



SOFTPRO ELITE WATER SOFTENER

INSTALLATION GUIDE



FOR UPFLOW & DOWNFLOW MODELS

Please read this manual carefully before attempting installation

Read this manual thoroughly to become familiar with the device and its capabilities before installing or operating your Water Softener. Failure to follow instructions in this manual could result in personal injury or property damage.

NOTICE: THIS PRODUCT HAS A LIMITED WARRANTY. BY INSTALLING AND OR USING THIS PRODUCT, YOU WAIVE CERTAIN LEGAL RIGHTS INCLUDING THE RIGHT TO SUE OR CLAIM COMPENSATION IN THE EVENT OF PROPERTY DAMAGE, INJURY, AND OR DEATH.

This manual will also help you to get the most out of your Softener.

- This system and its installation must comply with state and local regulations. Check with your local public works department for plumbing and sanitation codes. In the event the codes conflict with any content in this manual the local codes should be followed.

For installations in Massachusetts, Massachusetts Plumbing Code 248 CMR shall be adhered to. Consult your licensed plumber for installation of this system.

- This water Softener is designed to operate on pressures of 30 psi to 125 psi. If the water pressure is higher than the maximum, use a pressure reducing valve in the water supply line to the Softener. However, we do not recommend pressure above 70 psi for the softener or residential plumbing, anything over 70 psi can cause damage to the seals on the softener valve and you're plumbing and fixtures.
- This unit can operate at temperatures between 40°F and 110°F (4°C - 43°C). Do not use this water softener on hot water supplies.
- Do not install this unit where it may be exposed to wet weather, direct sunlight, or temperatures outside of the range specified above unless you take precautions to protect it.
Avoid pinched O-rings during installation by applying (provided with install kit) NSF certified lubricant to all seals.
- Softeners are commonly exposed to high levels of iron, manganese, sulfur, and sediments. Damage to pistons, seals, and or spacers within the control valve are not covered in this warranty due to the harsh environment.
- It is recommended to regularly inspect and service the control valve on an annual basis. Cleaning and or replacement of piston, seals, and or spacers may be necessary depending on how harsh the conditions are.
An Annual Maintenance kit (Part # 60010307) is available for this purpose.
- Do not use water that is microbiologically unsafe without adequate disinfection before or after this system.
- The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions stated herein, without obligation to change previously manufactured products or to note the change.
- This publication is based on information available when approved for printing. Continuing design refinement could cause changes that may not be included in this publication.
- Quality Water Treatment, Inc. reserves the right to change the specifications referred to in this literature at any time, without prior notice.

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HOW YOUR WATER SOFTENER WORKS

WHY WATER GETS HARD AND HOW IT IS SOFTENED

All the freshwater in the world originally falls as rain, snow, or sleet. Surface water is drawn upward by the sun, forming clouds. Then, nearly pure, and soft as it starts to fall, it begins to collect impurities as it passes through smog and dust-laden atmosphere. And as it seeps through soil and rocks it gathers hardness, rust, acid, unpleasant tastes, and odour.

Water hardness is caused primarily by limestone dissolved from the earth by rainwater. Because of this, in earlier times people who wanted soft water collected rainwater from roofs in rain barrels and cisterns before it picked up hardness from the earth.

Some localities have corrosive water. A softener cannot correct this problem and so its printed warranty disclaims liability for corrosion of plumbing lines, fixtures, or appliances.

Iron is a common water problem. The chemical/ physical nature of iron found in natural water supplies is exhibited in four general types: (Applies to private well or surface water applications only.)

① Dissolved Iron

Also called ferrous or “clear water” iron. This type of iron can be removed from the water by the same ion exchange principle that removes the hardness elements, calcium, and magnesium.

Dissolved iron is soluble in water and is detected by taking a sample of the water to be treated in a clear glass.

The water in the glass is initially clear, but on standing exposed to the air, it may gradually turn cloudy or coloured as it oxidizes.

Applies to private well or surface water applications only.

② Particulate Iron

Also called ferric or colloidal iron. This type of iron is an undissolved particle of iron.

A softener will remove larger particles, but they may not be washed out in regeneration effectively and will eventually foul the ion exchange resin.

A filtering treatment will be required to remove this type of iron.

Applies to private well or surface water applications only.

③ Organic Bound Iron

This type of iron is strongly attached to an organic compound in the water. The ion exchange process alone cannot break this attachment and the softener will not remove this type of iron.

Applies to private well or surface water applications only.

④ Bacterial Iron

This type of iron is protected inside a bacteria cell. Like the organic bound iron, it is not removed by a water softener.

Applies to private well or surface water applications only.

HOW YOUR WATER SOFTENER WORKS

ATTENTION:

Iron content must not exceed 1 ppm. Beyond 1 ppm an iron softener must be used.
Periodic media cleaning is required by Pro-Res Cleaner if iron level exceed 0.3 ppm.
Applies to private well or surface water applications only.

When using a softener to remove both hardness and dissolved iron it is important that it regenerates more frequently than ordinarily would be calculated for hardness removal alone.

Although many factors and formulas have been used to determine this frequency, it is recommended that the softener be regenerated when it has reached 50–75% of the calculated hardness alone capacity.
This will minimize the potential for bed fouling.
Applies to private well or surface water applications only.

If you are operating a water softener on clear water iron, regular resin bed cleaning is needed to keep the bed from coating with iron. Even when operating a softener on water with less than the maximum of dissolved iron, regular cleanings should be performed.

Clean every six months or more often if iron appears in your conditioned water supply. Use resin bed cleaning compounds carefully following the directions on the container.
Applies to private well or surface water applications only.

HOW A WATER SOFTENER WORKS

NOTE:

Do not remove or destroy the serial number.
It must be referenced on request for warranty repair or replacement.

CAUTION!

Do not use where the water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit.

Applies to private well or surface water applications only.

Water softeners remove hardness in the water by exchanging particles in the water, or ions. They remove hard ions the calcium and magnesium in the water by trading it for sodium ions producing soft water.

Unlike the calcium and magnesium, sodium stays dissolved in water and does not form a scale. Sodium also does not interfere with the cleaning action of soaps.

The sodium is released by a charged resin contained in the softener, this resin also traps the calcium and magnesium ions.

Eventually this resin releases all its sodium and has filled up with other ions, so it then must be regenerated. Regeneration is accomplished by washing the resin with a salt saturated brine solution that removes the calcium and magnesium while replenishing the sodium.

Therefore, the softener requires a brine tank and salt. The water softener can run for days before running out of sodium, and when it does, the sodium is replenished in only a matter of a few hours.

BEFORE INSTALLATION

All government codes and regulations governing the installation of these devices must be observed. Check your water hardness.

CAUTION! The unit should be depressurized before installing or replacing media.

COPPER PIPES - GROUNDING STRAPS:

If the ground from the electrical panel or breaker box to the water meter or underground copper pipe is tied to the copper water lines and these lines are cut during installation of the Noryl bypass valve and/or poly pipe, an approved grounding strap must be used between the two lines that have been cut in order to maintain continuity.

The length of the grounding strap will depend upon the number of units being installed and/or the amount of copper pipe being replaced with plastic pipe.

In all cases where metal pipe was originally used and is later interrupted by poly pipe or the Noryl bypass valve or by physical separation, an approved ground clamp with no less than #6 copper conductor must be used for continuity, to maintain proper metallic pipe bonding.

CAUTION: If the plumbing system is used as the ground leg of the electric supply, continuity should be maintained by installing ground straps around any non-conductive plastic piping used in installation. Check your local electrical code for the correct clamp.

WARNING! ELECTRICAL SHOCK HAZARD! UNPLUG THE UNIT BEFORE REMOVING THE COVER OR ACCESSING ANY INTERNAL CONTROL PARTS.

DRAIN LINE INFORMATION

Waste connections or drain outlets shall be designed and constructed to provide for connection to the sanitary waste system through an air gap of 2 pipe diameters or 1 inch (22 mm) whichever is larger.

Never insert a drain line directly into a drain, sewer line, or trap. Always allow an air gap between the drain line and the wastewater to prevent the possibility of sewage being backsiphoned into the softener.

WATER PRESSURE INFORMATION

Applies to private well or surface water applications only. If a severe loss in water pressure is observed when the Softener unit is initially placed in service, the softener tank may have been laid on its side during transit. If this occurs, backwash the softener to "reclassify" the media.

Check Your Water Pressure and Pumping Rate - Two water system conditions must be checked carefully to avoid unsatisfactory operation or equipment damage:

- Minimum water pressure required at the Softener tank inlet is 30 psi.
- The pumping rate of your well pump must at least equal the required backwash flow rate of your model.

LOCATE WATER TREATMENT EQUIPMENT CORRECTLY

Select the location of your softener tank with care. Various conditions which contribute to proper location are as follows:

- Locate as close as possible to the water supply source.
- Locate as close as possible to a drain.
- Locate in the correct relationship to other water conditioning equipment.
- Softener should be located near the supply line before the water heater. Temperatures above 120°F damage softeners.
- Do not install a softener in a location where freezing temperatures occur. Freezing may cause permanent damage to this type of equipment and will void the factory warranty.
- Allow sufficient space around the unit for easy servicing.
- Plumb in a bypass for your treated water where your water source is a community water supply, a public water supply or if you wish to bypass water used for a geothermal heat pump, lawn sprinkling, out-buildings, or other high demand applications.
- Keep the softener out of direct sunlight. The sun's heat may soften and distort plastic parts.
- Determine the best location for your water softener. Factor in the location of water supply lines, drain line and 120-volt AC electrical outlet. Subjecting the Softener to freezing or temperatures above 43°C (110°F) will void the warranty.

MANUAL WATER BYPASS

In case of an emergency such as softener maintenance, you can isolate your water softener from the water supply using the bypass valve located at the back of the control.

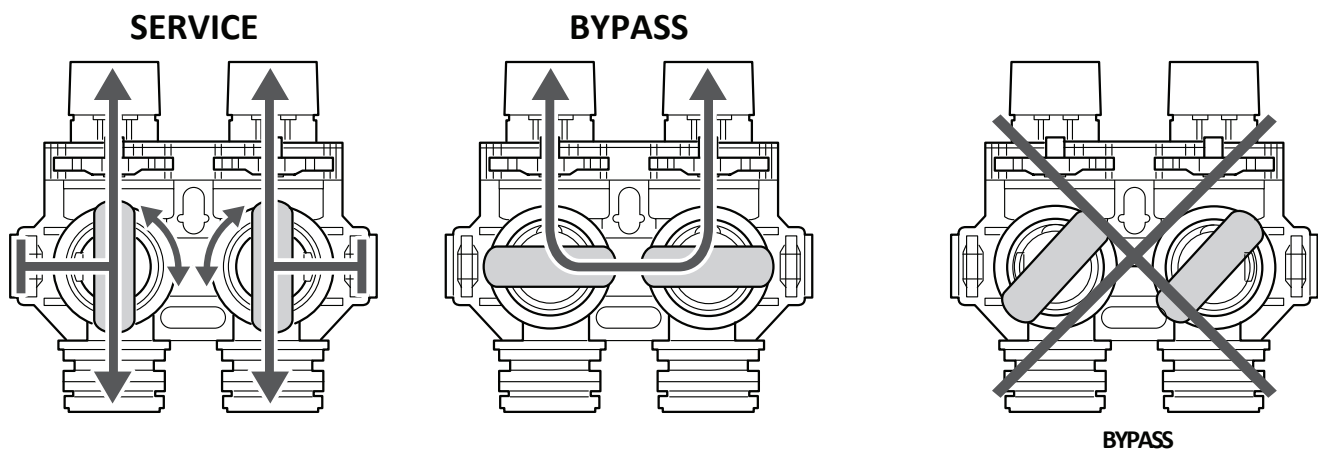
In normal operation the bypass is open with the ON/OFF knobs in line with the INLET and OUTLET pipes.

To isolate the softener, simply rotate the knobs clockwise (as indicated by the word BYPASS and arrow) until they lock.

You can use your water related fixtures and appliances as the water supply is bypassing the softener. However, the water you use will be hard.

To resume treated service, open the bypass valve by rotating the knobs counter-clockwise.

Please make sure bypass knobs are fully opened during service, otherwise the unsoftened water could bypass through the valve.



You are now ready to install your new water softener system.

GENERAL INSTRUCTIONS

Below are the installation instructions to get you up and running in no time. We highly recommend that you follow along in our simple installation videos.

