

INSTALLATION & START-UP INSTRUCTIONS CLACK WS1EE METERED WATER SOFTENER



Thank you for your purchase of a new Water Softener with Clack WS1EE Meter water softener from Quality Water Treatment! We have put together these instructions as a reference, and they are to be used as a general installation guideline.

Pre-Installation Guide

Before you assembly 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 AKA Brine Tank
- Nearby floor drain or standpipe to connect to the softener for use during each regeneration
- Standard US plug, 120v 60hz (the softener system includes a 8 ft. power cord and plug. Be sure the plug is not connected to a light switch Make a list of all the plumbing fittings to completely install the unit

Typical is:

- Two - 3/4" or 1" male adaptors
- Eight - 90° elbows
- Amount of pipe you need
- 1/2" drain line and 90° elbows

Always follow local plumbing codes in your area

Adding the Resin to the Water Softener Tank

1. Position your new softener unit where you want it placed for use.
 2. Inside the Softener tank you'll find a 3/4" or 1" gray or white Pvc tube (called a distributor tube.) If the tube does not already have a cap on the top use a pvc slip cap or some duct tape to temporarily plug this tube (this is to keep the resin from going down the tube.) If your system came with gravel, add the gravel first, then the resin. Use the included special funnel when adding the resin. This will take about 10 minutes.
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After adding the resin, remove the temporary cap, clean the valve threads with water, and screw the valve on. When screwing the valve on the tank the tube will slip into the bottom of the valve hole. Note no silicone or tape is needed, the valve is o'ring fit and only needs to be tightened by hand.



Assemble all tools needed to install the unit. Start your Installation. If copper, you need a copper cutter, propane tank, soldering torch, flux, wire paper and lead free solder. An average cost of \$40.00 NOW THAT YOU HAVE ADDED THE RESIN AND CONNECTED THE CONTROL VALVE TO THE TANK YOU ARE READY TO INSTALL, FOLLOW THESE INSTRUCTIONS:

1. Turn off the main water shutoff valve.
2. Open all plumbing fixtures in the house including all outside faucets in order to drain the lines. Unscrewing the aerator screen from your kitchen and bathroom faucets will help drain the lines faster
3. Cut and remove a 4" section of the water line where the unit is to be installed.

□4. connect bypass valve to back of clack control valve as shown in picture below.



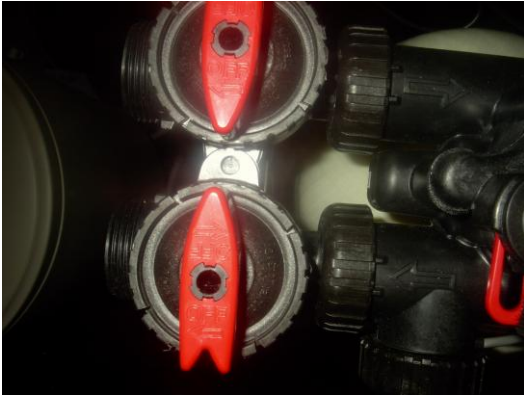
□5. Assemble Tale pieces; follow the diagram that came with your connectors.



□6. Connect the connectors on to the back of the bypass valve.



□7. Now position the water softener unit in place for final water line installation, making sure the bypass valve is set in the "BYPASS" show in Picture below.



□8. FIRST, measure and cut the lengths of pipe you need to plumb the main hard water line into your softener unit. Then do the same for the soft water line that will exit from the softening unit, back out into the house.

□9. NOTE: The unit will be marked either on the back of the valve body itself with the word "IN" and "OUT" or the top of the body of the bypass valve assembly with arrows showing the direction of water flow into and out of the valve. "Out: is the water entering your house after it has passed through the water softener. BE VERY CAREFUL TO MAKE SURE YOU PLUMB THE SYSTEM IN THE RIGHT DIRECTION OTHERWISE YOU WILL LOOSE THE RESIN OUT OF THE TANK INTO YOUR HOUSE LINES!

