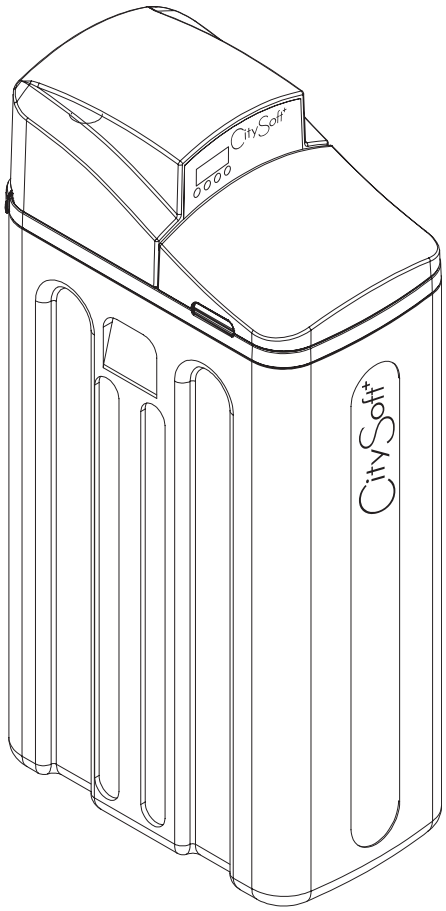
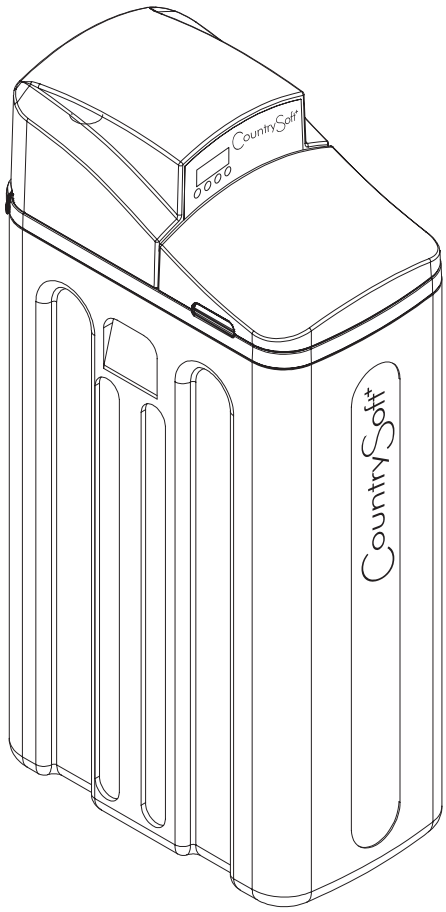
Owners Manual





CitySoft+ CountrySoft+
Water Softener

IAPMO R & T Certified against CSA B483.1

1. **Page 15 of this manual contains important maintenance procedures for the continued proper operation of your unit. These MUST be performed regularly for your warranty to remain valid.**
2. Read all instructions carefully before operation.
3. Avoid pinched o-rings during installation by applying NSF certified lubricant to all seals (provided with install kit).
4. This system is not intended for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

2164909 Ontario Limited
13-100 Hanlan Rd
Woodbridge ON L4L 4V8
Toll Free Phone: 1-866-293-8050

PRODUCT FEATURES AND BENEFITS

Congratulations on the purchase of your new water conditioner.

You will have peace of mind knowing your system will bring you years of treated water use and enjoyment.

Product Features & Benefits

- Rugged, simple design
- Non-corrosive, UV-resistant valve body
- Economical (small annual power consumption)
- Designed and engineered in North America

Eliminate:

- Stains
- Scale Deposits
- Soap Scum
- Clogged Plumbing
- Dissolved Minerals
- Reduces Chlorine

Enjoy:

- Longer Lasting Appliances (up to 30% longer)
- Less Detergent/Soap/Cleanser Use
- Greater Lathering of Soap
- Cleaner Dishes, Towels, Linens
- Softer Hands
- Silky Hair

Table of Contents

READ THIS PAGE FIRST

BEFORE STARTING INSTALLATION

- Read this manual thoroughly to become familiar with the device and its capabilities before installing or operating your Water Filter. Failure to follow instructions in this manual could result in personal injury or property damage. This manual will also help you to get the most out of your filter.
- This system is intended for use on municipal water only and its installation must comply with all State, provincial or 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. Consult your licensed plumber for installation of this system.
- This water filter 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 filter.
- This unit is capable of operating at temperatures between 40°F and 110°F (4°C - 43°C). Do not use this water filter 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.
- Avoid pinched o-rings during installation by applying (provided with install kit) NSF certified lubricant to all seals.
- Filters 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.
- Do not use water that is microbiologically unsafe without adequate disinfection before or after this system.
- 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. The manufacturer reserves the right to change the specifications referred to in this literature at any time, without prior notice.

INSTALL NOTES & SAFETY MESSAGES

Watch for the following messages in this manual:

NOTE

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

NOTE: used to emphasize installation, operation or maintenance information which is important but does not present a hazard.

CAUTION!

Disassembly while under pressure can result in flooding.

CAUTION: used when failure to follow directions could result in damage to equipment or property.

WARNING!

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

WARNING: used to indicate a hazard which could cause injury or death if ignored.

