Installing 2510 Water Softener

Presented by
Glass Water Systems
5130 S. Dale Mabry
Tampa, Florida 33611
Toll Free 1-877-345-2770

Purchasing Installation Materials

This can be done before the unit arrives. This list is broken down for either a customer using copper or pvc pipe. Therefore, the list will vary depending on your plumbing material that you use for the connection. Also, this list may be added to and is based on installing the unit on ¾" plumbing. If you are installing on 1" plumbing just substitute this for 3/4". The same applies for if you are using CPVC, Sch 80 , or PVC. This is strictly a guide and you can purchase less or more of the supplies depending on your situation. Always feel free to call us with any questions about installation at **1-877-345-2770**

PVC installation:

1. 20' – 40' 3/4" PVC pipe
2. 20' – 60' ½" PVC pipe or 5/8" Poly Tubing
3. 10 - 3/4" 90s PVC
4. 4 - 3/4" 45s PVC
5. 5- 3/4" Couplings PVC
6. 2 – 3/4" Tees (Optional for Hard Water Faucet)
7. 2- ¾" Tees SxSXF
8. 1- ¾" Hose Bibb
9. 1-3/4" Ball Valve (Optional for shut-off on entire system
10. 2- ½" PVC Female Adapter
11. 10 – ½" 90s PVC
12. 5 – ½" Couplings PVC
13. Rain & Shine Glue / CPVC Glue
14. Pipe Cleaner
15. Teflon Tape

If you have additional items you would recommend please call us – improvement and customer satisfaction is our goal.

Copper installation:

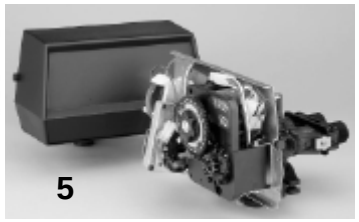
1. 10' – 20' ¾"" L hard copper pipe
2. 20' – 60' ½" PVC pipe or 5/8" Poly Tubing
3. 6 – 3/4" 90s Copper
4. 2 – 3/4" 45s Copper
5. 5- 3/4" Couplings Copper
6. 2 – 3/4" Tees (Optional for Hard Water Faucet)
7. 2- ¾" Tees
8. 1- ¾" S X S Hose Bibb (or get some type of threaded adapter for the hose bib and tees
9. 1-3/4" Ball Valve (Optional for shut-off on entire system
10. 2- ½" PVC Female Adapter
11. 10 – ½" 90s PVC
12. 5 – ½" Couplings PVC
13. Lead Free Soder
14. Flux and Brush
15. Sand Cloth

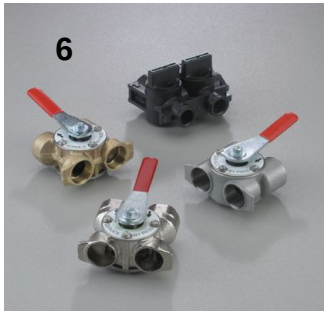
If you have additional items you would recommend please call us – improvement and customer satisfaction is our goal.

Inventory Contents

It is probably the most important thing to do the day your receive your package. This unit will either be drop shipped from our main supply warehouse in Florida or from our numerous nation wide suppliers. We use this method to keep the cost of shipping low for the customers. The unit may come in numerous packages. The Glass Water Systems representative will inform you of the number of packages. Also, you need to keep all packages if the unit is damaged in shipping and call us immediately. We need this to file a claim with the shipping company.

1. 1- Fiberglass Media Tank (8x44, 9x48, 10x47,12x52) depends on the system you orderd
2. Distributor Tube and Basket
3. High Capacity Resin-
    1. 24K Unit = ¾ Cu Ft Bag
    2. 32K Unit = 1 Cu Ft Bag
    3. 40K Unit = 1-1/4 Cu Ft Bag
    4. 48K Unit = 1-1/2 Cu Ft Bag
    5. 64K Unit = 2 Cu Ft Bag
4. Gravel (Optional)
5. 2510 Control Valve
6. Bypass
7. Installation Fitting Assemblies
    1. ¾" NPT-BLACK
    2. ¾" SWEAT BRASS
    3. 1" Brass SWEAT
    4. ¾" Brass SWEAT
8. Brine Tank
9. 3/8" Brine Line

