAIN HOSE

**1**. Measure, cut to needed length and connect the 3/8" drain line (provided) to the water conditioner valve drain fitting. Use a hose clamp to hold the hose in place.

**NOTE:** Make the valve drain line as short and direct as possible.

**IMPORTANT:** If codes require a rigid drain line see “Valve Drain requirements” section.

**2**. Route the drain hose or copper tubing to the floor drain. Secure drain hose. This will prevent “whipping” during regenerations. See “Air Gap Requirements” section.

## INSTALL SALT STORAGE TANK OVERFLOW HOSE

**1**. Measure, cut to needed length and connect the 3/8" drain line (provided) to the salt storage tank overflow elbow and secure in place with a hose clamp.

**2**. Route the hose to the floor drain, or other suitable drain point no higher than the drain fitting on the salt storage tank (This is a gravity drain). If the tank overfills with water, the excess water flows to the drain point. Cut the drain line to the desired length and route it neatly out of the way.

**IMPORTANT:** For proper operation of the water conditioner, do not connect the water conditioner valve drain tubing to the salt storage tank overflow hose.

# Installation Instructions

## ADD WATER AND SALT TO THE SALT STORAGE TANK

**⚠ WARNING**

**Excessive Weight Hazard**

**Use two or more people to move and lift salt bags.**

**Failure to do so can result in back or other injury.**

**1**. Using a container, add about three gallons of clean water into the salt storage tank.

**2**. Add salt to the storage tank. Use nugget, pellet, or coarse solar salts with less than 1% impurities.

## PLUG IN THE POWER SUPPLY

During installation, the water conditioner wiring may be moved or jostled from place. Be sure all leadwire connectors are secure on the back of the electronic board and be sure all wiring is away from the valve gear and motor area, which rotates during regenerations.

**1**. Plug the power supply into an electrical outlet that is not controlled by a switch.

**NOTE:** The water heater is filled with hard water and, as hot water is used, it will refill with conditioned water. In a few days, the hot water will be fully conditioned. To have fully conditioned hot water immediately, wait until the initial recharge is over. Then, drain the water heater (following instructions for water heater) until water runs cold.

## PROGRAM THE CONTROLLER

**1**. Install the system's top cover and salt lid.

**2**. Complete the programming steps on pages 13 & 14.

## RINSE OUT CARBON FINES

Small particles of carbon filtration material are generated during manufacturing and shipping, which will exit the media tank with the first water flow. These carbon "fines" are not harmful, but give the water a gray color and should be rinsed down the drain before any water from the conditioner is directed to the home's faucets or water heater.

**IMPORTANT:** To avoid water or air pressure damage to conditioner inner parts, and to flush pipe chips or other residue from the water pipes, be sure to do the following steps exactly as instructed.

**1**. Make sure the water conditioner's valve drain hose is hooked up and the open end directed to a floor drain, laundry tub or other suitable type of drain.

**2**. The system should be connected to electrical power.

**3**. Place bypass valve(s) in "bypass" position (see Figures 7 & 8). On a single valve, slide the stem inward to bypass. On a 3-valve bypass, close the inlet and outlet valves and open the bypass valve.

**4**. Fully open the house main water pipe shutoff valve.

**5**. Initiate a regeneration by pressing and holding for 3 seconds the RECHARGE button (see Figure 15 on page 13). The valve motor will start running and the valve will advance to the "Fill" position.

**6**. After you hear the valve motor stop running (valve in "Fill" position), press, but do not hold, the RECHARGE button. The valve will advance to the "Brine" position.

**7**. After you hear the valve motor stop running (valve in "Brine" position), press, but do not hold, the RECHARGE button. The valve will advance to the "Backwash" position.

**8**. Once the unit is in backwash, place bypass valve(s) in SERVICE, EXACTLY as follows:
**a**. Single Bypass Valve: Slowly, slide the valve stem outward toward service, pausing several times to allow the system to pressurize gradually.
**b**. 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 gradually.

**9**. Let the water conditioner complete the backwash and fast rinse cycles (takes about 20 minutes). When the regeneration ends, the conditioner's valve returns to the service position.

# Installation Instructions

## SANITIZE THE WATER CONDITIONER / SANITIZE AFTER SERVICE

**1**. Open the salt lid and pour about 3 oz. (6 tablespoons) of household bleach into the softener brinewell.

**2**. Make sure the bypass valve(s) is in the “service” (open) position.

**3**. **Start a recharge:** Press the RECHARGE button and hold for 3 seconds, until “Recharge Now” begins to flash in the display. This recharge draws the sanitizing bleach into and through the water conditioner. Any air remaining in the unit is purged to the drain.

**4**. After the recharge has completed, fully open a cold water faucet, downstream from the conditioner, and allow 190 liters of water to pass through the system. This should take at least 20 minutes. Close the faucet.

## TEST FOR LEAKS

To prevent air pressure in the water conditioner and plumbing system, complete the following steps in order:

**1**. Fully open two or more softened cold water faucets close to the water conditioner, located downstream from the water conditioner.