HOW YOUR WATER CONDITIONER WORKS

Water softeners remove hardness in the water by exchanging particles in the water, or ions. They remove hard ions such as 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 of 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. This is why 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

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.

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.

Upon installation the following information will be displayed or is easily accesible (see page 17 for key pad configuration) please review for your continued satisfactory operation of this product:

NOTE

In normal operation the display will not be back lit. You can press any button to back light the display.

Date and Time

Gallons Remaining or Days Remaining

Hardness: This can be adjusted seasonally if necessary and only upon recommendation of your installer or dealer. Most often this is set at installation for worst case hardness by the installer.

Number of People: This can be adjusted seasonally if necessary and only upon recommendation of your installer or dealer. Most often this is set at installation for worst case hardness by the installer.

Reserve Capacity: calculated as 75 gallons per person

Manual Regen Delay: – generally used after servicing the valve so that it will regenerate at the standard preset regeneraton time. to regenerate immediately either turn the center knob slightly or change to Immediat and press settings.

Regen Time: This is the time of day that the conditioner is scheduled to regenerate, this is factory set to 2:00 a.m. it can be adjusted (see page 34)

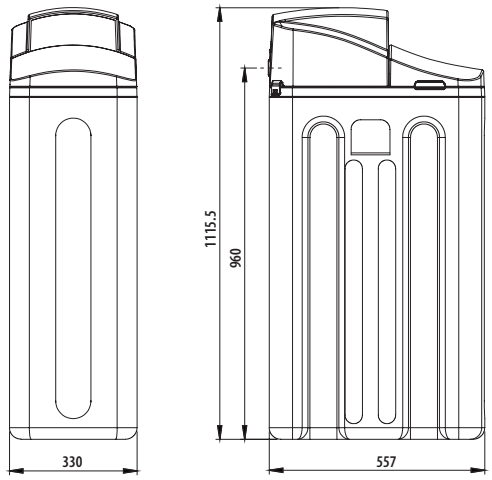
SPECIFICATION

Model #	Model #
CitySoft+	CountrySoft+

Capacity (10lbs/CF of Salt)	Control Valve
30,000 Grains	Electronic, Metered Initiated

VALVE PROGRAMMING	940600 -940772	940601
SYSTEM LANGUAGE	ENGLISH	ENGLISH
VALVE OPERATION	SOFTENER	SOFTENER
REGEN. MODE	METER DELAYED	METER DELAYED
REGENERATION TIME	2:00AM	2:00AM
CAPACITY CALC.	AUTO	AUTO
RESIN VOLUME	0.8	0.8
SALT SETTING	4.8 LB	4.8 LB
REFILL FLOW RATE	0.3	0.3
UNIT CAPACITY	19,200 grains	19,200 grains
RESERVE CAPACITY	75 GAL	75 GAL
BACK WASH	10	10
BRINE / RINSE	60	60
RINSE	10	10

SYSTEM DIMENSIONS



Working Temperature: This unit must be operated at temperatures between 40°F and 110°F (4°C - 43°C).

Working Pressure: This water softener must be operated on pressures between 30 psi to 125 psi. If the water pressure is higher than 125 PSI, use a pressure reducing valve in the water supply line to the softener.

Voltage = 120V / 60 Hz

Pipe Size = 3/4" and 1"

- At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.
- 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.

Peak flow rates intended for intermittent use only (10 minutes or less) and are for residential applications only. Do not use peak flow rate for commercial applications or for a continuous rate when treated water supplies are geothermal heat pump, swimming pool, etc.

For satisfactory operation, the pumping rate of the well system must equal or exceed indicated backwash flow rate.

All units come with plastic bypass

****Maximum Iron** = 2.0 ppm ferrous (clear water iron)
Maximum Hydrogen Sulfide = 0.0 ppm
Maximum Manganese = .75 ppm
pH = 6.5 to 8.5 with no iron present with iron present 6.5 - 7.5

UNPACKING / INSPECTION

Be sure to check the entire unit for any shipping damage or parts loss. Also note damage to the shipping cartons. **Contact the transportation company for all damage and loss claims. The manufacturer is not responsible for damages in transit.**

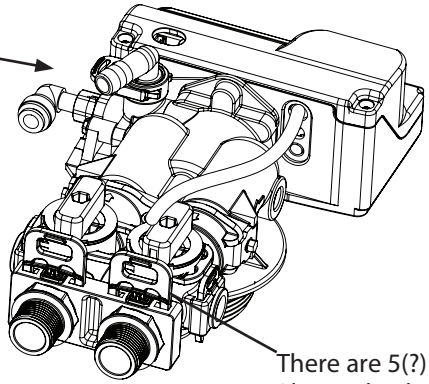
Small parts, needed to install the Softener, are in a parts box. To avoid loss of the small parts, keep them in the parts bag until you are ready to use them.

What is included in the box?