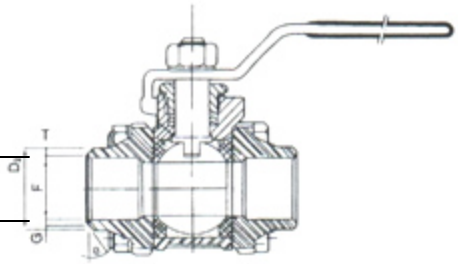




NOT ALL ITEMS ARE SHOWN

Determining where to install the unit

This is the portion where you decide where to install you water softener. You need to make sure that you follow your local plumbing codes. This information will serve as a guide to help you with this process. We encourage you to call with any questions about placement **1-877-345-2770.**



Usually homes have
A main shut off with a
Ball valve or a Gate Valve

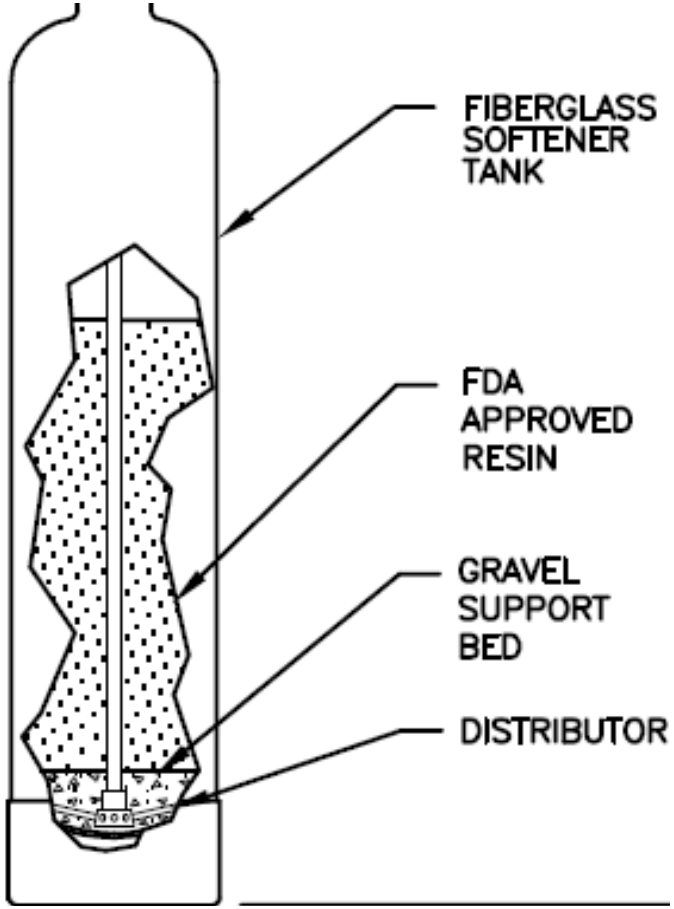
You need to first find the main coming into your home.

1. Locate your water meter
2. This is usually the side of the house it comes in on
3. Most Homes have a L shaped pipe going into the side of the home.
4. Once you have found this you need to dig down and locate the pipe to tie into.

1. Electric
   1. Try and find an outside socket.
   2. If you have to run a further distance than you have cord – you can slice in and extend the line.
   3. You can also drill a hole through the wall and fish it through.
2. Drain
   1. You can either use a sink, an outside drain, or dig a hole approximately 24-36” and fill with rock The hole needs to be about 12-18” in diameter

BEDDING THE UNIT AND PREPARING FOR INSTALLATION

1. Put the Distributor Tube into the tank and tape the opening of the pipe. You cannot get resin or gravel inside the distributor tube.
2. Get a bucket 5 gallon type and cut a hole that will fit over the tank – Tape the Sides. Or use the funnel provided with the package (optional)
3. Fill the tank with the large gravel first and then the fine gravel. You may have no gravel or just one bag of gravel. If you do not have gravel do not worry about it.
4. Put the ¾, 1, 1.25, 1.5, or 2 Cu Ft of Resin in the tank
5. Remove the tape
6. Clean the threads of any resin etc. This will possibly make the valve not seat correctly
7. Take the Valve and screw back on the tank – be careful not to cross-thread the tank. We usually go backwards until it locks in and then tighten it down.
8. After you have the valve on take it and place it where you want it.



