

## **INSTALLATION & START-UP INSTRUCTIONS**

### **FLECK 7000SXT METER WATER SOFTENER SYSTEMS**



## **Preface:**

Thank you for your purchase of a new Water Softener with Fleck 7000SXT Meter from QualityWaterForLess.com! We have put together these instructions as reference, and to be used as general installation guidelines. It is always recommended that a licensed plumber perform all installation work according to all local codes. We at QualityWaterForLess.com cannot assume responsibility for improper installation, application, or injury or damage as a result of improper installation.

## **Pre-Installation Guidelines:**

Before assembly of your new system, be sure that the following conditions have been met for placement of your system:

- Level, firm surface, such as concrete, on which to place the softener tank and salt tank (as known as a 'brine' tank)
- Nearby floor drain or standpipe to connect to the softener for use during each regeneration
- Un-switched power source, standard US plug, 120v 60hz (the softener system includes a 5ft. power cord and plug)
- Access to the water main coming into your home. You will need to install the softener at this point to assure that water for the home is going through the system.

## **Placing and Filling the Tank:**

- Choose the final location for your water softener tank, and place the tank upright and level on the surface.
- Filling the tank may be necessary on some systems. **Your tank may have also come prefilled, and in this case you only need to unscrew the protective cap as shown below in Figure 1 and move on to the next section.**



FIGURE 1

- If your tank is not filled, please follow the additional instructions below.
- First, place the riser tube into the tank as shown in Figure 2. **NOTE: Please be sure that the riser tube seats into the bottom of the tank, and that the top of the riser tube is FLUSH with the top of the tank lip.**

FIGURE 2



- Before filling the tank, place a piece of duct tape over the top of the riser to prevent resin from dropping down inside the riser tube as shown in Figure 3.
- Place the included filling funnel over the top of the tank as shown in Figure 4, and prepare to fill the tank. **If your softener system came with Gravel, please pour this amount into the tank FIRST, then pour in the included resin media afterwards.**



FIGURE 3



FIGURE 4

- Remove the filling funnel and duct tape and go on to the next section

## Installing the Fleck 7000SXT Meter Control Valve:

- Using the included silicone lubricant packet, lubricate the inner and outer o-rings on the bottom of the Fleck 7000SXT Meter Valve as shown in Figures 5 & 6 below.



FIGURE 5



FIGURE 6

- Next, place the Fleck 7000SXT Meter Valve onto the top of the tank, being sure that the riser tube fits into the central o-ring on the valve, as shown in figure 7 below. Hand tighten the valve to the tank snugly by hand only.

**NOTE: Do not use Teflon tape or pipe dope on the valve or tank threads.**



FIGURE 7

- Locate the plumbing adaptors and bypass valve assembly that was shipped with your system. Also, disassemble the plumbing adaptor clips as shown in Figure 8 on the following page.
- Using the included silicone lubricant packet, lubricate the o-rings on the bypass valve as shown in figure 9 on the following page.
- Finally, push the bypass valve snugly to the back of the 7000SXT valve as shown in Figure 10 on the following page. Use the red clips to secure the bypass valve as shown in figure 11 on the following page.



FIGURE 8



FIGURE 9



FIGURE 10



FIGURE 11

- Locate the two plumbing adaptors supplied with your 7000SXT system. Using Teflon tape, wrap the threaded end of your plumbing adaptor as shown in figure 12 below.
- Next lubricate the o-ring on each adaptor as shown in figure 13 below.
- Push in, and secure each plumbing adaptor into place using the red clips supplied as shown in figure 14.