For Models EFT20, EFT30, EFT40, you will expect the following:

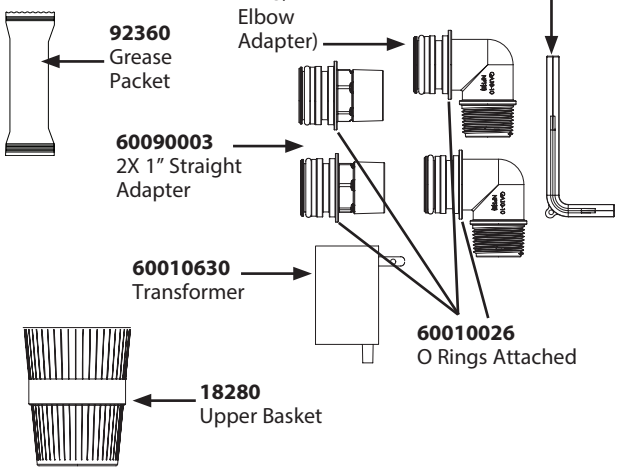
1. Control Valve
2. Tank
3. Parts Box
4. Owners Manual
5. Drain Hose & Clamp (Not included in some brands)

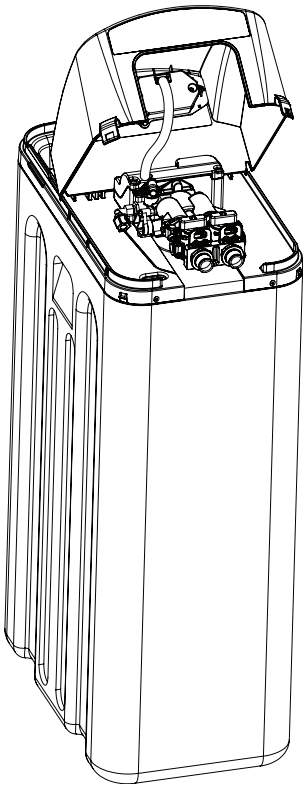
1. Control Valve



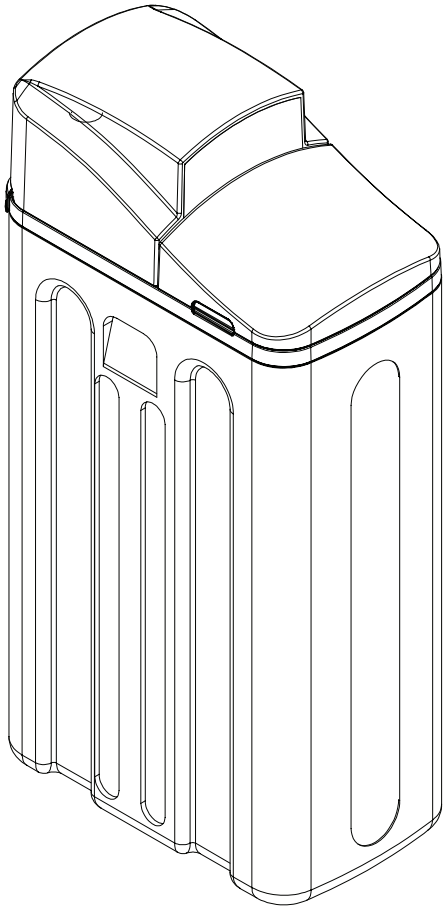
There are 5(?) Red clips. Please check to make sure you have all of them.

3. Parts Box





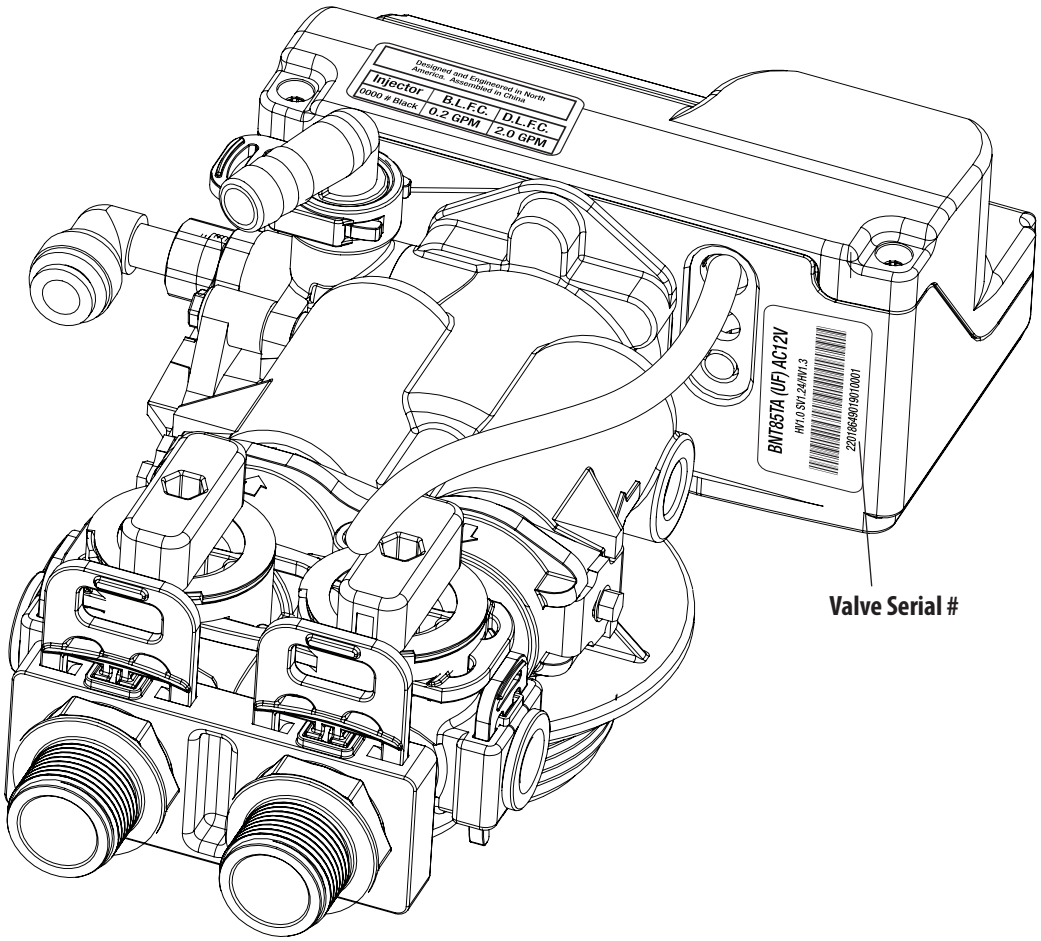
Media Inside the Tank. Media Type will depend on what models were purchased