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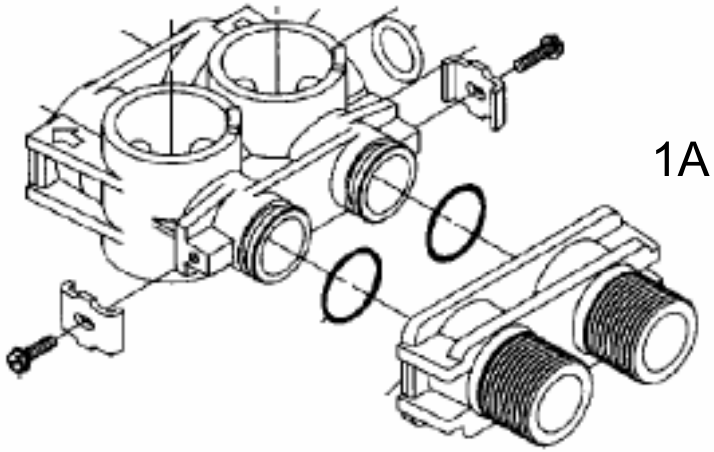
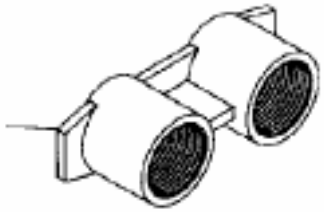


1A



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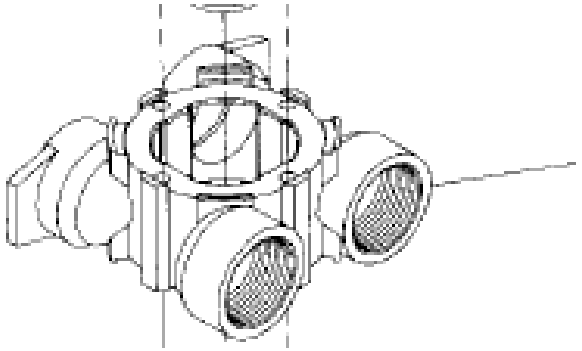

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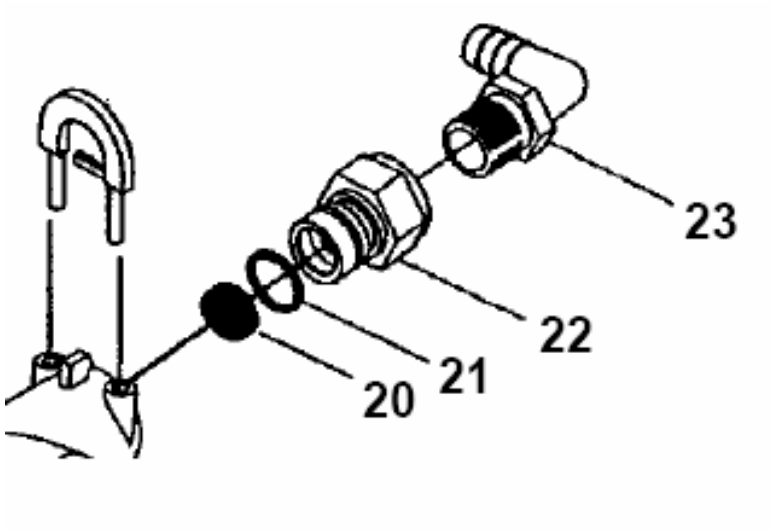
PREPARING THE UNIT FOR INSTALLATION TO MAIN LINES AND SWEATING COPPER

IN THIS STEP YOU WILL EITHER USE FEMALE ADAPTERS, MALE ADAPTERS, OR SWEAT COPPER ONTO THE PIPING BOSSES LABLED 1A (NPT NORYL PIPING BOSS) 1B (SWEAT PIPING BOSS. YOU WILL HAVE EITHER A NORYL (PLASTIC) OR STAINLESS STEEL BYPASS – THESE ARE SHOWN TO THE LEFT 1 (STAINLESS STEEL BYPASS) AND 2 (NORYL BYPASS.

1. If you are sweating the pipe – sweat the before attaching the piping boss using the screws and clip to attach the piping boss to the bypass.
2. If you are using the noryl piping boss take teflon tape and wrap the ends. Screw your female adapters into it. Plumb the rest of your lines into that fitting and attach your bypass and unit using the screws & clips.
3. Keep the bypass shut and get ready to attach the drain line.