FIGURE 12



FIGURE 13



FIGURE 14

## Plumbing your Fleck 7000SXT Meter:

- Before beginning your installation, please first familiarize yourself with the “IN” and “OUT” on the Fleck 7000SXT Meter Valve. **In order to prevent damage to your home and to the softener system, install the softener according to the “IN” and “OUT” arrows on the softener valve!**
- Find the main shut-off valve for your house and turn it to the “OFF” position. If you have a private well, this valve should be near your well pressure tank. If you have a city water supply, your valve should be near your water meter.
- Depressurize and drain your home of water by turning on all faucets and fixtures in your home, including those outside.
- Pick your installation point, and cut a section of pipe out to run to and from your softener. **NOTE: In many cases, it is preferred to keep outside lines UNSOFTENED. If you wish to keep your outside lines unsoftened, you must plumb “Bypass” lines to run hard water to these fixtures.**
- Using soldered (or "sweated") copper, PVC plastic pipe, or flexible connections, plumb the system according to all local plumbing codes. **NOTE: If using copper pipe, please pre-fabricate at least a 12” section of pipe for the “IN” and “OUT” bound lines. Attach the prefabricated sections to your threaded plumbing adapters, and wrap a wet rag around this connection to prevent heat damage during soldering.**
- Once all connections have been made, place the system into bypass by either using your existing 3-valve bypass (if ordered with a Yoke adaptor), or by switching your included bypass to “IN BYPASS” position. See the figures below for a demonstration of how to use the bypass valve included with your 7000SXT system. The holes in the two bypass handles should be “Up & Down” as shown.
- Next, gradually open your main valve and allow all air in your plumbing lines to escape slowly. Also, you may turn off all outside and inside faucets and fixtures.
- Check for leaks at your plumbing site for signs of slow drips, and rectify if necessary.
- Please DO NOT position the bypass valve to “IN SERVICE” at this time, as the installation is completed yet! **NOTE: Please take this opportunity to check and re-check the “IN” and “OUT” to make sure that they are correct!**

Holes “Up & Down” is “In Bypass”



Use a screwdriver to move each side 1/4” turn to move the bypass to “In Service”



### Making the Brine Tank Connection:

- Locate the Brine Fitting Assembly on the 7000SXT Valve, and pull out the Gray retaining clip as shown in figure 15 below.
- Remove the Assembly as shown in figure 16 below.



FIGURE 15



FIGURE 16

- Locate the included section of Brine Tubing and the Brine Nut Assembly as shown in figure 17 below.
- **IMPORTANT!** Onto one side of the included Brine Tubing, assemble the Brine Nut Assembly exactly as shown in Figure 18 below.



FIGURE 17



FIGURE 18

- Tighten the nut to the Brine Fitting Assembly using until snugly tightened in place. Be careful not to over tighten, as you may sever the brine line tubing. See figure 19 on the following page.
- Push the Brine Fitting Assembly back into place and secure the Assembly with the Brine Fitting Clip as shown in figure 20 on the following page.



FIGURE 19



FIGURE 20

- Locate the included brine tank, and remove the brine tank cover shown below Figure 21.
- Next, locate the brine well, and remove the cap as shown in Figure 22 below.



FIGURE 21



FIGURE 22

- Pull the 2310 brine float assembly out of the brine well and disassemble the retaining nut as shown in Figure 23 below.
- Next, assemble the 2310 brine float assembly to the brine well through the pre-drilled hole and hand-tighten as shown in figure 24 on the following page

FIGURE 23



FIGURE 24





- Take the other end of your brine line tube and insert the tube through the small hole drilled through the brine tank, and brine well. Loosely unscrew the hex nut on the 2310 brine float assembly. Insert the tubing end firmly into the hex nut on the 2310 brine float assembly.
- Next back-off the hex nut and ferrule assembly so they are securely onto the tubing as shown in Figure 25 below. **NOTE: Please be sure to assemble the nut in the fashion described to prevent system malfunction and possible brine tank overflow!**
- Hand-tighten the hex nut snugly onto the 2310 brine float assembly as shown in Figure 26 below.



FIGURE 25



FIGURE 26

- Finally, use ½" I.D. tubing (sold separately, or the same as the drain tubing which you may have elected to add to your system during your order) to connect the drain barb fitting on the brine tank to a floor drain as shown in Figure 27 below. **NOTE: This is not necessary as the 2310 assembly is designed to prevent an overflow situation, but is a good and recommended precaution for a proper installation.**



FIGURE 27

### Making the Drain Connection:

- Locate the Drain Fitting Assembly on the 7000SXT Valve, and remove the gray retaining clip as shown in figure 28 below.
- Remove the fitting by pulling upward as shown in figure 29 below.
- Use Teflon tape to wrap the threading as shown in figure 30 below.
- Install the included drain barb assembly to the Fleck 7000SXT Meter Valve by screwing the fitting using a wrench snugly unto the threads as shown in Figure 31 below. **Please use caution not to over tighten this fitting.**



FIGURE 28



FIGURE 29



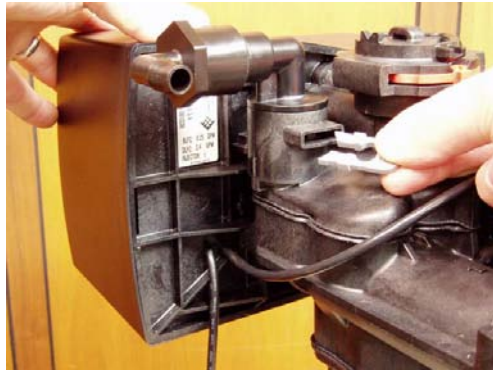
FIGURE 30



FIGURE 31

- Push the drain fitting assembly back onto the 7000SXT Valve snugly and secure the fitting with the gray clip as shown in figure 32 below.