CHECK VALVE TYPE AND VALVE SERIAL

The right Sticker shows the serial # of the control valve. The middle Sticker is dataplate which provides information of Serial # and Date of Manufacture of complete system. Both Serial # labels are important for troubleshooting.

Please record these numbers for future use on page 21 in the maintenance section.



Check to make sure Valve Type is Upflow (UF) (left Sticker shown below). The right Sticker shows the serial # of the control valve. The middle Sticker is dataplate which provides information of Serial # and Date of Manufacture of complete system. Both Serial # labels are important for troubleshooting.

Please record these numbers for future use on page 42 on the Important Warranty and Maintenance Information page.

Valve Serial #:

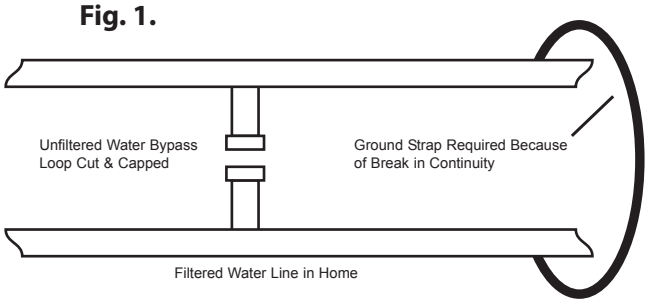
Complete System Serial #

BEFORE INSTALLATION

Make sure you have a copy of your most recent water test results. If your water has not been tested previously you can contact your supplier of this product to obtain a water sample bottle to be sent to one of our facilities for a free analysis. **It is important that this product not be installed until you have this information**.

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.

Fig. 1.



Inspecting and Handling Your CitySoft+/CountrySoft+ Softener*

Inspect the equipment for any shipping damage. If damaged, notify the transportation company and request a damage inspection. Damage to cartons should also be noted.

Handle the filter unit with care. Damage can result if it is dropped or set on sharp, uneven projections on the floor.

Do not turn the filter unit upside down.

To Insure this Product Functions Properly:

Your feed water line size to the unit must be a minimum of 3/4 inch with an operating pressure of no less than 30 psi and no more than 125 psi.

MECHANICAL:

Do not use petroleum based lubricants such as petroleum jelly, oils or hydrocarbon based lubricants.Use only 100% silicone lubricants (grease packet provided in parts kit). All plastic connections should be hand tightened only. Teflon tape may be used on connections that do not use an O-ring seal. Do not use pliers or pipe wrenches except where indicated by Nut shape (eg. pipe adapters) All plumbing must be completed according to local codes. Soldering connections should be done before connecting any pieces to the pipe as excessive heat can damage them.

Tools Required for Installation:

NOTE: We recommend installation only be completed by a competent installer or plumbing professional to insure this product is installed in accordance with local plumbing codes.

- Two adjustable wrenches
- Additional tools may be required if modification to home plumbing is required.
- Plastic inlet and outlet fittings are included with the filter. To maintain full valve flow, 3/4" or 1" pipes to and from the filter fittings are recommended. You should maintain the same, or larger, pipe size as the water supply pipe, up to the filter inlet and outlet.
- Use copper, brass, or PEX pipe and fittings.
- Some codes may also allow PVC plastic pipe.
- ALWAYS install the included bypass valve, or 3 shut-off valves. Bypass valves let you turn off water to the filter for repairs if needed, but still have water in the house pipes.
- 5/8" OD drain line is needed for the valve drain. A 10' length of hose is not included with some brands.

NOTE

All government codes and regulations governing the installation of these devices must be observed.

⚠ CAUTION!

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. See Fig. 1.

NOTE

Check your local electrical code for the correct clamp and cable size.

NOTE

If a severe loss in water pressure is observed when the filter unit is initially placed in service, the filter tank may have been laid on its side during transit. If this occurs, backwash the filter to "reclassify" the media.

***NOTE**

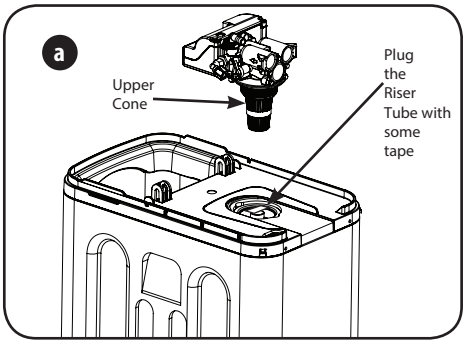
Due to transportation and climatic conditions all connections including the valve to the tank need to be checked at time of installation and tightened if necessary.