□10. Use teflon tape only and wrap around the threaded end of the drain line adaptor and screw drain line adaptor into control show in photo below, then snug up with a small wrench.



□ 11. **Attaching your drain line:** Note: Do not attach the drain line to the elbow on the brine tank it will overflow the brine tank. Running the drain line to a house drain, where your washing machine drain line goes is an excellent choice, if this is not possible then you can drain into multiple areas, make sure you always leave an air gap if going into a pipe. An air gap is an open area where there is no standing water. Your drain line can be elevated up to 5 feet over and above where it comes out of the valve. More than 20' use 3/4" drain line instead of 1/2". and you can run it up to 100 feet away. Always follow local codes.

- 12. Slide a 1/2" hose clamp over drain line and then slide drain line over drain hose barb. Slide hose clamp over barb and tube and tighten the hose clamp.



- 13. Plug your power cord into a nearby outlet.
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Assembly of Brine tank:

- 14. The float assembly is a safety float; it only functions if there's a failure in the control valve. This will insure the brine tank won't overflow with water. The safety float does not dictate the water level in your brine tank. Measure from the top of the air check shown as # 1, 10" to bottom of float show as #2 in photo below, you may have to gently push the float rod through the rubber gaskets to achieve this. Cut any existing rod off.



- 15. Slide the float assembly in to the brine well and secure it with the small nut by screwing it on to the stud as shown in picture below.



□ 16. Take the clear brine tubing that we supplied and slide it through the whole in the brine tank and into the brine well.

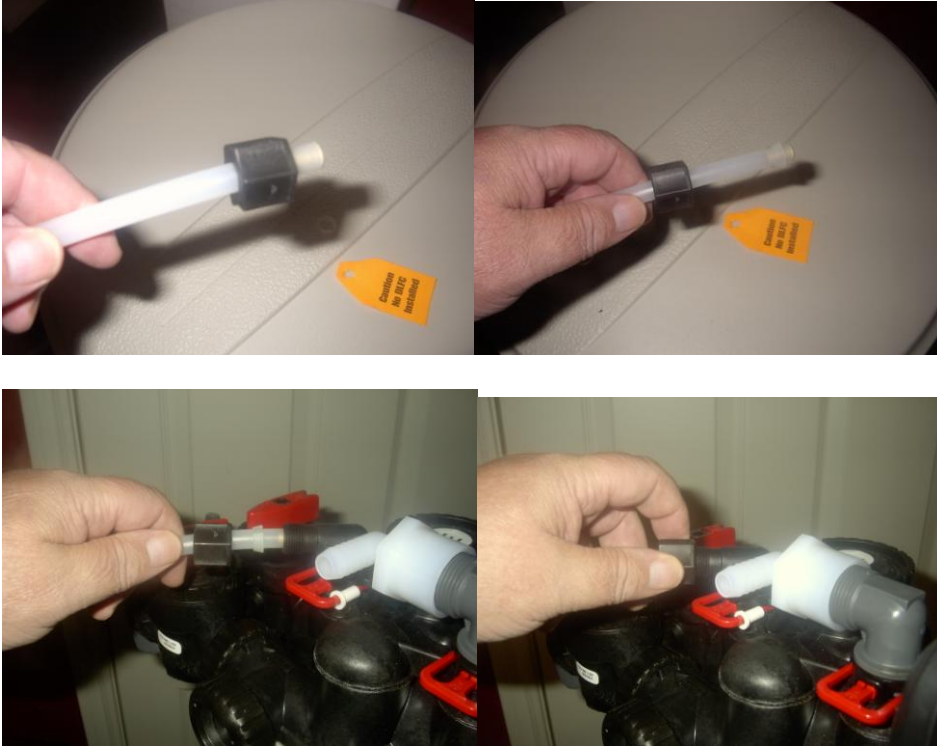
□ 17. Slip the plastic nut, and the two ferules one black and one white, over brine tubing then push brass insert and screen into brine tubing as shown in photo below.