Typical Install Times:

- 3 hours for a Handyman/ Plumber
- 4 hours for DIY

Tools Required:

- Flathead Screwdriver
- Phillips Head Screwdriver
- Tongue-and-Groove Pliers (i.e. Channellock)
- Adjustable Wrench
- Pipe Cutter or Hacksaw (as applicable)

UNPACKING AND INSPECTING YOUR NEW SYSTEM

Your new SoftPro water softener system will include the following items. Before starting, please check that you have all the items, and inspect for any possible damage that may have occurred during shipment.
(Note: This new system may have multiple shipments.)

SHIPMENT FAQ

① Is it OK if some items are delivered on its side or upside-down?

Yes, it is OK. If your shipment, boxes, or other items are delivered to you on its side or upside-down, do not be alarmed. Our team takes additional precautions to ensure that your new system is properly protected. Simply turn the shipment or box right-side up and unpack it.

② What if there is damage to the exterior of the shipment or boxes?

We got your back. If you find visual damage to the exterior of the boxes, take pictures of the boxes and/or video of the damage before unpacking them. Just because boxes are damaged does not mean the system is damaged, we make sure they are protected. So continue to unpack they system from boxes and inspect the system for damage.

Additional Parts (as applicable):

- Drain tubing: 1/2" ID vinyl tubing & 1/2" hose clamp (length to reach the drainpipe)
- Drainpipe connection and air gap fittings
- Inlet & outlet connection plumbing items
- Hose bibs and fittings (Optional, but recommended)

For Copper, PEX, and CPVC pipes (as applicable):

- Quick Connect Fittings (Optional Quick-connect Hose Kit, or other quick-connect fittings. i.e. SharkBite)

For Copper pipes (as applicable):

- Electrical grounding strapping, if this new install will cut/ separate any existing copper pipes.

For PVC Pipes (as applicable):

- PVC Primer & glue, Teflon tape, pipe and fittings.
- Note: The optional Quick connect Hose kit does not work on PVC pipes.

Contact Support:

Web link: <https://qualitywatertreatment.com/support>

Email Address: Help@QualityWaterTreatment.com



③ After unpacking, what if there is damage to the valve, tank, or other equipment?

We got you. If you find visual damage to any of the parts, please take pictures and/or video of the damage. Then please immediately send us the images/ video, and we will get parts shipped to you.

④ After unpacking, what if there is a missing item?

Easy. If you are missing a part, please contact us to help get you set up properly.

ITEMS INCLUDED

- 1) SoftPro Control Valve (packed inside the brine tank)
- 2) Mineral Tank with Preloaded Media and Preinstalled Distributor Tube
- 3) Brine Tank Assembly (round or rectangular)
- 4) Upper Basket/ Cone
- 5) Bypass Valve
- 6) 1" Elbow Connectors (qty. 2)
- 7) Optional - Quick-Connect Hose Kit (not for PVC plumbing) (qty. 2)
- 8) Optional - KDF-55 MediaGuard Filter Upgrade
 - a) The KDF-55 filter will be pre-installed inside the mineral tank. Additional assembly is not required.

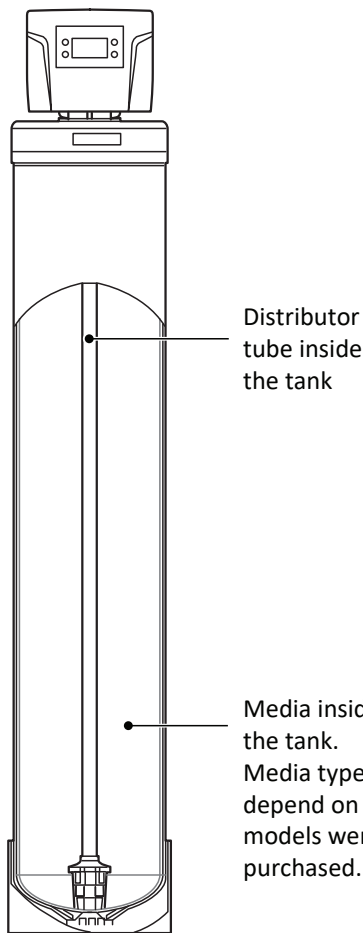
NOTE:

Small parts are placed in the small parts bag inside the brine tank. Please keep in the bag until ready to install. (Let's not lose them...)

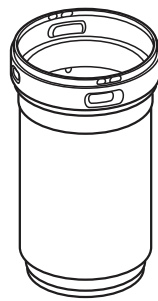
NOTE:

Resin is pre-loaded in the softener tank

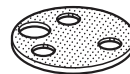
- 24,000 to 64,000 Grain Capacity Tanks:
 - Your new water softener tank is already fully loaded with the appropriate amount of resin up to 64,000-grain capacity.
- For 80,000 and Larger Grain Capacity Tanks



Brine tank (Round or Square) and Components



Brine tank (Round or Square)



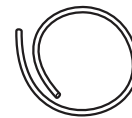
Grid (Round or Square)



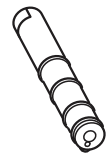
Grid Legs (3 Round or 4 Square)



Brine tank lid



Brine tank tubing

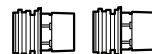


Brine well/ Safety float

Parts kits



Upper basket/ Strainer



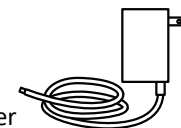
2x1" Straight adapter



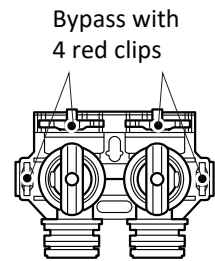
2x Clips



2x1" Elbow adapter



Power transformer



Bypass tool

i Using Additional Whole House Filters or Other Treatment Systems?

If you have additional water treatment filters (i.e. whole house filter, iron filter or pH neutralizer), those systems should always be installed before the water softener.

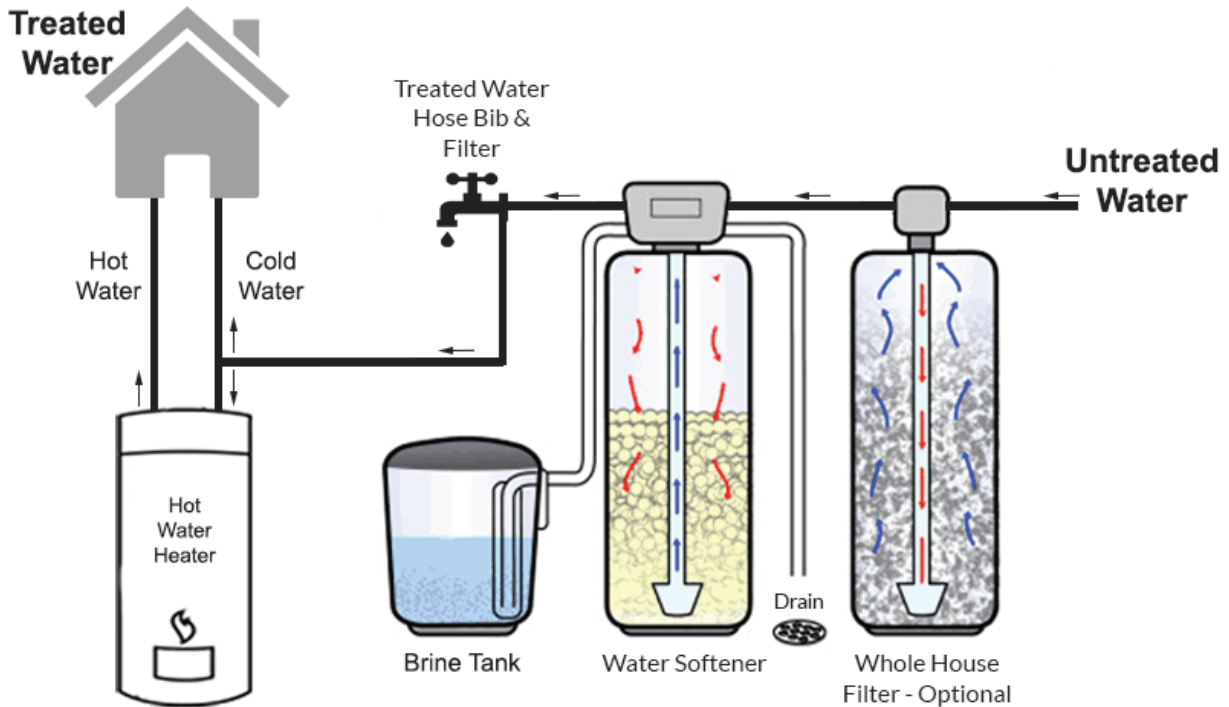
The water softener is the final treatment systems in your complete water treatment. (The exception is for a UV Disinfection System, which will be placed after the water softener.)

You are now ready to install your new water softener system.

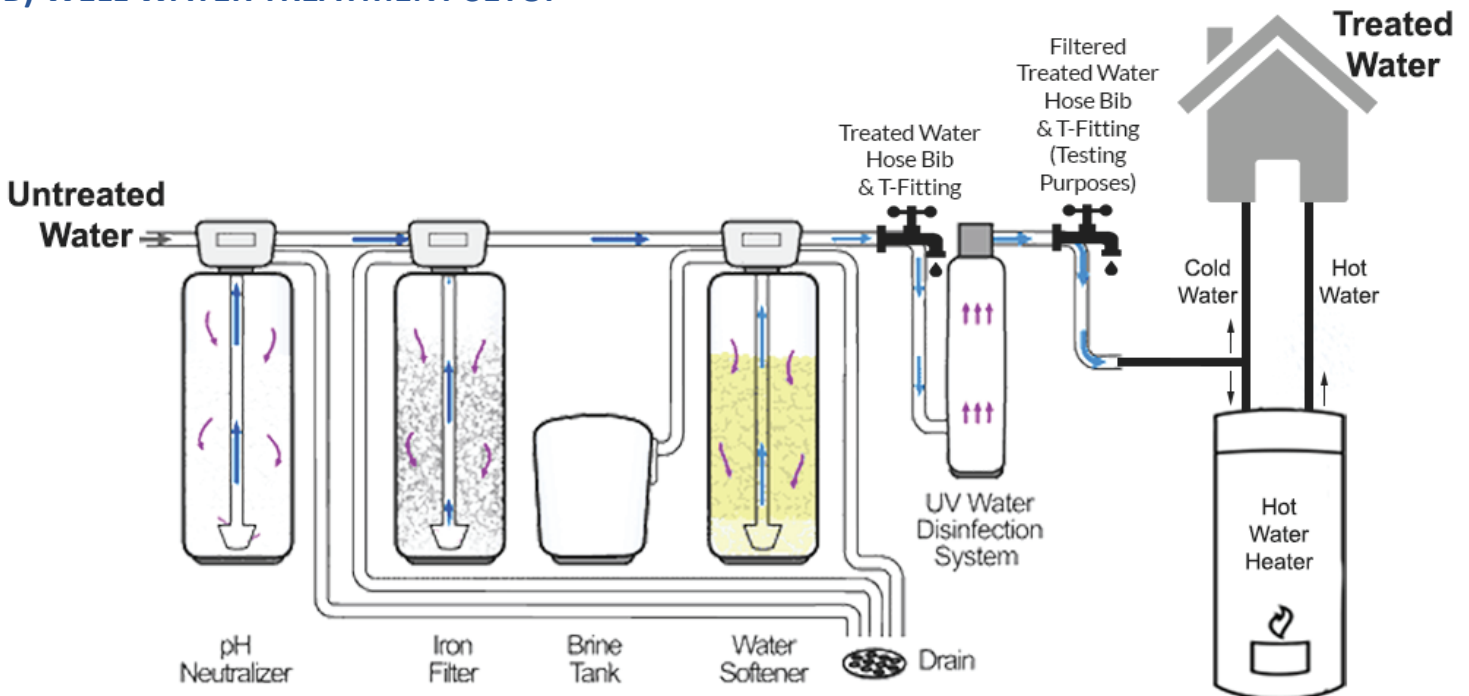
GENERAL WATER SOFTENER TREATMENT SETUP

The following shows common setups for A) city water, and B) well water sources. These system setups include optional additional filter options.