PREPARATIONS

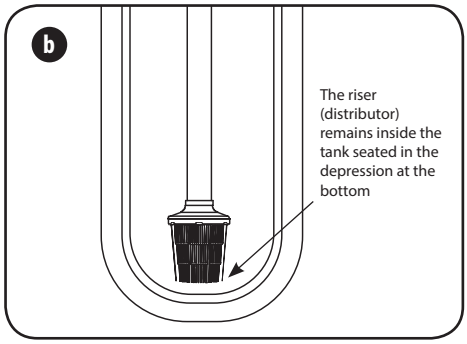
CAUTION!

The unit should be depressurized before installing or replacing media

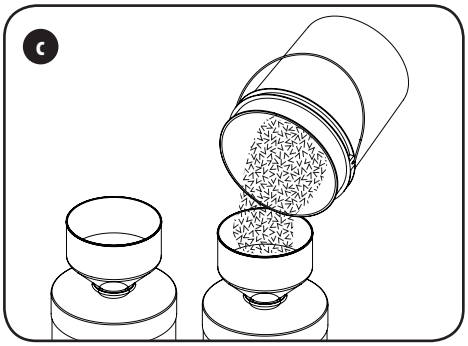
Media Installation (When Necessary). Models including and higher than 2 CF (Models 60, 90) of media are shipped with separate media in pails or boxes. Models lower than 2 CF of media come loaded with media and this step can be skipped for new installation.



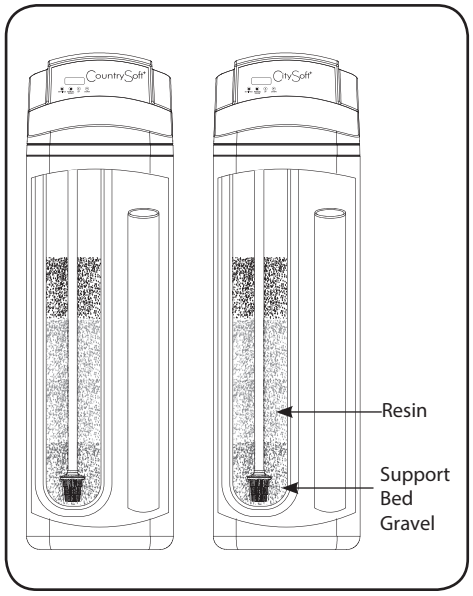
a) Lube the bottom oring (picture **d**) and attach the upper cone to the valve.



b) Temporarily plug the open end of the riser tube to ensure that no resin or gravel falls down into the distribution. The riser (distributor) remains inside the tank seated in the depression at the bottom. Plug tube with a tape. Remove after media is loaded.



c) Fill support bed first. The media will not always spill down inside the tank and may need to be swept inside.The large funnel (sold separately makes filling the tank easier and neater. (Or an empty 1 gallon or 4 liter container with the bottom cut out makes a good funnel.)



Fill tank one quarter full of water to protect distribution during gravel installation.Place the media into the tank in the order indicated above. Slowly and carefully add the gravel support bed and the filtration media leveling each layer as it is placed into the tank.

CUSTOMER INSTALLATION INFORMATION

Unit type:_____

Install Date:_____

Dealer Name:_____

Installer Name:_____

Water Type: ❑ City ❑ Well

Pump Pressure:_____PSI

PROGRAM INFO

Capacity:_____

Hardness:_____GPG (grains/gallon)

Salt:_____

WATER INFO

Hardness:_____GPG (grains/gallon)

Iron:_____ PPM

TDS:_____ PPM

P.H.:_____

Other:_____

GALLONS BETWEEN REGENERATION

_____Gallons

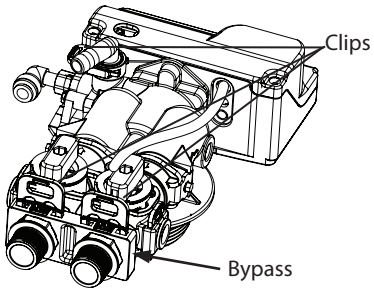
CAUTION!

DO NOT use petroleum based lubricants as they will cause swelling of O-ring seals.

CAUTION!

Make sure that the unit is de-pressurized before conducting this task.

PREPARATIONS



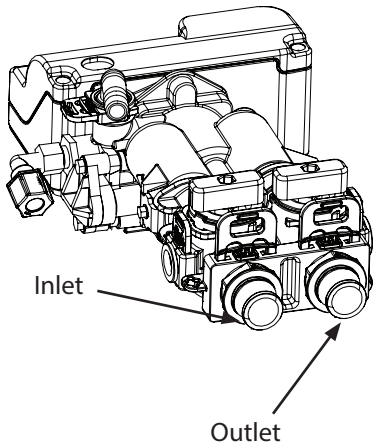
Attaching Bypass to Valve (If required in case of replacing the control valve. The new control valve comes with bypass attached)

Make sure the bypass is attached well to the control valve. Connect the straight or elbow connectors to the bypass with red clips. Connect the inlet and outlet of the water Softener to the plumbing of the house. The control valve must not be submitted to temperatures above 43°C (110°F). When sweat fittings are used, to avoid damaging the control valve, solder the threaded copper adapters to the copper pipe and then, using Teflon tape, screw the assembly into the bypass valve.Do not use pipe thread compound as it may attack the material in the valve body.