□ 18. Insert tube into top fitting on float shown in photo below and hand tighten then snug it up with a small wrench. **Note: no tape is required this is a compression fitting.**



□ 19. Take the other end of tube slide the Nut and Farrell over it and insert sleeve in to tube. Note: Farrell tapered end slide over tube first. Push the tube into the side of the control valve show in photo below. Tighten by hand then snug it up with a small wrench.



Programming the Clack WS1EE Water Softener control valve:

Step 1CT - Press NEXT and ▼ simultaneously for 5 seconds and release. If screen in Step 2CT does not appear, the lock on the valve is activated. To unlock press ▼, NEXT, REGEN, ▲ in sequence, then press NEXT and ▼ simultaneously for 5 seconds and release.

Step 2CT - Select SOFTENING

Press NEXT to go to Step 3CT.

Step 3CT - Adjust the length of the backwash from 1-20 minutes or OFF using the ▲ or ▼ buttons. "Set for 10 min"

Press NEXT to go to Step 4CT

Step 4CT - Adjust the length of the regenerate draw from 1-99 minutes or OFF using the ▲ or ▼ buttons. "Set for 60 min"

Press NEXT to go to Step 5CT

Step 5CT - Adjust the length of the second backwash from 1-20 minutes or OFF using the ▲ or ▼ buttons. "Set for 6 min"

Press NEXT to go to Step 6CT

Step 6CT - Adjust the length of rinse from 1-20 minutes or OFF using the ▲ or ▼ buttons. "Set for 10 min"

Press NEXT to go to Step 7CT

Step 7CT - Adjust brine refill time. Use the chart below:

- 24,000 Grain system = 8 minutes
- 32,000 Grain system = 10 minutes
- 40,000 Grain system = 11 minutes
- 48,000 Grain system = 14 minutes
- 64,000 Grain system = 16 minutes
- 80,000 Grain system = 18 minutes
- 96,000 Grain system = 20 minutes
- 110,000 Grain system = 22 minutes

Press NEXT to go back to time of day

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To enter Installer Display press the NEXT and ▲ buttons simultaneously for 5 seconds and release.

Step 2I - Volumetric capacity in gallons to regeneration. Use chart below to figure out how many gallons to set for. Push up or down arrow to set gallons.

Figuring the amount of gallons to set your water softener meter at! 4 people x 75 gallons per person = 300 gallon used per day. 300 gallons x 15 gpg hardness = 4500 grains being removed per day. 32,000 grain water softener divided by 4500 grains of hardness = 7.11 days. back off one day for reserves so you still have treated water for that day until the system regenerates that night = 6 days. 6 days times water usage of 300 gallons per day = setting meter to regenerate every 1800 gallons of water that you use. Installer Display. set amount of gallons before a regeneration.

Press NEXT to go to Step 3I

Step 3I - Adjust day override to 14 days.

Press NEXT to go to Step 4I

Step 4I - Use ▲ or ▼ buttons to set the regen hour.
" Set for 2:00AM "

Press NEXT to go back to time of day and set the clock to current time.

Your Clack WS1EE Water Softener System is now programmed and ready for operation.

Filling your water softener with water and purging air from it: Turn all faucets off outside and in home. Slowly open bypass valve and let the mineral tank fill with water. When water stops running go to the nearest treated faucet to the Water Softener, unscrew aerator screen if applicable and turn cold water on slowly, this will bleed the air from the tank, let the water run until it clears. If you sized your water softener using our recommendation then you will go through salt or potassium chloride slowly. Add five gallons of water to brine tank. Add three 40 to 50 pound bags of extra course, pelt salt or potassium chloride to brine tank. The resin is already charged so initial regeneration is not required. Installation and set up is now complete. Congratulations!

Please feel free to email some pictures of your new installation and a letter we will post it on our site for other customers to view. As always we appreciate your business!