A) CITY WATER TREATMENT SETUP



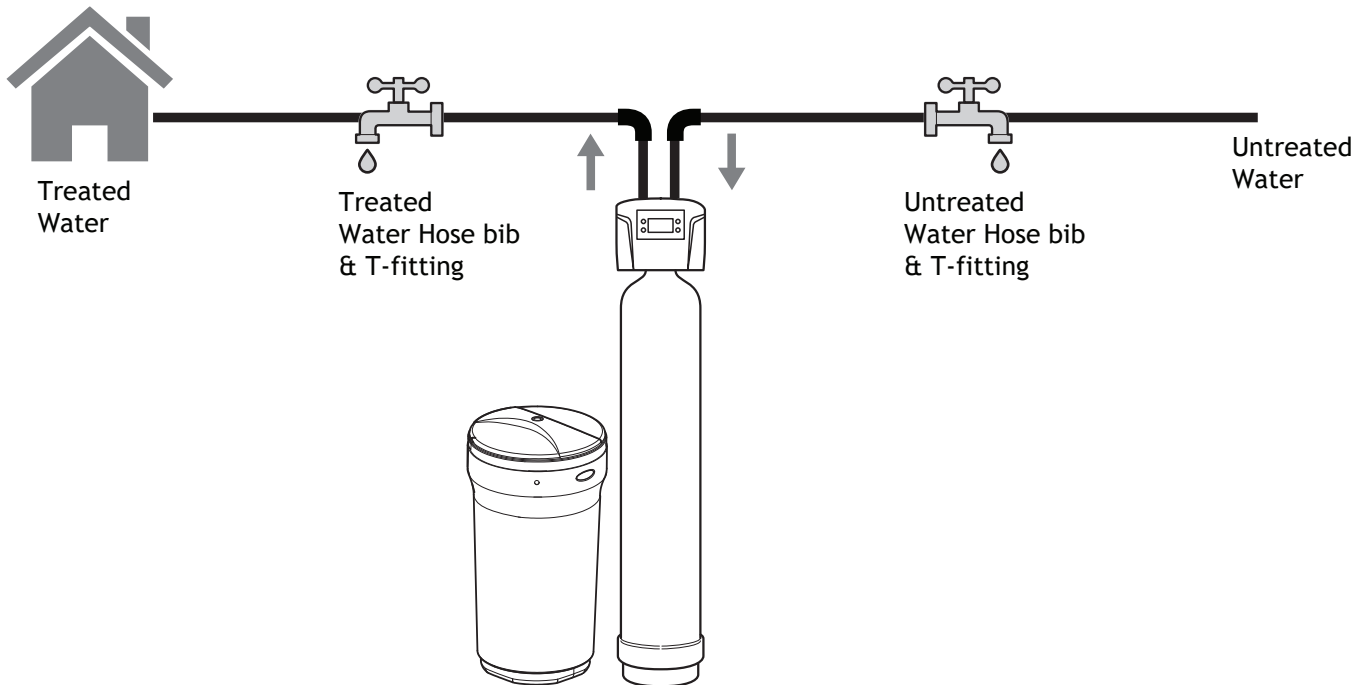
B) WELL WATER TREATMENT SETUP



i Treated/ Untreated Water Hose Bib Options:

If you want filtered, soft water access, you can install a tee fitting, hose bib and plumbing after the softener. Soft water uses include washing cars and pets.

You can also install an untreated prior to flowing into the treatment system. Untreated water uses include testing the source water and washing items that do not need soft water.



METAL PIPE GROUNDING GENERAL INFORMATION

Do you have existing copper water pipes?

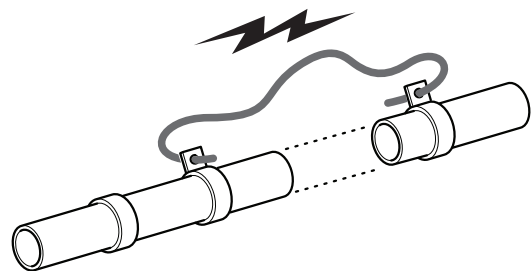
Prior to a new installation of the water softener, in all cases where metal pipe was originally used and is later interrupted by poly pipe or the bypass valve or by physical separation, an approved ground clamp with no less than #6 copper conductor must be used for grounding continuity, to maintain proper metallic pipe bonding.

Refer to your local building code.

CAUTION:

If the ground from the electrical panel or breaker box to the water meter or underground copper pipe is fitted to the copper water lines and these lines are cut during installation of the Noryl bypass valve and/or poly pipe, an approved grounding strap must be used around the two lines that have been cut in order to maintain continuity.

The length/ size of the grounding strap will depend upon the number of units being installed and/or the amount of copper pipe being replaced with plastic pipe.



DRAIN CONNECTION GENERAL GUIDE

NOTE:

Do not remove the pre-installed drain port hose barb fitting from the SoftPro control valve. This houses a required flow restrictor and must be used.

Refer to the appropriate drain type.

This guide is intended for as a general reference. Your specific installation may vary from this guide.

A. REPLACING AN EXISTING WATER SOFTENER

B. PRE-INSTALLED SOFTENER LOOP DRAINS

C. FLOOR DRAINS

D. WASHING MACHINE DRAIN

E. LAUNDRY TUB/ SINK

F. SANITARY SEWER LINE

NOTE:

Proper draining function may require an adequate air gap to prevent the possibility of wastewater being back-siphoned into the treatment system.

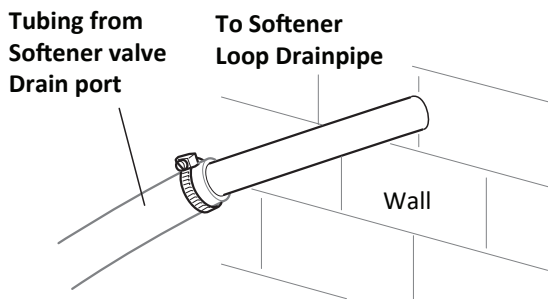
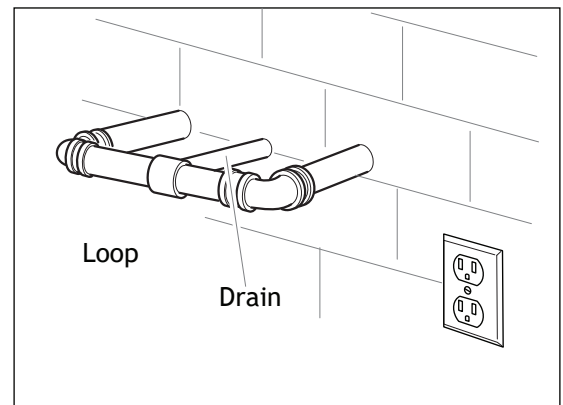
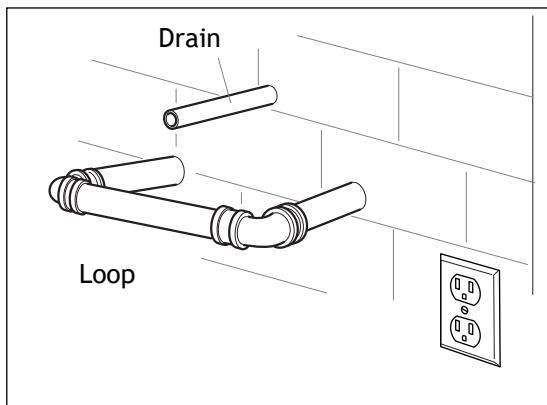
A) REPLACING AN EXISTING WATER SOFTENER:

Reuse the existing drain line.

NOTE:

The end connection to the softener's control valve drain port hose barb fitting requires a 1/2 inch I.D. vinyl tubing. Use a hose clamp to secure the tubing to the drain port.

B) PRE-INSTALLED SOFTENER LOOP DRAINS:

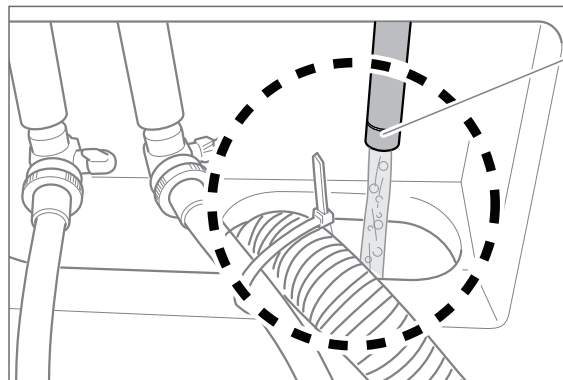


Typically, a pre-installed softener loop will have two pipes connected out from the wall with a third pipe for the softener drainpipe.

(This drainpipe maybe capped separately or directly connected to the softener loop.)

Note:

If the drainpipe is plumbed to a washing machine drainpipe, be sure to also uncap the drain line at the discharge side.

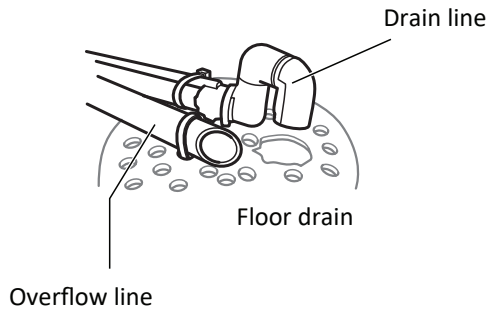


Remove drainpipe cap as needed.

DRAIN CONNECTION GENERAL GUIDE

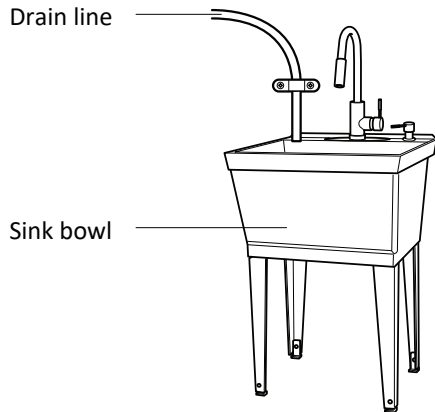
C) FLOOR DRAINS:

End the drain tube at the mouth of the floor drain.



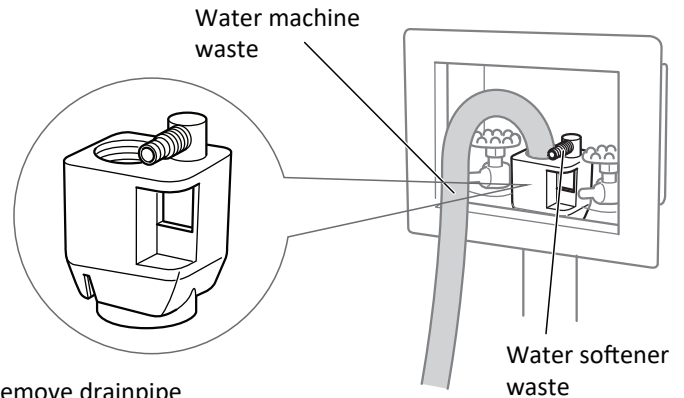
E) LAUNDRY TUB/ SINK:

Drain directly into the open sink bowl.

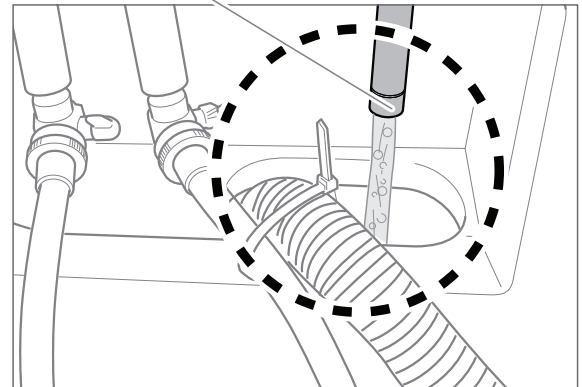


D) WASHING MACHINE DRAIN:

Install water softener drain lines with the washing machine line. You may opt to use an air gap kit (not included).



Remove drainpipe cap as needed.



F) SANITARY SEWER LINE:

If draining to an existing closed sewer line, then install a P-trap with a riser. Make sure there is the appropriate air gap or use an air gap kit. See illustration below.