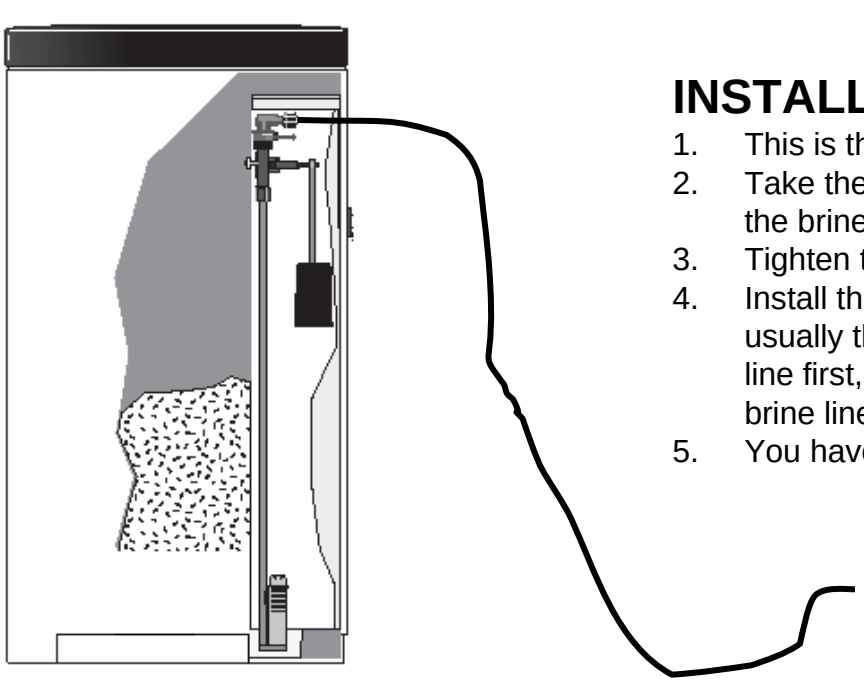
Installation of Fitting Assemblies

1. The installation fittings connect to the control valve or the bypass valve using nuts that only require hand tightening. Hand tighten nut connections between control valve and installation fittings, control valve and bypass valve, and bypass valve and installation fittings allow for easy serviceability. Do not use a pipe wrench to tighten nuts on installation fittings. Hand tighten only.
2. Split ring retainer design holds the nut on and allows load to be spread over the entire nut surface area reducing the chance for leakage. The split ring design, incorporated into the installation fittings allows approximately 2 degrees off axis alignment to the plumbing system. The installation fittings are designed to accommodate minor plumbing misalignments but are not designed to support the weight of a system or the plumbing.
3. When assembling the installation fitting package, connect the fitting to the plumbing system first and then attach the nut, split ring and o-ring. Heat from soldering or solvent cements may damage the nut, split ring or o-ring. Solder joints should be cool and solvent cements should be set before installing the nut, split ring and o-ring. Avoid getting primer and solvent cement on any part of the o-rings, split rings, bypass valve or control valve. Solvent cements and primers should be used in accordance with the manufacturer.s instructions.
4. Slip the nut onto the fitting first, then the split ring second and the o-ring last. Hand tighten the nut. If the fitting is leaking tightening the nut will not stop the leak. Remove the nut, remove the fitting, and check for damage or isalignment of the o-ring.
5. Do not use pipe dope or other sealant on threads. Teflon tape must be used on the threads of the 1. NPT elbow and the ¼. NPT connection and on the threads for the drain line connection. Teflon tape is not necessary on the nut connection or caps because of oring seals.
6. Do not use Vaseline, oils, or other unacceptable lubricants on o-rings. A silicon lubricant may be used on black o-rings.



INSTALLING THE DRAIN LINE

1. You must first determine a suitable drain
    1. Examples
        1. Washer Box
        2. Floor Drain
        3. Pre-plumbed Drain
        4. Stack Pipes
        5. Surface Drain
        6. Clean Out Modified for Draining
2. Once you have determined your drain you must run the line. The waste product from the water softener will kill grass, plants, etc. This occurs even if you use potassium chloride.
3. The drain can be run in either 5/8 tubing or ½" PVC rigid pipe – I recommend ½" PVC Sch 40 Pipe unless you have over 20 feet to run. Then I suggest using 5/8 tubing which we can sell to you or you can purchase from Home Depot
4. You will either use item 23 for 5/8 tubing or use a ½" male adaptor for pvc pipe. You must make sure that 20,21, and 23 are in the drain line. This is the Drain Line Flow Button (20) and the Drain Line Flow Button.
5. Use teflon tape on the threads and tighten down the fitting-DO NOT OVERTIGHTEN
5. Plumb the drain line into either a washing machine box – floor drain etc. If you want to use a washing machine box – I have a part specifically designed for that – Cost $25.00
6. Most codes require some type of air gap – We have some fitting specifically designed for Air Gaps on washer boxes.