INSTALLATION STEPS

Determine the best location for your water Softener, bearing in mind the location of your 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.

Please notice the inlet and outlet labels on the valve as shown here to determine the position of the equipment:



Facts to Remember When Planning Your Installation

1. All installation procedures must conform to local and state or provincial plumbing codes.
2. Outside faucets used to water lawns and gardens should not supply untreated water, replace untreated water with feed water to the unit. If necessary to do this please install check valve, see page 14. A new water line is often required to be connected to supply untreated water to the inlet of the water filter and to the outside faucets.
3. Make sure the bypass is attached well to the control valve. Connect the straight or elbow connectors to the bypass with red clips. Connect the inlet and outlet of the water filter to the plumbing of the house. The control valve must not be submitted to temperatures above 43°C (110°F). When sweat fittings are used, to avoid damaging the control valve, solder the threaded copper adapters to the copper pipe and then, using Teflon tape, screw the assembly into the bypass valve.

   Do not use pipe thread compound as it may attack the material in the valve body.
4. Apply Teflon Tape and Orings to the fittings
5. Connect Filter to the house plumbing. Any solder joints near the valve must be done before connecting any piping to the valve. Always leave at least 6" (152 mm) between the valve and joints when soldering pipes that are connected to the valve. Failure to do this could cause damage to the valve.
6. **Drain Line connection:** Attach 5/8" OD drain hose (Supplied with some models and brands) to the hose barb and tighten securely with a hose clamp (Supplied with some models and brands). Run the drain line to a floor drain or a laundry drain. Complete any necessary plumbing.
7. Make sure there are no leaks in the plumbing system before proceeding.

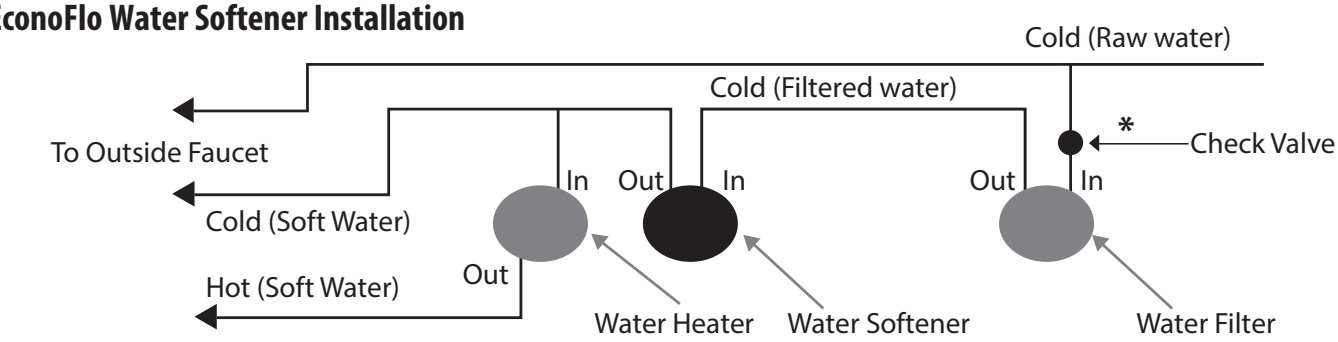
Water Lines

Outside faucets used to water lawns and gardens should not supply softened water. A new water line is often required to be connected to supply hard water to the inlet of the water softener and to the outside faucets. Cut the water line between where it enters the house and before any lines that branch off to feed the hot water heater or other fixtures in the house and as near the desired location of the water softener as possible. Install a tee fitting on the feed end of the cut pipe, and an elbow fitting on the other end. Install piping from the tee to the inlet of the water softener and from the elbow to the outlet of the softener. To sever the water lines which branch off to feed any outside faucets, cut the branch lines approximately two inches from the fitting on the main water line. Install an elbow on the end of the pipe nearest the outside faucet and a cap on the end connected to the existing water line. Install piping from the tee installed on the inlet line to the water softener to the elbow installed on the pipe to the outside faucet. Following this procedure will result in all lines in the house, with the exception of the outside faucets, but including the water heater and therefore the hot water lines, being supplied with soft water.