MINIMUM AIR GAP REQUIREMENT:

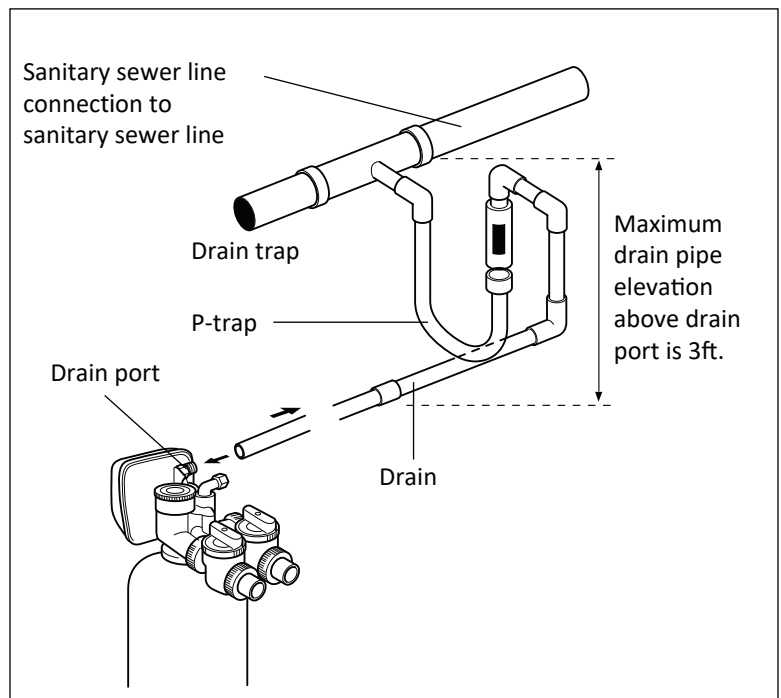
Waste connections or drain outlet shall be designed and constructed to provide for connection to the sanitary waste system through an air gap of a minimum of 2 times the drainpipe diameter, or 1 inch (22 mm) in diameter. Abide by whichever is larger. An air gap kit may be available.

NOTE:

Do not tee into any other existing drain line.

DRAINS LOCATED ABOVE THE SOFTENER CONTROL VALVE DRAIN PORT:

If the sewer line or drain is located over 3 feet above the drain port, please contact our support team for options.



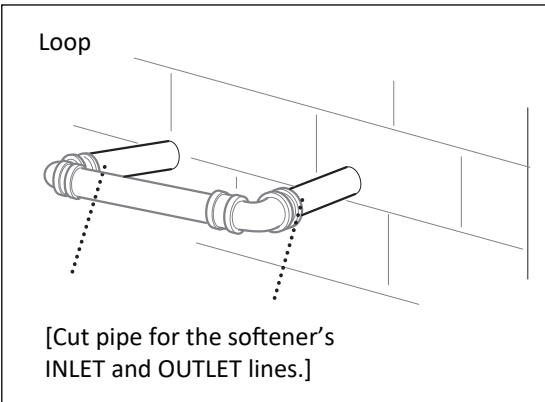
NEW INSTALL PLUMBING GUIDE

Refer to the appropriate new installation scenario. This guide is intended as a general reference. Your specific installation may vary from this guide.

CAUTION: CUTTING COPPER PIPES?
Install grounding straps prior to cutting.

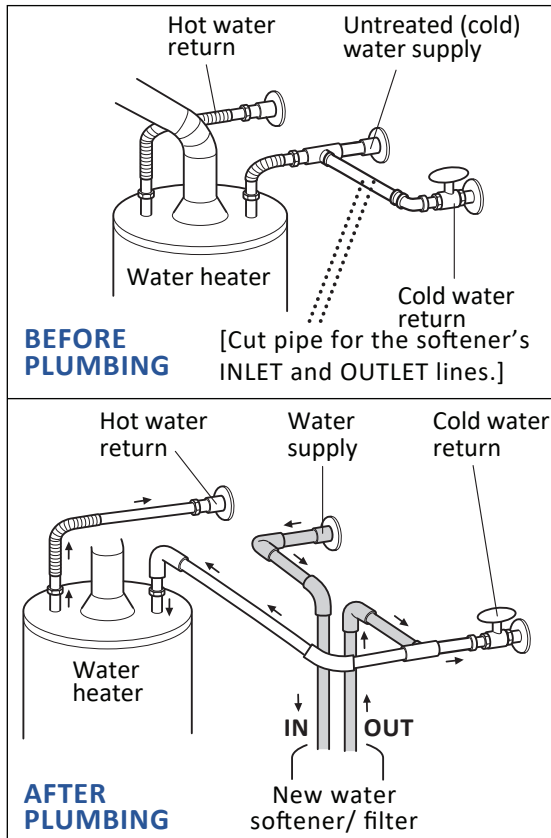
- A. NEW INSTALL WITH A PRE-PLUMBED WATER SOFTENER LOOP
- B. NEW INSTALL ON A WATER HEATER LOOP
- C. NEW INSTALL BY RE-ROUTING A HOME'S WATER SUPPLY LINE
- D. NEW INSTALL FOR PRIVATE WELL WATER

A) NEW INSTALL WITH A PRE-PLUMBED WATER SOFTENER LOOP



- 1) Switch-off the breaker to the hot water heater. At the electrical control panel, temporarily switch off the power feeding the water heater unit.
- 2) Shut-off the water main.
- 3) Drain any existing water from both the cold and hot water pipes. Simply, open all of the sink and bathtub faucets to empty the remaining water in the pipes. Drain completely.
TIP: In addition, you can also remove a shower head (since it is located high) to create a vacuum so pipes can drain better.
- 4) Cut the water line softener loop and cut/ unplug the appropriate drain line. Place a bucket to catch the water from the softener loop.
- 5) Identify and label the inlet (supply), and the outlet plumbing pipes.
 - To identify the inlet (supply pipe), very slightly, turn open the water main supply to identify which pipe is the water supply line. The pipe with water flowing out (supply side), should be labelled: "INLET". Label the other pipe: "OUTLET".

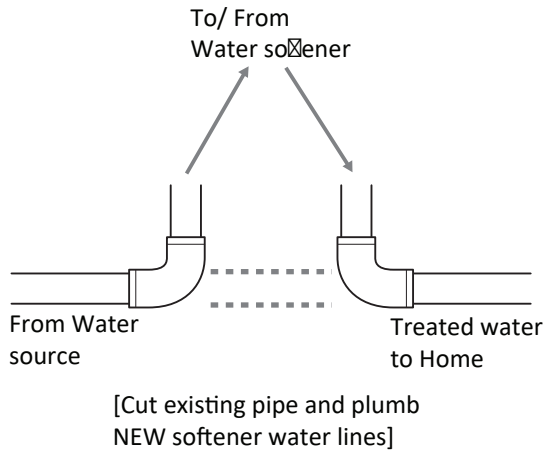
B) NEW INSTALL WITH A WATER HEATER LOOP



- 1) Check that untreated water supply return was plumbed. Refer to the illustration.
 - This untreated water line supplies the water heater and the home.
- 2) Switch-off the breaker to the hot water heater. At the electrical control panel, temporarily switch off the power feeding the water heater unit.
- 3) Shut-off the water main.
- 4) Shut-off the water heater valve, if applicable.
- 5) Drain any existing water from both the cold and hot water pipes. Simply, open all of the sink and bathtub faucets to empty the remaining water in the pipes. Drain completely.
TIP: In addition, you can also remove a shower head (since it is located high) to create a vacuum so pipes can drain better.
- 6) Cut the untreated water line loop. Use a bucket to catch any water from the softener loop. Cut the water line softener loop and cut/ unplug the appropriate drain line. Place a bucket to catch the water from the softener loop. (Use the appropriate cutting tool for the different types of pipes (copper, PVC, PEX, CPVC, etc.)
- 7) Plumb the new softener water lines to the water softener location.
- 8) Identify and label the inlet (supply), and the outlet plumbing pipes.
 - To identify the inlet (supply pipe), very slightly, turn open the water main supply to identify which pipe is the water supply line. The pipe with water flowing out (supply side), should be labelled: "INLET". Label the other pipe: "OUTLET".

NEW INSTALL PLUMBING GUIDE

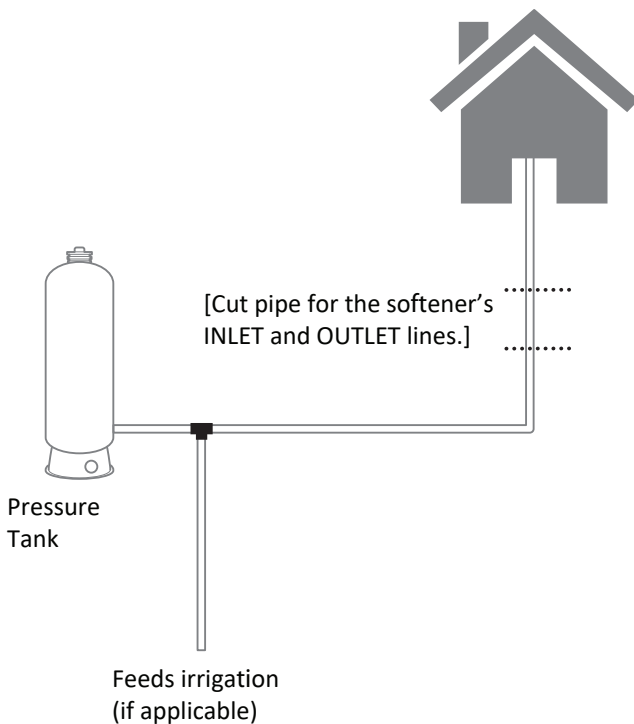
C) NEW INSTALL BY RE-ROUTING A HOME'S WATER SUPPLY LINE



- 1) Locate the main water supply line entering into the home.
- 2) Switch-off the breaker to the hot water heater. At the electrical control panel, temporarily switch off the power feeding the water heater unit.
- 3) Shut-off the water main.
- 4) Drain any existing water from both the cold and hot water pipes. Simply, open all of the sink and bathtub faucets to empty the remaining water in the pipes. Drain completely.
 - TIP:** In addition, you can also remove a shower head (since it is located high) to create a vacuum so pipes can drain better.
- 5) Cut the water main to plumb in the softener loop. Use a bucket to catch any water from the water main.
- 6) Plumb the new softener water lines to the water softener location.
- 7) Identify and label the inlet (supply), and the outlet plumbing pipes.
 - To identify the inlet (supply pipe), very slightly, turn open the water main supply to identify which pipe is the water supply line.

The pipe with water flowing out (supply side), should be labelled: "INLET". Label the other pipe: "OUTLET".

D) NEW INSTALL FOR PRIVATE WELL WATER



- 1) Shut-off the power off to the well pump.
- 2) Switch-off the breaker to the hot water heater. At the electrical control panel, temporarily switch off the power feeding the water heater unit.
- 3) Release the water pressure by opening a faucet to drain the pressure tank.
- 4) Drain any existing water from both the cold and hot water pipes.
 - Simply, open all of the sink and bathtub faucets to empty the remaining water in the pipes. Drain completely.
 - Tip: In addition, you can also remove a shower head (since it is located high) to create a vacuum so pipes can drain better.
- 5) Cut the water supply line after the pressure tank and after any following irrigation lines. Use a bucket to catch any water from the water main.
- 6) Plumb the new softener water lines to the water softener location.
- 7) Identify and label the inlet (supply), and the outlet plumbing pipes.
 - To identify the inlet (supply pipe), very slightly, turn open the water main supply to identify which pipe is the water supply line.

The pipe with water flowing out (supply side), should be labelled: "INLET". Label the other pipe: "OUTLET".

NOTE:
THE WATER SOFTENER MUST BE INSTALLED AFTER THE PRESSURE TANK.

The softener will not operate properly if installed before the pressure tank.

QUICK INSTALL OVERVIEW

- 1 ASSEMBLE THE NEW SOFTENER**
Assemble the softener and brine tank.
- 2 PREPARE THE INSTALL AREA**
Prepare the plumbing, drain and electrical connections.
- 3 REMOVE THE EXISTING SOFTENER**
If applicable. Skip this step if this is a new install.
- 4 INSTALL THE NEW SOFTENER**
Connect the plumbing.
- 5 START-UP & PROGRAM THE NEW SOFTENER**
Starting the new softener.

1) ASSEMBLE THE NEW WATER SOFTENER

Water Softener Assembly 4 Steps:

A) Brine Tank Assembly

B) Softener Tank Assembly

C) Control Valve Installation

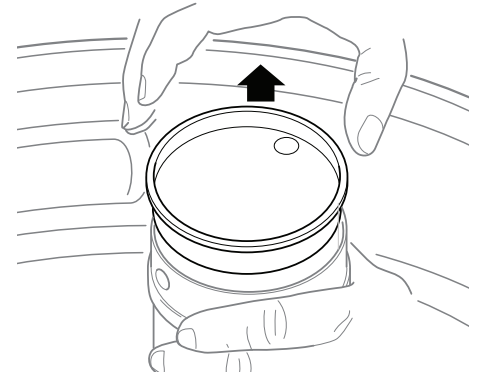
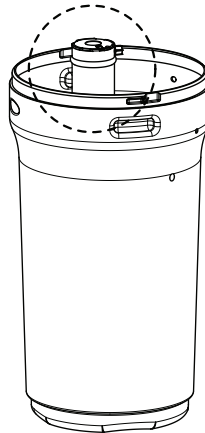
D) Bypass Valve Installation

A) BRINE TANK ASSEMBLY

NOTES:

- The brine tank may be either round or rectangular.
- The basic brine tank will be partially assembled. The brine well (the long, white vertical tube) comes preattached to the brine tank plate at the bottom. This brine well houses the pre-assembled brine valve and safety float.