**2**. Place the bypass valve (single or 3 valve) into the “bypass” position. See Figures 6 & 7 on Page 7.

**3**. Slowly open the main water supply valve. Run water until there is a steady flow from the opened faucets, with no air bubbles.

**4**. Place bypass valve(s) in “service” or soft water position as follows:

- Single bypass valve: Slowly move the valve stem toward “service,” pausing several times to allow the water conditioner to fill with water.
- 3 valve bypass: Fully close the bypass valve and open the outlet valve. Slowly open the inlet valve, pausing several times to allow the water conditioner to fill with water.

**5**. After about three minutes, open a hot water faucet until there is a steady flow, and there are no air bubbles, then close this faucet.

**6**. Close all cold water faucets and check for leaks at the plumbing connections that you made.

**7**. Check for leaks around clips at conditioner’s inlet and outlet. If a leak occurs at a clip, depressurize the plumbing (turn off the water supply and open faucets) before removing clip. When removing clips at the conditioner’s inlet or outlet, push the single bypass valve body toward the conditioner (see Figure 14). Improper removal may damage clips. Do not reinstall damaged clips.

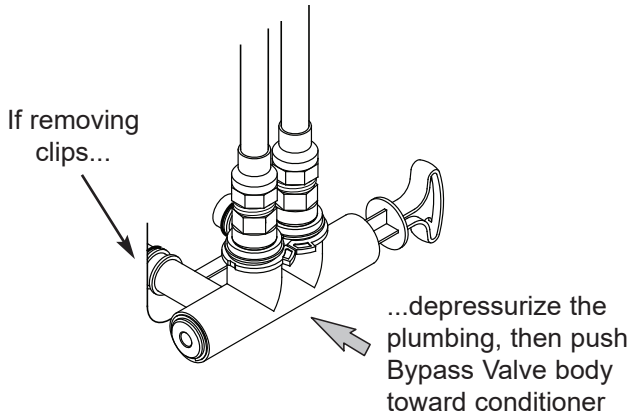



**FIG. 14**

# Programming the Water Conditioner

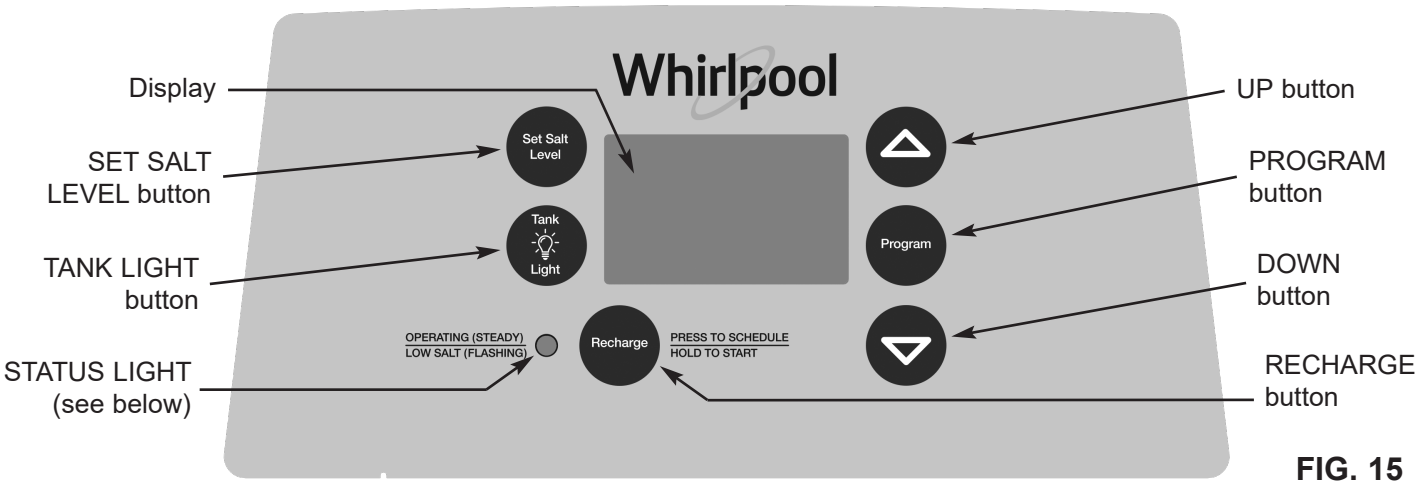



**FIG. 15**

## STATUS LIGHT

When the water conditioner is connected to electrical power, the status light on the control panel will operate as follows:

- **Light flashing slowly, along with the salt level indicators in the display** - The salt monitor system indicates a low salt level and needs to be set. See “Set Salt Level” on Page 15.
- **Light flashing slowly, along with the words “SCHEDULED CLEAN” in the display** - Four months have elapsed on the system’s timer since start up or the last reset. This is a reminder to use Whirlpool® WHE-WSC Water Softener Cleanser three times a year. To reset the timer, press any button on the control panel and the flashing words will disappear. The status light will stop flashing, unless the system is also low on salt (see above).
- **Light flashing rapidly, with “CURRENT TIME” shown in the display and the clock flashing slowly** - The present time needs to be set, either during initial start up or after a long power outage. See “Set Time of Day”, at right.
- **Light flashing rapidly, with “Err” shown in the display** - The electronic self-diagnostics have detected a problem. See “Troubleshooting” on Page 20.
- **Light on steady (not flashing)** - The system has power applied and does not require any attention.