INSTALLING THE BRINE LINE

1. This is the final step before start up.
2. Take the 3/8” Tubing and insert it into the compression fitting on the brine tank.
3. Tighten the nut – do not over tighten.
4. Install the other end into the brass fitting on the control valve – usually this has an orange cap on it. Put the brass nut on the line first, then the brass ferrule, and the brass insert into the 3/8 brine line. Tighten this down.
5. You have completed the brine line set-up

GENERAL START-UP

1. This is the final step
2. Move the valve to Rinse and plug in
3. Open the bypass to open position slowly and let the water fill – do not open all the way. If you open this too fast – you will possibly blow resin up in the valve and it will not work right. After the valve is pressurized open it all the way
4. Open the other side or completely put the valve into service
5. Fill the brine tank by moving the valve to the next stage brine refill. Let it complete the cycle.
6. Finally run your hot water for about 30-40 minutes to empty the hard water from the hot water heater.
7. Your unit is now ready for you enjoymentI recommend running the valve through the entire cycle.- The following night when you are not using water. (when you sleep)

PLEASE FEEL FREE TO CALL US WITH ANY QUESTIONS
AT 1-877-345-2770

Installation Instruction per manual

INSTALLATION INSTRUCTIONS

1. Place the softener tank where you want to install the unit making sure the unit is level and on a firm base.
2. All plumbing should be done in accordance with local plumbing codes. The pipe size for the drain line should be a minimum of 1/2”. Backwash flow rates in excess of 7 gpm or length in excess of 20’ require 3/4” drain line.
3. The 1” distributor tube (1.050 O.D.) should be cut flush with top of each tank.
4. Lubricate the distributor o-ring seal and tank “o” ring seal. Place the main control valve on tank. Note: Only use silicone lubricant.
5. Solder joints near the drain must be done prior to connecting the Drain Line Flow Control fitting (DLFC). Leave at least 6” between the DLFC and solder joints when soldering pipes that are connected on the DLFC. Failure to do this could cause interior damage to the DLFC.
6. Teflon tape is the only sealant to be used on the drain fitting.
7. Make sure that the floor is clean beneath the salt storage tank and that it is level.
8. Place approximately 1” of water above the grid plate. If a grid is not utilized, fill to the top of the air check in the salt tank. Do not add salt to the brine tank at this time.
9. On units with a by-pass, place in by-pass position. Turn on the main water supply. Open a cold soft water tap nearby and let run a few minutes or until the system is free from foreign material (usually solder) that may have resulted from the installation. Once clean, close the water tap.
10. Slowly place the by-pass in service position and let water flow into the mineral tank. When water flow stops, slowly open a cold water tap nearby and let run until the air is purged from the unit.
11. Plug unit into an electrical outlet. Note: All electrical connections must be connected according to local codes. (Be certain the outlet is uninterrupted).

main

Installation Instruction per manual (cont.)

The water softener should be installed with the inlet, outlet and drain connections made in accordance with the manufacturer's recommendations and to meet applicable plumbing codes.

1. Remove control box cover.
2. Make "Time of Day" setting and set "Program Wheel". (See time control instructions). Rotate program wheel counter clockwise until it stops at regeneration position.
3. Observe regeneration cycle settings. Arrange cycle times as determined in "Item 4" on "Page 2".
4. Add three inches of water to brine tank.
5. **Note:** To set the control to the various positions noted below. Turn the manual regeneraton knob slowly in a clockwise direction until the Program Micro Switch lifts on top of the first set of pins. Allow the drive motor to move the piston to the first regeneration step and stop. Each time the Program Switch position changes, the valve will advance to the next regeneration step. Always allow the motor to stop before moving to the next set of pins or spaces. (See "Timer Program" instructions).

Control Valve Positions:

a. Service Drive shaft out
b. Backwash Drive shaft in
c. Brine / Slow Rinse Drive shaft 1/2 way out
d. Rapid Rinse Drive shaft 3/4 way out
e. Brine Tank Fill Drive shaft out but brine cam holds brine valve stem in.

6. Position valve to backwash and check to make sure that drain line flow remains steady for ten (10) minutes or until clear (see above).
7. Position valve to brine / slow rinse position and check to see that the unit is drawing water from brine tank (this step may need repeating).
8. Position valve to rapid rinse and check the drain line flow, run for 5 min. or until the water is clear. (Note: Rapid rinse and backwash flow rates should be the same).
9. Position valve to start of brine tank fill cycle. See that water goes into the brine tank at proper rate. Brine valve drive cam will hold valve in at this position to fill the brine tank for the first regeneration.
10. Replace control box cover.
11. Put salt in brine tank (do not use granulated or rock salt).

FINAL INSTRUCTIONS

- READ THE ACCOMPANYING MANUALS
- CALL US WITH ANY QUESTONS AT 1-877-345-2770
- WE APPRECIATE YOUR BUSINESS AND TELL A FRIEND, FAMILY MEMBER, OR CO-WORKER ABOUT OUR SERVICE