- ① Remove the white brine well cap from the brine well (the long, white vertical tube) to gain access to the brine valve. This is where you will connect the black brine line tube to the safety float assembly.

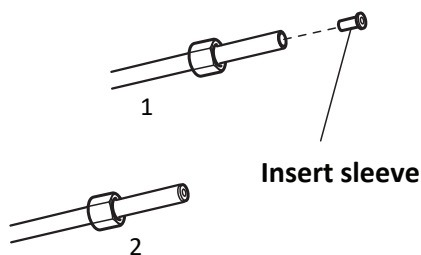


- ② Connect the 3/8" black brine line tube to the top and through the side of the brine well (the long, white vertical tube).

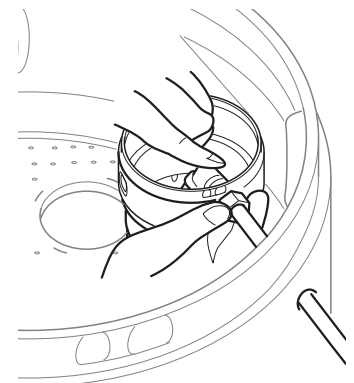
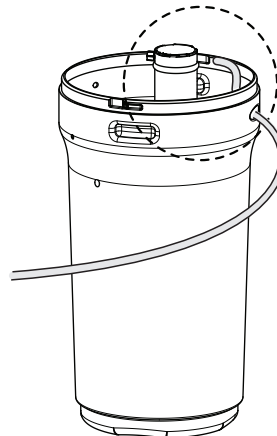
This connection will come with one of two connection types:

a) Threaded Nut Connection.

Unscrew the nut and push the brine line tube through the nut. Then screw the nut back on by hand. **HAND-TIGHTEN ONLY.**



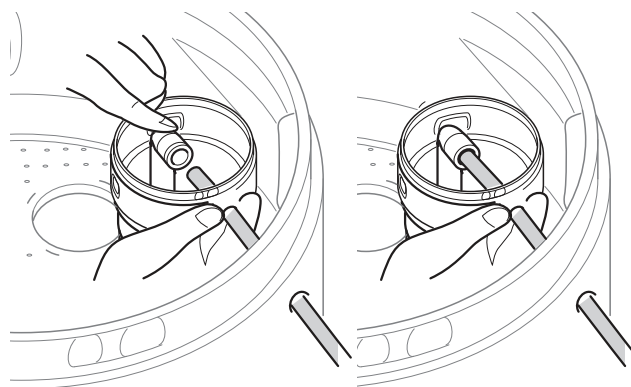
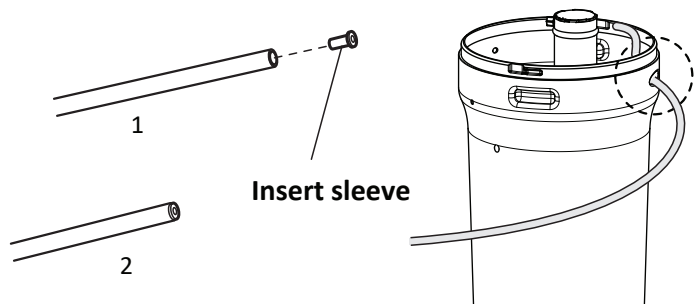
NOTE: The brine line tube hole on the exterior brine tank does not need to align with the brine valve connection. The brine line tube can enter from either side of the brine well with some slack in the brine line if needed.



QUICK INSTALL OVERVIEW

b) Quick Connect Push Fitting

Push the brine line tube fitting into the brine valve until it locks in



- ③ Re-install your white brine well cap back on the brine well housing.

- ④ Feed the brine line tube from the inside and out through the brine tank. (Later, the brine line tube will connect direct to the softener control valve.)

B) SOFTENER (MINERAL) TANK ASSEMBLY

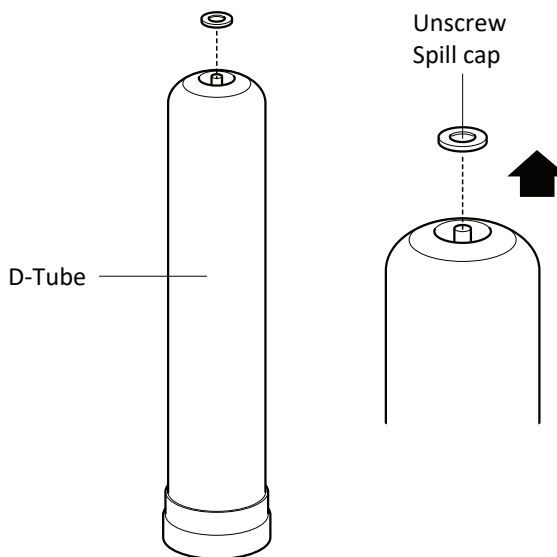
NOTE ON DELIVERED PACKAGE ORIENTATIONS:

It is acceptable (and common) for the softener tank to arrive on its side or upside-down. The spill cap will keep the pre-loaded resin in place. The resin will self-level after one or two regeneration cycles. Check everything for any tank damage.

If you suspect damage, please photo or video the damage and send it to our support team.

- ① If applicable, install the neoprene jacket.
In some cases, the neoprene jacket will come pre-installed.
- ② Remove the spill cap from the top of the softener tank.
See image on right.

FOR SYSTEMS SIZES 24,000 TO 64,000 GRAIN CAPACITIES:
These systems come completely pre-loaded with resin.
Your tank is ready to install the softener control valve.
Go to the next step.



FOR SYSTEMS SIZES LARGER THAN 80,000 AND LARGER GRAINS CAPACITY LOAD ADDITIONAL RESIN INTO THE SOFTENER TANK

Please see the following loading instructions:

- ① Remove the spill cap from the top of the softener tank.
- ② Cap, plug or tape to cover the cover the top opening of the distribution tube or "D-tube" (the white PVC pipe) in the media tank. This is to prevent resin from entering the distribution tube.
- ③ Place the funnel in the top of the softener tank.
- ④ Pour the additional resin through the funnel, and down the side of the softener tank.

NOTE: Water softeners larger than a 64,000 grain capacity are partially pre-loaded with resin. These systems will require loading the additional resin as shipped.

- ⑤ Wipe away any loose resin from the softener tank threads with a soft brush or water.
- ⑥ Remove the cap, plug or tape to uncover the distribution tube.

Your softener tank is now completely loaded with the proper amount of resin and is ready to install the softener control valve.

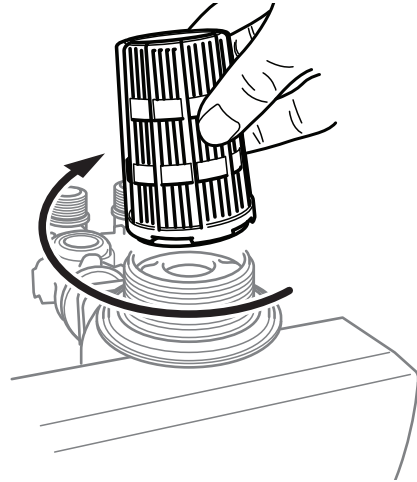
QUICK INSTALL OVERVIEW

C) CONTROL VALVE INSTALLATION

- ① Attach the white upper basket/ cone to the bottom of the softener control valve.

Twist the cone to lock into place.
The upper basket/ cone will seat in once installed.

Give a little tug to check that is installed properly.



- ② Install the control valve to the softener tank as follows.
 - a. Place the top of the distribution tube (white pipe located in the tank) through the bottom center of the upper basket cone.
 - b. Then screw on the softener control valve assembly onto the tank. **HAND-TIGHTEN ONLY, DO NOT OVER-TIGHTEN.**

Note:

As you complete this installation step, the control valve will drop into a socket on the tank once the distribution tube clears the O-ring from the bottom of the control valve. You'll feel it drop and then just hand tighten.

HAND-TIGHTEN ONLY, DO NOT OVER-TIGHTEN.

Do not force the screwing of the control valve. It should screw on very easily.

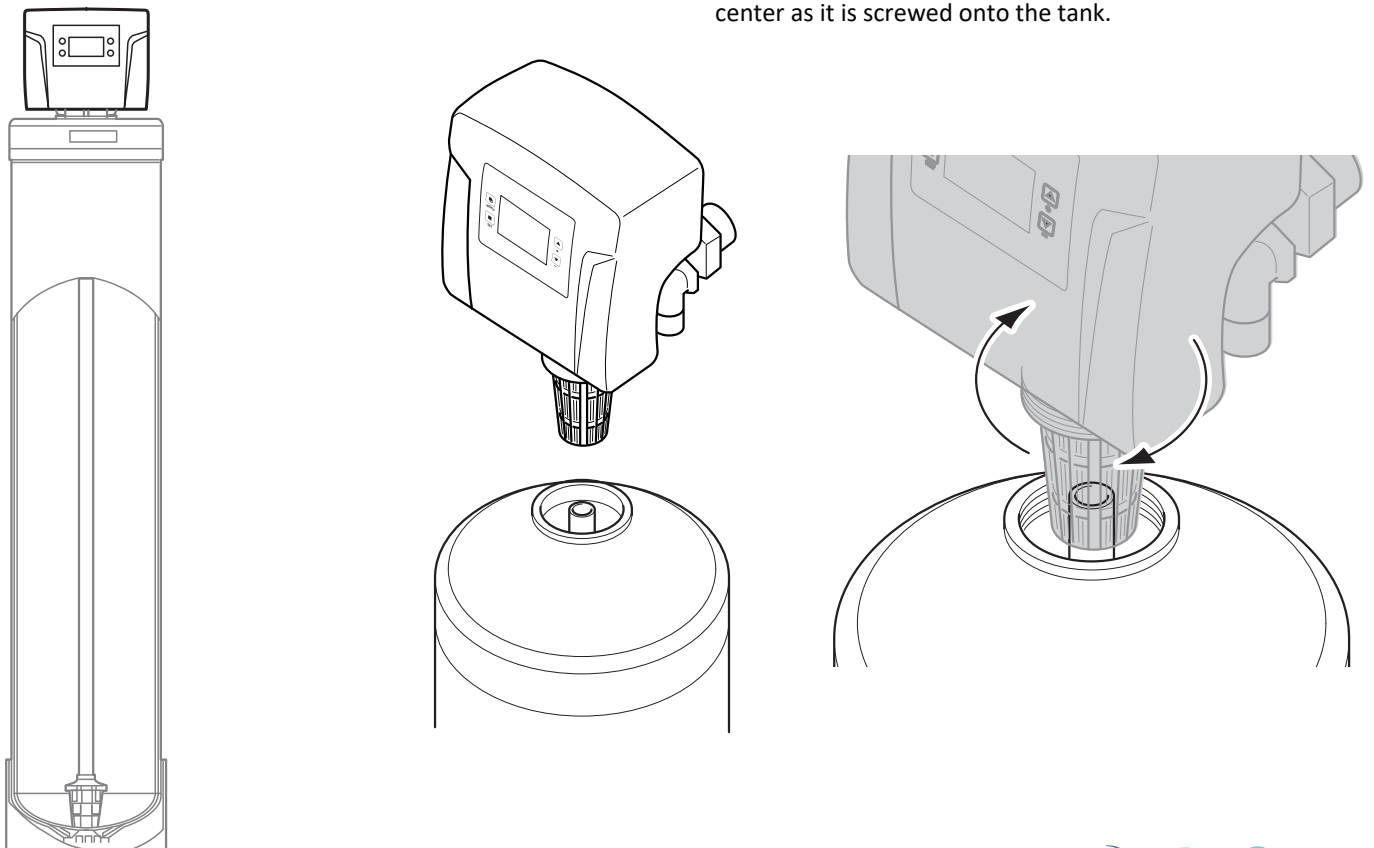
ATTENTION: DO NOT USE LUBRICANTS OR TEFLON TAPE.

The installed O-ring was previously lubricated with a non-petroleum-based lubricant. Never use Vaseline, WD-40, etc.

NOTE ON D-TUBE CENTERING:

It is acceptable and common that the distribution tube (the white PVC pipe) in the softener tank is not completely centered.

This is acceptable, the control valve will pull it to the center as it is screwed onto the tank.