INSTALLATION

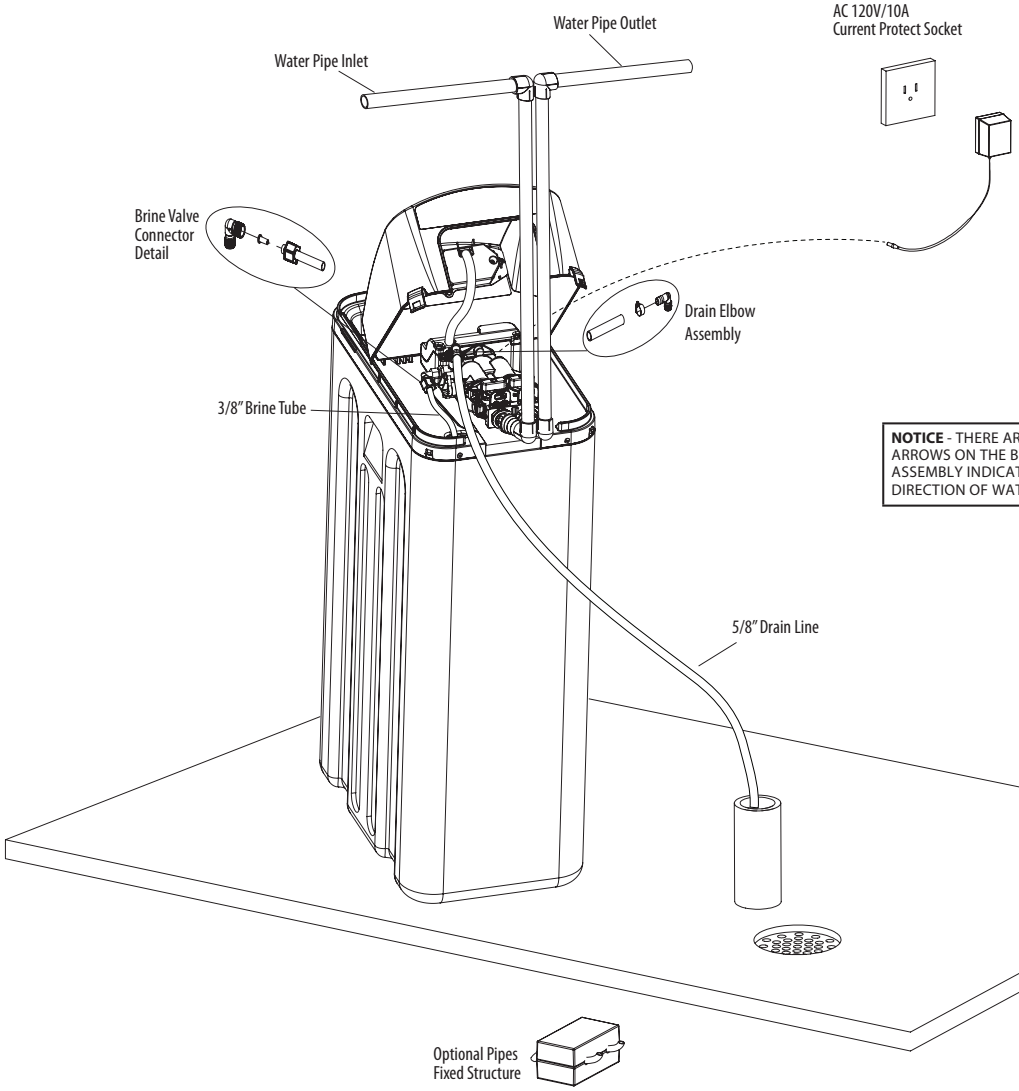
Connect Softener to the HousePlumbing Any solder joints near the valve must be done before connecting any piping to the valve. Always leave at least 6" (152 mm) between the valve and joints when soldering pipes that are connected to the valve. Failure to do this could cause damage to the valve.

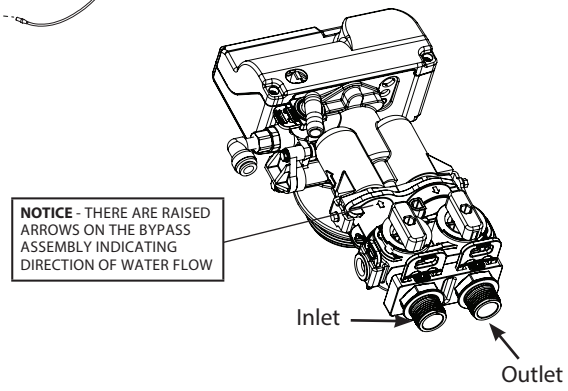
EconoFlo Water Softener Installation



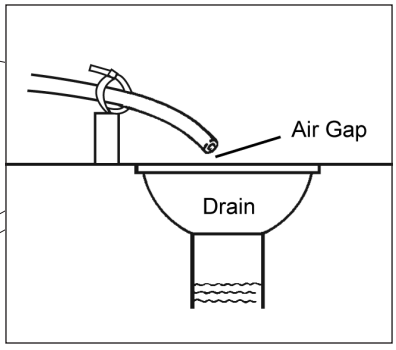
***NOTE**

Check local plumbing codes in regards to requirements for use of Check Valve or back flow prevention or vacuum breaker





NOTICE - THERE ARE RAISED ARROWS ON THE BYPASS ASSEMBLY INDICATING DIRECTION OF WATER FLOW



NOTE

Waste connections or drain outlet 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.

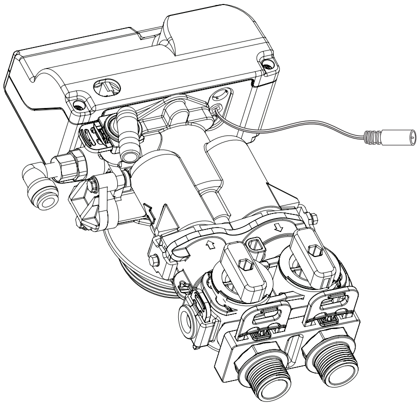
⚠ CAUTION!

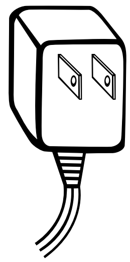
Never insert drain line directly into a drain, sewer line, or trap. Always allow an air gap between the drain line and the wastewater to prevent the possibility of sewage being back-siphoned into the conditioner.