FIGURE 32



- Next, assemble your ½” I.D. drain line to the drain barb as shown in Figure 33 on the following page. Be sure to use rigid wall ½” I.D. tubing that will not flatten
- Wrap electrical tape over the drain tubing to prevent a tubing split, and clamp the tubing securely into place with the included blue clamp as shown in Figure 34 below.

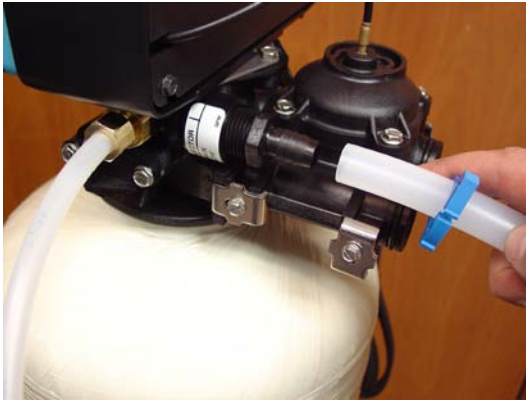


FIGURE 33



FIGURE 34

- Connect the other end of this drain line tubing **SECURELY** to a standpipe or drain in accordance with all local plumbing codes. **NOTE: Be sure that the drain line is securely in place before the use of the water softener system. When the system regenerates, there will be increased flow via this tubing, which may cause the tubing to become loose.**

### Programming the Fleck 7000SXT Meter Valve:

- Before start-up a few simple steps must be followed to program the Fleck 7000SXT Meter Valve.
- It will be important to know your water Hardness and Iron quantities before doing this programming procedure. If you do not know your water hardness, or if you are unsure, you may wish to have it tested by sending us a sample for testing, or by taking a sample to a local pool supply, or hardware store.
- Your Hardness test results may indicate “Grains”, “PPM”, or “mg/L”. It is important to note that PPM and mg/L are the same measure and both figures can be treated interchangeably. If you get a hardness figure in PPM or mg/L, please divide this number by 17.1 to get Grains. **Ex: If your hardness is measured at 300 PPM, your Grains are  $300 / 17.1 = 18$  Grains.**
- Your Iron results should be measured in either “PPM” or “mg/L”. Add your level of iron multiplied by 5. Add this number to your hardness level. This final figure will be your Total Hardness Level that we will program into your softener system.
- To begin programming, first plug in your 7000SXT Valve to a nearby wall outlet. The system will then illuminate. The system will show the time of day and the amount of gallons remaining. This display will switch between these values about every 10 seconds.

- Set the time on the system to 12:01 PM by pressing either the “UP” or “DOWN” arrow as shown in figure 35 below. You may hold the button to allow the time to scroll faster.
- Once the time display is set to 12:01 PM, press the “extra cycle” button once as shown in figure 36 below.



FIGURE 35



FIGURE 36

- To enter master programming mode, press the “UP” and “DOWN” buttons TOGETHER and HOLD for 5 seconds, and then release the buttons, as shown in figure 37 below.
- The display should now show “DF / GAL” as shown in figure 38 below. (This indicates U.S. Operation Mode - Gallons) **Do not change this value, and press the “Extra Cycle Button” once to continue.**



FIGURE 37



FIGURE 38

- The display should now show “7VT / St2b” as shown in figure 39 on the following page. (This indicates Valve Type 7000SXT Mode) **Do not change this value, and press the “Extra Cycle Button” once to continue.**
- The display should now show “CT / Fd” as shown in figure 40 on the following page. (This indicates Control Type METER Delayed Format) **Do not change this value, and press the “Extra Cycle Button” once to continue.**



FIGURE 39



FIGURE 40

- The display may now show “C / 24.0” as shown in figure 41 below. (This indicates the Capacity is currently set to 24,000 grains) **Use the “UP” or “DOWN” button to change this value to the size of your system, and press the “Extra Cycle Button” once to continue when finished.**
- The display may now show “H / 20” as shown in figure 42 below. (This indicates the Hardness is 20 grains) **Use the “UP” or “DOWN” button to change this value to the total hardness of you water (as calculated before on page 11), and press the “Extra Cycle Button” once to continue when finished.**