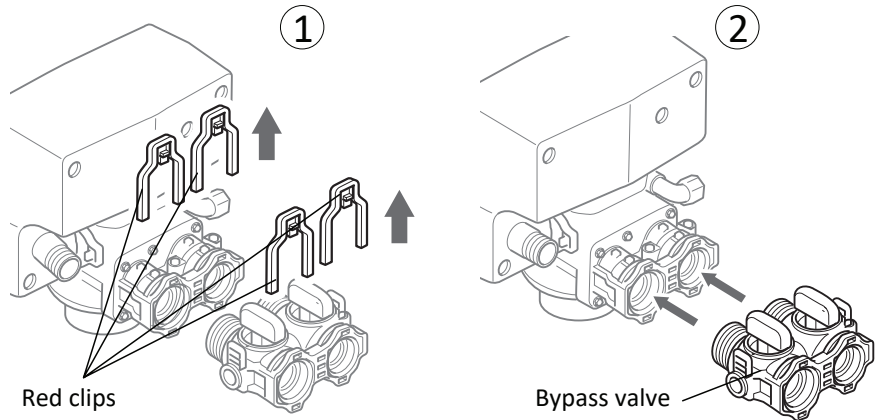


QUICK INSTALL OVERVIEW

D) BYPASS VALVE INSTALLATION

Once the softener control valve is installed, install the bypass valve into the back of the control valve.

- ① Pull out the four large red clips from the back of the bypass valve. Set the four red clips aside.
- ② Attach the bypass valve to the control valve. Push the corresponding side of the bypass into the back of the control valve until it is fully secured.
- ③ Replace the two red clips into the bypass valve to secure the attachment. Gently tug on the clips to make sure they are locked into place.

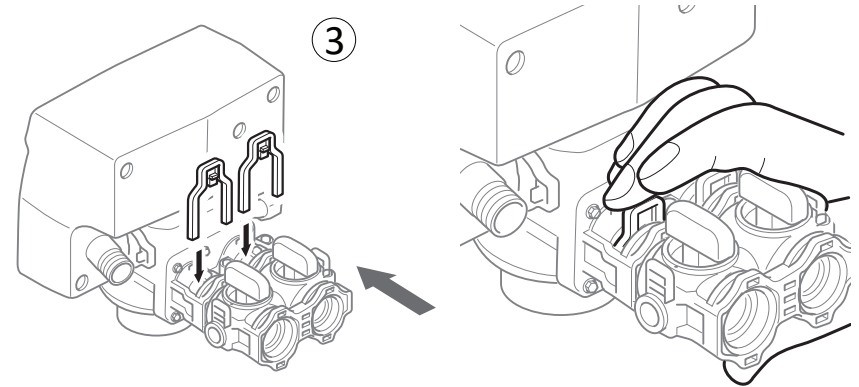


NOTE ON RE-INSTALLING THE CLIPS:

The red clips will only install if the bypass valve is completely secured. If the red clips are not able to be re-installed, the bypass valve is not properly pushed into the control valve. Push the bypass in further.

If difficult getting the bypass valve to fully seal to the control valve, use the palm of your hand to “slap” it in, or use a mallet to softly tap it in.

Gently tug on the clips to make sure they are locked into place.
(see image on the right)



- ④ Install either the two
 - a) quick-connect hoses, or
 - b) the standard connection adaptors to the bypass valve.

Then slide both elbow connection adapters into the bypass valve. Then re-install the remaining two red clips to lock in place. Gently tug on the clips to make sure they are locked into place.

a) Quick-connect hoses:

For now, set the two quick-connect hoses to the side. This will be installed to the bypass valve later.

NOTE:

QUICK-CONNECT HOSES DO NOT WORK ON PVC PIPES. Please use the elbow connection to hard pipe your connectttons.

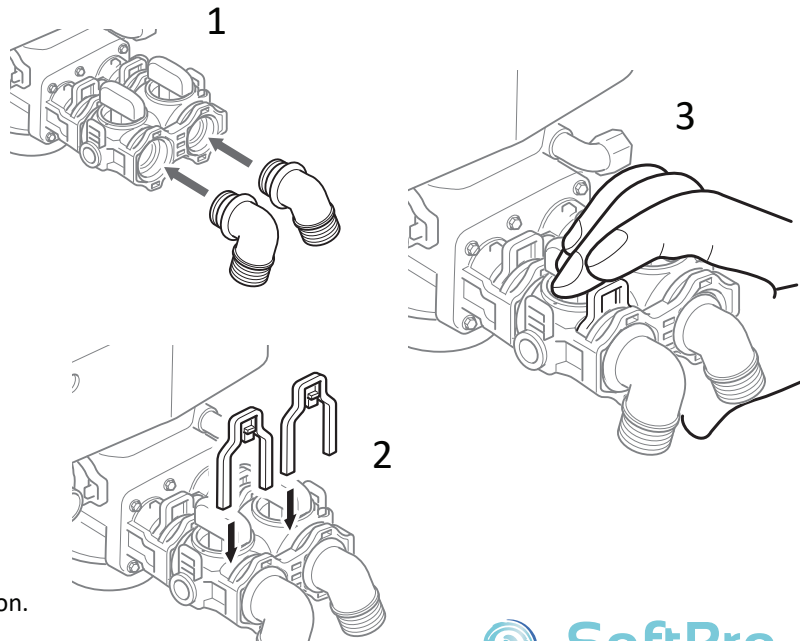
b) Standard connections

Wrap Teflon tape onto the thread of both elbow connection adaptors.

WARNING:

USE ONLY TEFLON TAPE ON THE ELBOW ADAPTORS. Do not use pipe dope or plumbers’ putty. This can damage the plastic fittings.

- ⑤ Make sure that the bypass valve is set to the bypass position.



QUICK INSTALL OVERVIEW

2) PREPARE FOR THE INSTALLATION OF THE NEW WATER SOFTENER

i Using Additional Whole House Filters Or Other Treatment Systems?

If you have additional water treatment filters (i.e. whole house filter, iron filter or pH neutralizer), those systems should always be installed before the water softener.

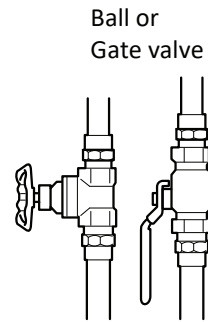
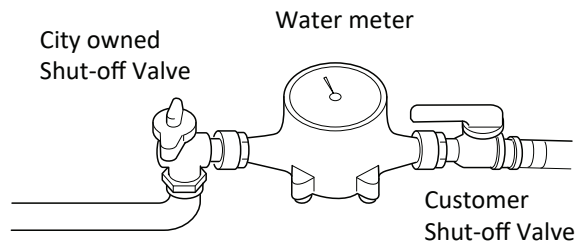
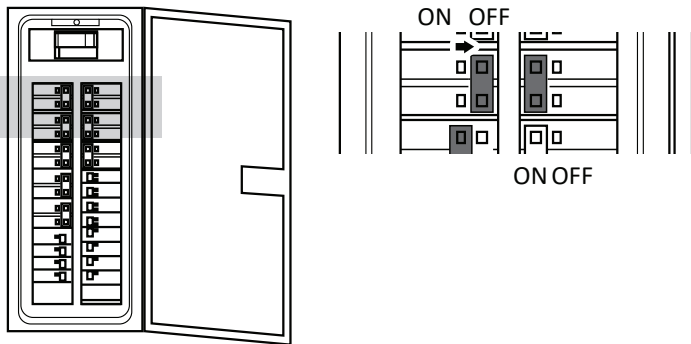
The water softener is the final treatment systems in your complete water treatment. (The exception is for a UV Disinfection System, which will be placed after the water softener.)

- ① Verify and clear the location of the new water softener system.
 - a. Clear and clean the areas.
 - b. Prepare the nearest electrical outlet and drain locations. Verify the drain type for connection and applicable parts to be required.
 - c. Prepare the softener's inlet and outlet water pipe connections.

- ③ Shut-off the main water supply.
 - Close the water main shut-off valve to the home. It is usually located in the front of the property.
 - Alternatively, if you have a shut-off valve as water enters home (usually a ball or gate valve in the front of the building), then you can opt shut-off the home water supply there.

- ② Switch-off the breaker to the hot water heater. At the electrical control panel, temporarily switch off the power feeding the water heater unit.

Main circuit breaker



- ④ Drain any existing water from both the cold and hot water pipes. Simply, open all of the sink and bathtub faucets to empty the remaining water in the pipes. Drain completely.

Helpful tip:
In addition, you can also remove a shower head (since it is located high) to create a vacuum so pipes can drain better.

- ⑤ Label the inlet (supply), and the outlet plumbing pipes. The pipe with water flowing into the softener control valve (supply side) should be labelled: "INLET".

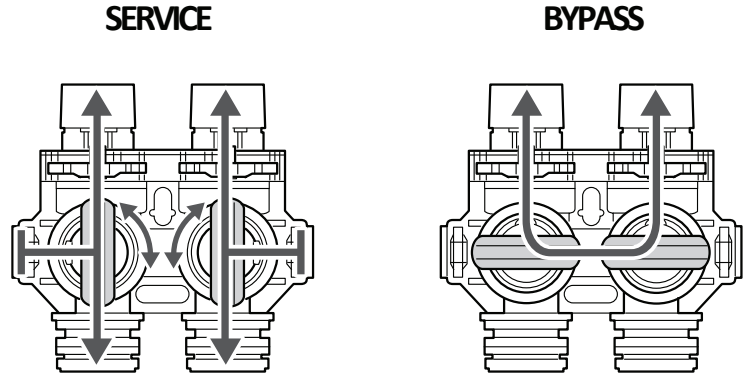
To identify the inlet (supply pipe), very slightly, turn open the water main supply to identify which pipe is the water supply line. The pipe with water flowing out (supply side), should be labelled: "INLET". Label the other pipe: "OUTLET".

QUICK INSTALL OVERVIEW

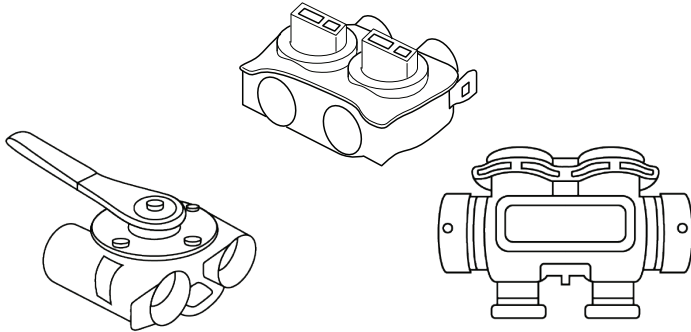
3) REPLACING AN EXISTING WATER SOFTENER

If applicable, the following guide is typical of how common water softeners are removed. If you find that your existing setup is unconventional, please take pictures and videos to send to our support team to review.

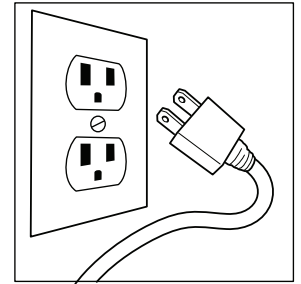
- ① Set the existing softener bypass valve to the bypass position. When set to bypass mode, water will not enter into the softener tank.



Examples of some different types of bypass valves:



- ② Disconnect power supply.
 - a. Unplug the power supply plug to your old, existing water softener.



- ③ Reclaim the existing salt or potassium chloride from the brine tank.

Remove any good, usable salt or potassium chloride that you would like to keep and reuse from your old unit. Discard any clumps.

Disposal: Dispose unusable salt or potassium chloride properly into the garbage. Do not dispose onto lawns, gardens, plants, or trees, etc.



- ④ Disconnect & remove the old brine tank.
 - a. Disconnect brine tube line from the softener control valve.
 - b. Disconnect the brine drain overflow line from the brine tank, if applicable.
 - c. Remove the brine tank from the area
- ⑤ Disconnect & remove the old softener tank.
 - a. Disconnect both the inlet and the outlet plumbing lines to the old softener. Use a bucket to capture any residual water in the pipes.
 - b. Disconnect the drain tube from the softener valve.
 - c. Remove the old softener from the area.
- ⑥ Clear and clean the area for the new water softener system.

Proper Disposal:
Please dispose of the old softener and brine tank properly.

You are now ready to install your new water softener system.

QUICK INSTALL OVERVIEW

4) CONNECT THE NEW WATER SOFTENER

- ① Position the water softener tank assembly in front of the plumbing.
- ② Connect the inlet (supply side) and outlet plumbing lines to the softener bypass valve. Use either connection type as previously installed on the bypass valve.