## PROGRAM THE CONDITIONER

When the power supply is plugged into the electrical outlet, the model code (LFCP) and a software version number (example: J3.9), are briefly shown in the display. Then the words “CURRENT TIME” appear and 12:00 PM begins to flash.

## SET TIME OF DAY

If the words “CURRENT TIME” do not show in the display, press the PROGRAM button until they do.

**1**. Press the △ UP or ▽ DOWN buttons to set the present time. Up moves the display ahead; down sets the time back. Be sure AM or PM is correct.

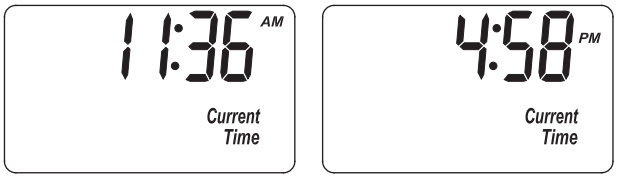



**FIG. 16**

**NOTE:** Press buttons and quickly release to slowly advance the display. Hold the buttons down for fast advance.

continued on the next page

**Questions? Call Toll Free 1-866-986-3223** or visit **whirlpoolwatersolutions.com**

When you call, please be prepared to provide the model and serial number, found on the rating decal, typically located on the rim below the salt lid hinges.

# Programming the Water Conditioner

## SET WATER HARDNESS NUMBER

**1**. Press the PROGRAM button once again to display a flashing “25” and the word “HARDNESS”.

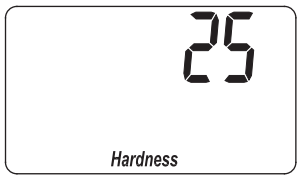



**FIG. 17**

**2**. Press the △ UP or ▽ DOWN buttons to set your water’s hardness number.

**NOTE:** If your water supply contains iron, compensate for it by adding to the water hardness number. For example, assume your water is 20 gpg hard and contains 2 ppm iron. Add 5 to the hardness number for each 1 ppm of iron. In this example, you would use 30 for your hardness number.

| | |
|---|---|
| | 20 gpg hardness |
| 2 ppm iron x 5 = 10 | +10 |
| (times) | 30 HARDNESS NUMBER |

## SET RECHARGE (REGENERATION) TIME

**1**. Press the PROGRAM button once again to display a flashing “2:00 AM” and the words “RECHARGE TIME”. This is a good time for the recharge to start in most households, because water is not in use.


**FIG. 18**

**2**. If you want to change the recharge start time, press the △ UP or ▽ DOWN buttons until the desired time shows. Be sure AM or PM is correct.

## SET SALT TYPE

**1**. Press the PROGRAM button once again to display a flashing “nACL”.

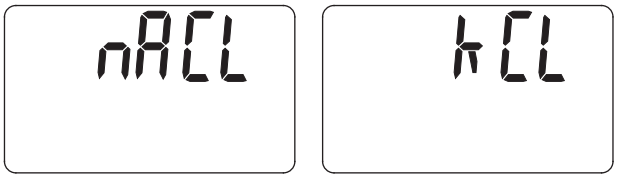



**FIG. 19**

Salt Type allows you to choose between sodium chloride (NaCl), which is regular softener salt, or potassium chloride (KCl), which is an alternative to sodium chloride. KCl (potassium chloride) may be used if the user of the water conditioner is on a sodium restricted diet and is concerned about the amount of sodium in the water supply.

KCl should be used in accordance with the following steps to help give you years of maintenance free service.

Place only one bag at a time of KCl into your conditioner (the salt storage tank should contain no more than 60 pounds of KCl at any one time).

**NOTE:** A conditioner using KCl should not be located in areas with high temperature changes or high humidity (KCl may harden in these environments and make the conditioner inoperable).

**2**. Check the brine tank and brinewell (black tube in salt storage tank) monthly. If hardening is present, pour small amounts of warm water on hardened areas until they loosen.

**3**. Be sure to set the correct salt type, depending on which type of salt is used (NaCl or KCl). Use the △ UP or ▽ DOWN buttons to toggle between NaCl and KCl, then press the PROGRAM button to enter the selection.

**4**. Press the PROGRAM button once again to return to normal operating display.

## START A RECHARGE

**1**. Press the RECHARGE button and hold for three seconds, until “RECHARGE” begins to flash in the display, starting a recharge. This recharge draws the sanitizing bleach into and through the water conditioner. Any air remaining in the water conditioner is purged to the drain. During this time, periodically check for leaks.

**NOTE:** As with all other water system applications, leaks may occur. Leaks may not be immediately apparent. Recheck for leaks 24 hours after the first recharge cycle is complete.