FIGURE 41



FIGURE 42

- The display should now show “RS / SF” as shown in figure 43 on the following page. (This indicates Reserve Selection is Safety Factor percentage) **Do not change this value, and press the “Extra Cycle Button” once to continue.**
- The display should now show “SF / 15” as shown in figure 44 on the following page. (This indicates the Safety Factor is 15 percent) **Use the “UP” or “DOWN” button to change this value to “15” for 2-3 people in the home, and "20" for 4 or more people in the home, and press the “Extra Cycle Button” once to continue when finished.**



FIGURE 43



FIGURE 44

- The display should now show “DO / 14” as shown in figure 45 below. (This indicates the Day Override is 14 days – the system will regenerate on the 14<sup>th</sup> day if the meter does not otherwise automatically initiate a regeneration based on usage.) **Do not change this value, and press the “Extra Cycle Button” once to continue.**
- The display should now show “RT / 2:00” as shown in figure 35 below. (This indicates the system will regenerate at 2:00 AM, assuming the system clock is set accurately) **Although this is the recommended time, you may change this by using the “UP” or “DOWN” buttons, and then press the “Extra Cycle Button” once to continue.**



FIGURE 45



FIGURE 46

- The display should now show “BW / 10” as shown in figure 47 on the following page. (This indicates Backwash Time is 10 minutes in length) **Do not change this value, and press the “Extra Cycle Button” once to continue.**
- The display should now show “BD / 60” as shown in figure 48 on the following page. (This indicates Brine Draw Time is 60 minutes) **Do not change this value, and press the “Extra Cycle Button” once to continue.**



FIGURE 47



FIGURE 48

- The display may now show “BW / 5” as shown in figure 49 below. (This indicates 2nd Backwash Time is 5 minutes) **Do not change this value, and press the “Extra Cycle Button” once to continue – if this value is different, use the “UP” or “DOWN” buttons to change this.**
- The display may now show “RR / 10” as shown in figure 50 below. (This indicates Rapid Rinse Time is 10 minutes) **Do not change this value, and press the “Extra Cycle Button” once to continue – if this value is different, use the “UP” or “DOWN” buttons to change this.**



FIGURE 49



FIGURE 50

- The display may now show “BD / 12” as shown in figure 51 on the following page. This indicates the length of the Brine Refill Cycle during regeneration. **Use the table on the following page to determine the proper salt time setting based on the size of your system. Change the value by pressing the “UP” or “DOWN” button until the proper time setting is shown, and press the “Extra Cycle Button” once to continue when finished.**



FIGURE 51

System Size	Salt Time Setting (0.25 BLFC)
24,000 Grains	15
32,000 Grains	20
40,000 Grains	25
48,000 Grains	30
64,000 Grains	40
80,000 Grains	50
96,000 Grains	60
120,000 Grains	80

**\*\*\* NOTE: If using Potassium Chloride, please add 30% to the numbers in the table above. This is because Potassium Chloride is a weaker regenerant, and more usage is required per regeneration to achieve the same capacity gain.**

- The display may now show “FM / t1.5” as shown in figure 52 below. (This indicates Flow Meter type 3/4" Turbine) **Do not change this value, and press the “Extra Cycle Button” once to continue – if this value is different, use the “UP” or “DOWN” buttons to change this.**
- The system will now exit the Master Programming mode, and the display should now show the time of day, flowed by the new number of gallons remaining, as shown in figure 53 below. **Change the time of day by pressing and holding the “UP” or “DOWN” button until the proper time setting is shown. Note that there is a “PM” light indicator to differentiate between AM and PM times.**



FIGURE 52



FIGURE 53

- Congratulations! Your new 5600SXT system is now programmed and ready for operation. Please move on to the next section on the following page to initialize and start-up your system.



### **Initial Start-Up:**

- With one nearby softened faucet running in the COLD position, slowly open your bypass valve or 3-valve bypass to about ¼ open to allow the air trapped in the softener to escape via your running faucet. See page 6 in this guide for illustrations. **NOTE: Opening the bypass too quickly or too fully open may damage your softener or plumbing.**
- Allow the softener tank to slowly fill with water, and then gradually move your bypass valve to the fully open position. **NOTE: You may see some initial discoloration from the softened water – this is normal and should dissipate within the first 40-50 gallons of water used.**
- Turn off the nearby faucet when the water runs clear.
- Add approximately five gallons of water to your brine tank, and add 120-160 pounds of pellet, solar, or block salt or potassium chloride to your brine tank.

### **Enjoy Your Softener!**

Congratulations, you have successfully installed your new water softener with Fleck 7000SXT Meter Valve!

Please maintain your system by keeping the softener plugged-in and always keep your brine tank filled with salt to at least above the water level.

We appreciate your business, and hope that you enjoy years of trouble-free softened water!

- QualityWaterForLess.com