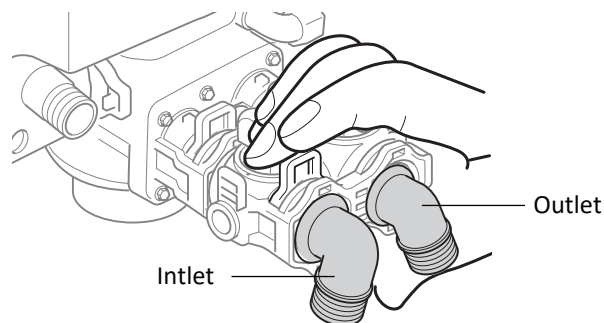
a) Quick-connect hoses:

- Connect the quick-connect hoses to the inlet and outlet plumbing pipes. Match the corresponding inlet and outlet sides.
- Connect the quick-connect hoses to the bypass valve. Match the corresponding inlet and outlet sides. Remove the two red clips on the bypass valve. The hoses will slide into the bypass valve. Then re-install the remaining two red clips to lock in place. Gently tug on the clips to make sure they are locked into place.

NOTE: QUICK-CONNECT HOSES DO NOT WORK ON PVC PIPES. Please use the elbow connection to hard pipe your connections.

b) Standard connection

Connect the plumbing to the elbow connection adapters. Match the corresponding inlet and outlet sides.

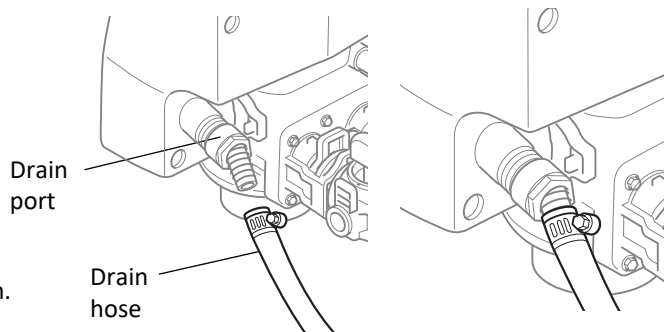


- ③ Connect the softener drain line tubing to the drain port.

NOTE:

Do not remove the pre-installed drain port hose barb fitting from the SoftPro control valve. This houses a required flow restrictor and must be used.

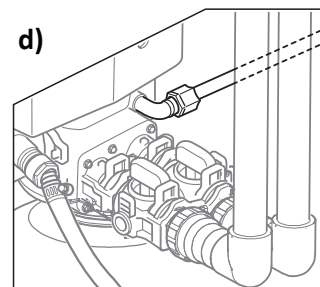
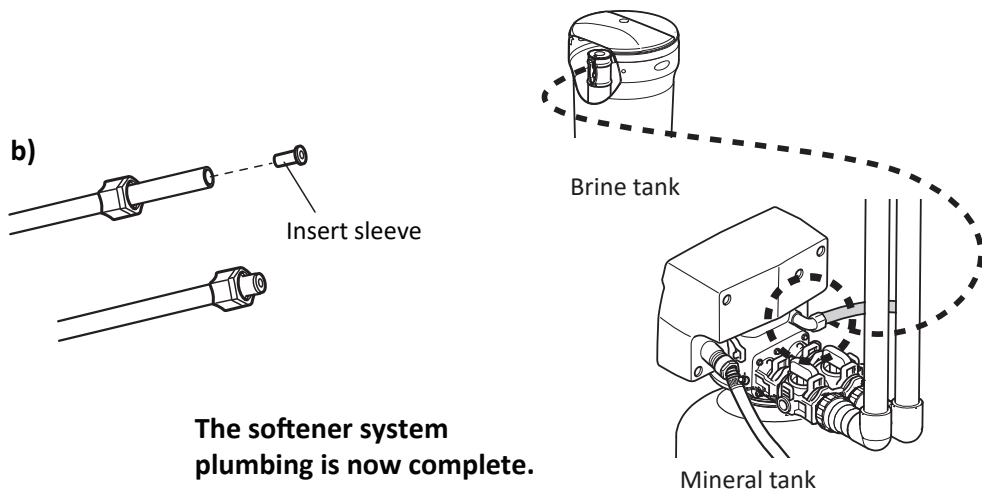
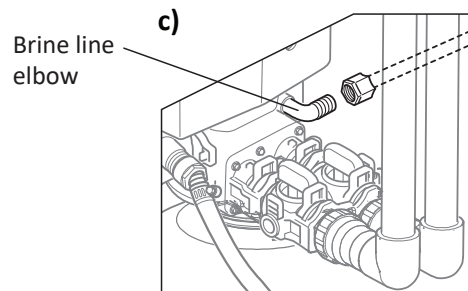
- Attach a 1/2" ID drain tube onto the drain port adapter on the control valve. Secure using a hose clamp.
- Run the drain tube to the drain as appropriate.
 - a. Common drains include: existing softener drain, floor drain, laundry tub/ sink, sanitary sewer line and washing machine drain.



- ④ Attach the brine line tube to the control valve.

- a) Position the brine tank in place.
- b) Slip the brine tube through the nut with nut threads facing the tube end.
- c) Insert the plastic sleeve into the brine tube. (The white insert sleeve is usually attached to a thin wire on the brine line elbow).
- d) Screw the brine line nut to the drain line elbow fitting on the control valve.

Hand-tighten only. Do not over-tighten.



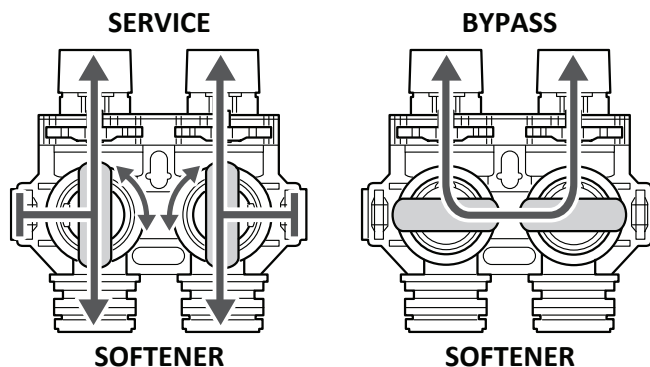
The softener system plumbing is now complete.

QUICK INSTALL OVERVIEW

5) INITIAL WATER SOFTENER START UP

- ① Add 3 gallons of water to the brine tank.
- ② Add 1 to 3 bags of salt (or potassium chloride) to the brine tank.
NOTE: This can be added later but before the first regeneration cycle.
Salt Type Recommendation:
Salt pellets are recommended, but extra coarse salt is acceptable.
- ③ Turn the power back on.
 - a) Switch the water heater back on.
 - Restart the water heater pilot, as applicable.
 - Turn-on the well water pump, if applicable.
- ④ Power up the softener control valve, plug into the power outlet.

- ⑤ Starting the water supply to the softener mineral tank.
 - a) Verify that the bypass valve is in the bypass position.
 - b) Re-open the water main valve.
 - a. Re-open the water heater valve, if applicable.
 - c) SLOWLY turn open the INLET side of the softener bypass valve until the softener tank fills with water.
Do not fully open the inlet valve (open to about a quarter of a turn).
 - a. Once the softener tank is full, the water will stop running.
 - b. Then fully open the inlet side of the bypass valve.
 - d) SLOWLY turn open the OUTLET side of the softener bypass valve.



Bypass handles (red) may initially be stiff to turn. You may opt to use the included Allen wrench as leverage to open the bypass valves. Simply insert the wrench into the top of each red handle and slowly turn open.

- ⑥ Initial cleaning of the softener mineral tank.
 - a) Open the nearest softened treated cold-water faucet or hose bib and run the water until it shows clear.
 - a. Periodically use a clear container to view the water clarity.
 - b) Let the water run until the water shows clear in the container. This is to bleed out the resin's color and air.
 - c) Once the water runs clear into the container, turn off the faucet or hose bib. Your new softener is ready and in service operation.
- ⑦ Complete the programming of your new control valve. Please refer to the following valve programming guide.

NOTE:

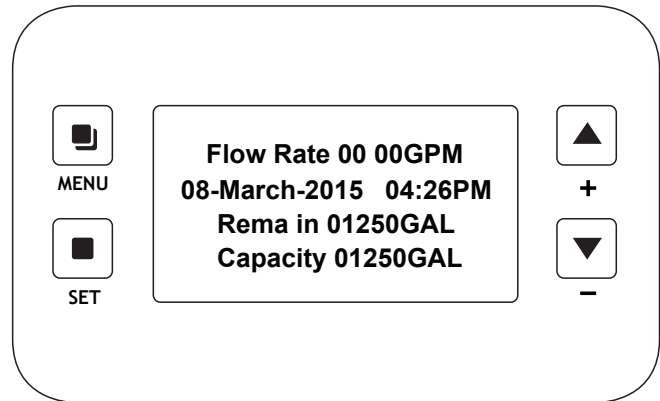
**The resin media is pre-charged.
Initial manual regeneration is NOT required.
Resin media has been previously pre-charged and ready for use.**

PROGRAMMING YOUR VALVE

INITIATE THE PROGRAMMING SETTINGS

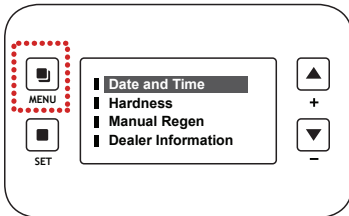
Press and hold down the MENU button until the [MENU] screen unlocks with a beep (about 3 seconds).

Flow Rate Display: This will display the flow rate that is actively being passed through the softener and back to your home.

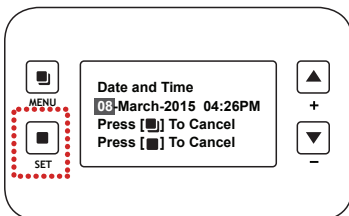


SET DATE AND TIME

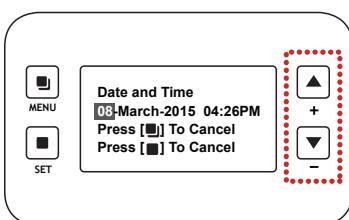
- 1 Press MENU to display Date and Time settings. (If already highlighted, skip to next step.)



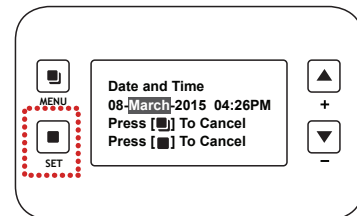
- 2 Press SET to enter the Date and time.



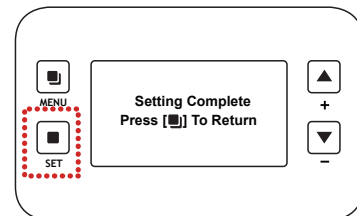
- 3 Use the UP and DOWN arrows to select the appropriate Date, Month, Year and Time.



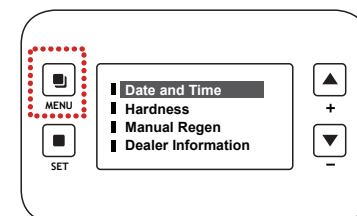
- 4 Press SET after each selection to move to the next field.



- 5 Once Date, Month, Year and Time is selected, press SET to complete the setting.

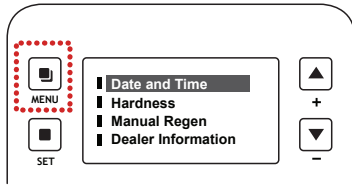


- 6 Press MENU to return to the home screen.

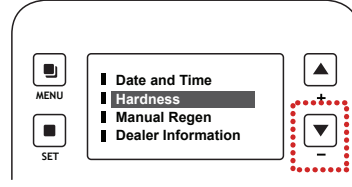


SET WATER HARDNESS

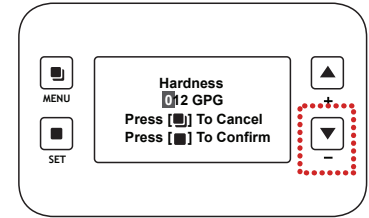
- 1 Press MENU to display the home screen.



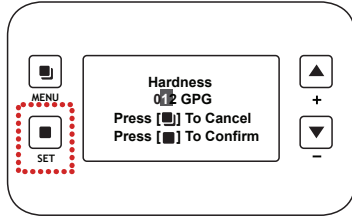
- 2 Select DOWN arrow to select Hardness setting.



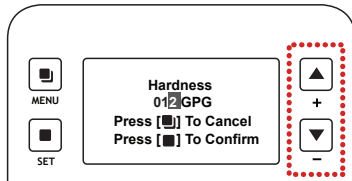
- 3 Press SET to input your water hardness. Input the water hardness in grains per gallon (GPG)* units.



- 4 Press SET to select each field



- 5 Use UP and DOWN arrows to select the appropriate hardness (GPG) levels.



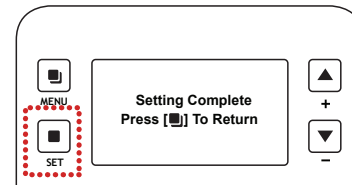
*If your water hardness is in mg/L or PPM units, divide that number by 17.1 to convert to GPG units (round up to the nearest number if needed).

Notes on well water iron removal application*: (If NOT using an iron filter, please see the following.)

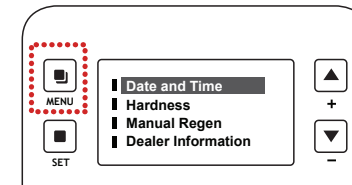
If using your water softener to additionally remove iron from your water, then add 3 GPG's to your total water hardness when entering in the hardness setting.

*This is only applicable for iron levels equal to 2-3 ml/L or PPM.

- 6 Press SET to complete the setting.

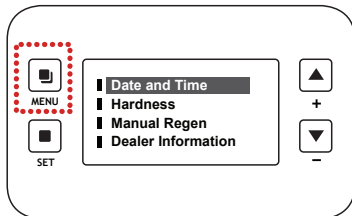


- 7 Press MENU to return to the home screen.

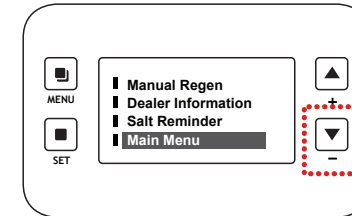


SET REFILL RATE

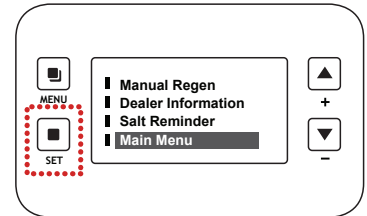
- 1 Press MENU to display the home screen.



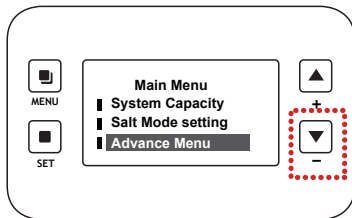
- 2 Press DOWN arrow to select Main menu



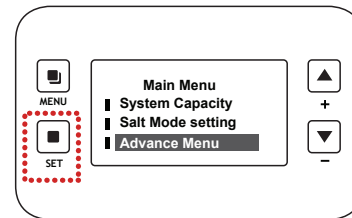
- 3 Press SET.



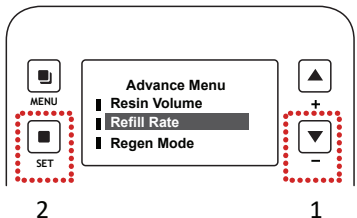
- 4 Press DOWN arrow to select until you get Advance menu



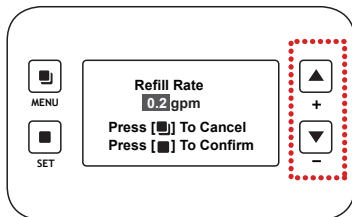
- 5 Press and Hold SET till it beeps



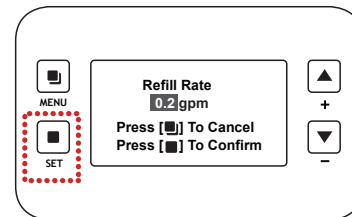
- 6 Press Down arrow to select Refill Rate and Press SET



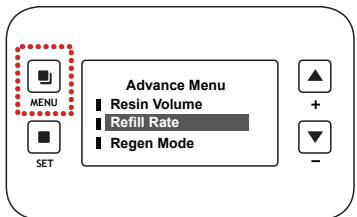
- 7 Use UP and DOWN arrow to set the Refill rate to 0.2.



- 8 Press SET.



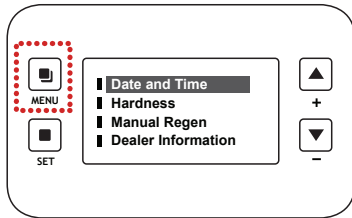
- 9 Press Menu to return



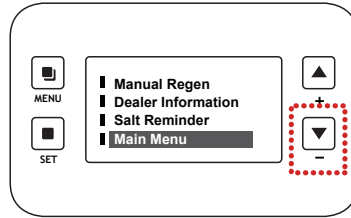
City water source : Set Refill Rate to "0.2"
Well water source : Set Refill Rate to "0.7"

FOR CITY WATER: SET BW/ Rinse Override

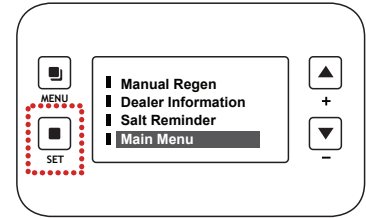
1 Press MENU to return to home screen.



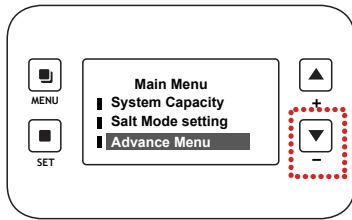
2 Press DOWN arrow to select Main menu



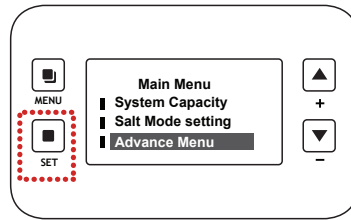
3 Press SET.



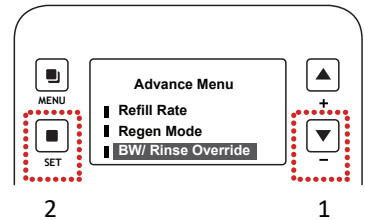
4 Press DOWN arrow to select until you get Advance menu



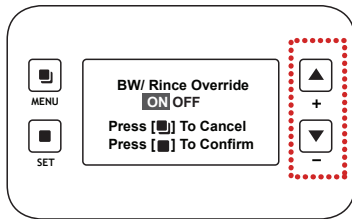
5 Press and Hold SET till it beeps



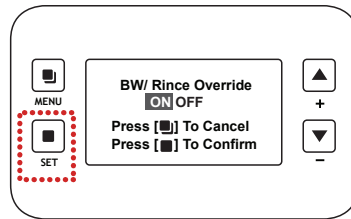
6 Press Down arrow to select Refill Rate and Press SET



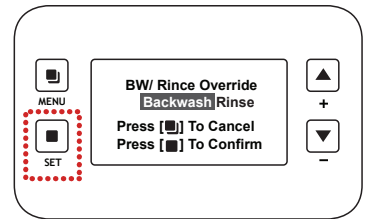
7 Use UP and DOWN arrow to set it to ON



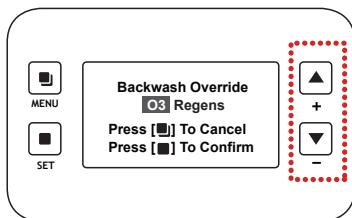
8 Once ON is highlighted Press SET.



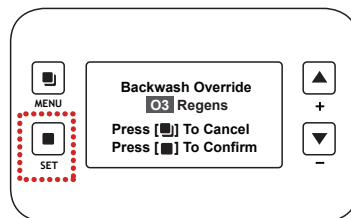
9 Once you SET to ON, Backwash is Highlighted. Press SET.



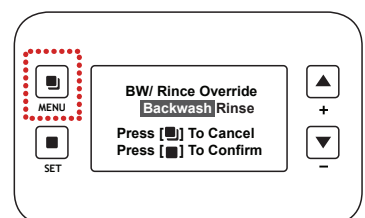
10 Set the Backwash setting to only 3 or 4 Regens. Use Up and Down arrows accordingly)



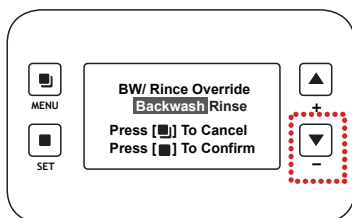
11 Press SET.



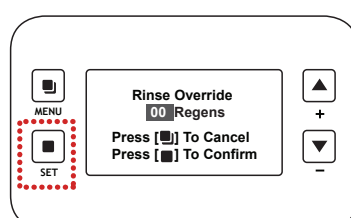
12 Press Menu to return



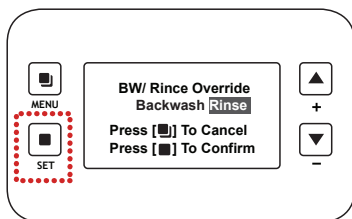
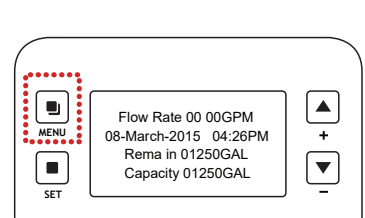
13 Use DOWN arrow to highlight Rinse. Press SET.



14 If Rinse is set to "00" or "01" Press MENU to return.



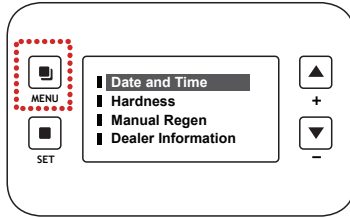
12 Press Menu until you return to the Main Screen.



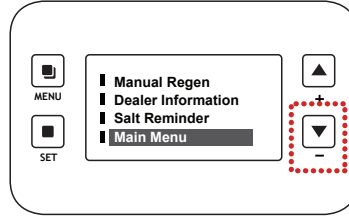
ATTENTION:
Make sure the Rinse is set to "00" or "01" and not higher.

FOR WELL WATER: SET BW/ Rinse Override

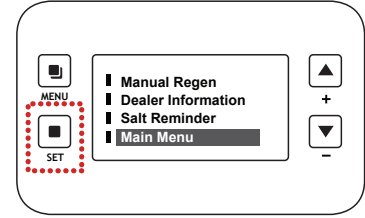
- 1** Press MENU to return to home screen.



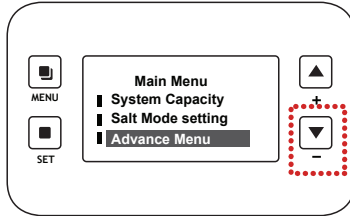
- 2** Press DOWN arrow to select Main menu



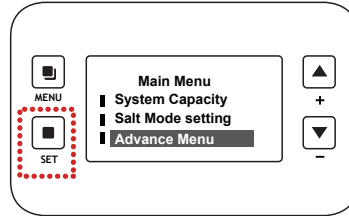
- 3** Press SET.



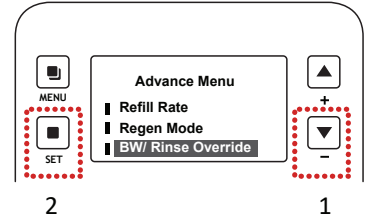
- 4** Press DOWN arrow to select until you get Advance menu



- 5** Press and Hold SET till it beeps

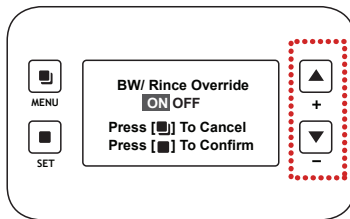


- 6** Press Down arrow to select Refill Rate and Press SET

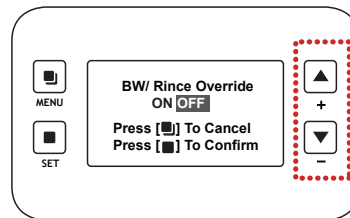


- 7** Use UP and DOWN arrow to set it to OFF.

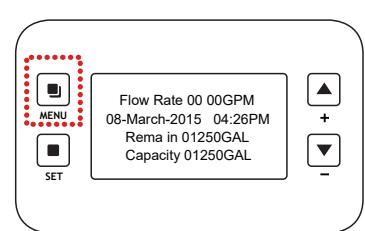
ATTENTION:
Make sure BW/ Rinse Override is set to OFF.



- 8** Once OFF is highlighted Press SET.



- 9** Press Menu until you return to the Main Screen.



Congratulations!

You have completed the installation of your new water softener system.

Contact Support:

Web link: <https://qualitywatertreatment.com/support>

Email Address: Help@QualityWaterTreatment.com