STARTUP INSTRUCTIONS

1. Connect the Transformer to the Valve

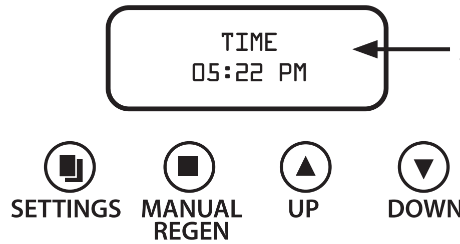
Plug the 12-volt transformer into a 120 VAC 60 Hz outlet.





2. Screen Display

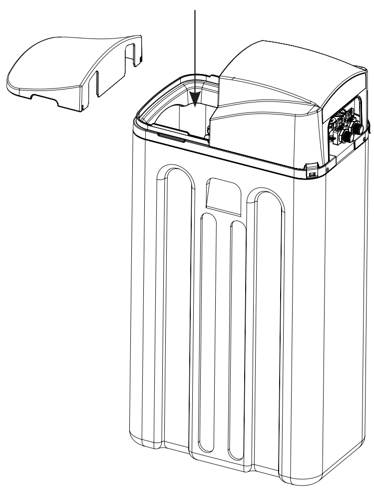
Familiarize with Button Configuration:



The controller will show the following on the screen - Time, Date and Remaining Gallons or Days.

3. Add Water to Brine Tank

Open the cabinet salt lid and add water. Do not add salt to the brine tank at this time.



Key Pad Configuration:

SETTINGS - This function is to enter the basic set up information required at the time of installation.

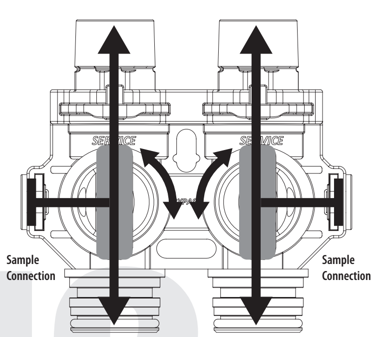
MANUAL REGEN - This function is to accept the values if changed and advance to the next page in the menu.

UP/DOWN - These buttons are used to increase or decrease the value of the settings while in the programming mode.

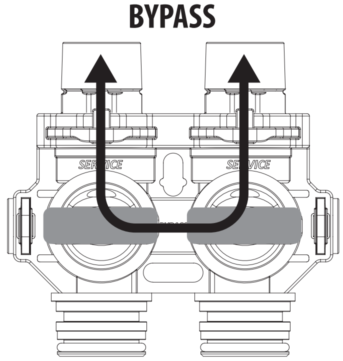
4. Manually Regenerate the Valve

Manually index the valve with the control knob to BA.WA. or press **SETIINGS** and hold display will come up showing delay flashing press Up or Down Arrows to immediate and press **MANUAL REGEN** to initiate a manual regeneration. Once the valve is in the Backwash (BA.WA.) position please unplug.

SERVICE



BYPASS



MANUAL REGEN
Delay **Immediate**

BACKWASH
BRINE DRAW
RINSE (SKIP)
REFILL (SKIP)

***NOTE**

Times indicated here are example only.

Regen Sequence - Once in Regeneration, the cycle can be skipped by pressing any button.

BACKWASH
IIIIIIIIIIIIIIIIIIIIII 15 Minutes*

BRINE DRAW
IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII 50 Minutes*

STARTUP INSTRUCTIONS (CONTINUED)

4. Manually Regenerate the Valve (Continued)

4a. Open the inlet on the bypass valve slowly and allow water to enter the unit. (The outlet of the bypass should remain closed to prevent any fines or debris from entering the plumbing system. Allow all air to escape from the unit before turning the water on fully then allow water to run until the drain water appears to be clear of any fines or color.

4b. Plug in the valve. Allow the valve to continue its cycles until complete and back in service. Allow the valve to stay in each position for 2 - 3 minutes to purge air from the system and the valve. Failure to properly purge the system may result in unsatisfactory performance. This process can be performed more than once if necessary to purge air and color or fines from the system before finishing start up. Once the system is purged properly you can open the outlet of the bypass valve. Because your plumbing system has been disturbed it is advisable to remove screens from faucets and flush all lines until clear. **See Plumbing System Clean-Up on page 19**.

4c. The Valve is already programmed from factory. Please set up date and time of day and feedwater hardness and people as shown below: **(See page 17 for Key Pad Configuration)**

Calculating Compensated Hardness for Water where Iron or Manganese is Present

From your water analysis.

Iron x 4 = grains of hardness and or Manganese x 8 = grains of hardness. These numbers can be found on your water analysis report, and the equivalent grains of hardness should be added to your total hardness number. The new sum of these numbers is the hardness to be entered during programming below.

EG
Iron = 0.5 ppm x 4 = 2.0 gpg
Mang = 0.3 x 8 = 2.4 gpg (always round up) = 3.0 gpg

Hardness = 15 gpg + 2.0 (compensated iron) + 3.0 (compensated manganese) =20 gpg
enter 20 as the hardness when programming below.

Iron _____ x 4 + Manganese x 8 _____ + Hardness = Total Hardness _____

NOTE All units are factory programmed for the correct size and regeneration cycle, alteration should only be done by a factory trained technician or after consultation with one of our technical representatives if you have any questions please call: 1-877-288-9888**

Press **SETTINGS** key to advance to **TIME OF DAY. TIME OF DAY** will flash.

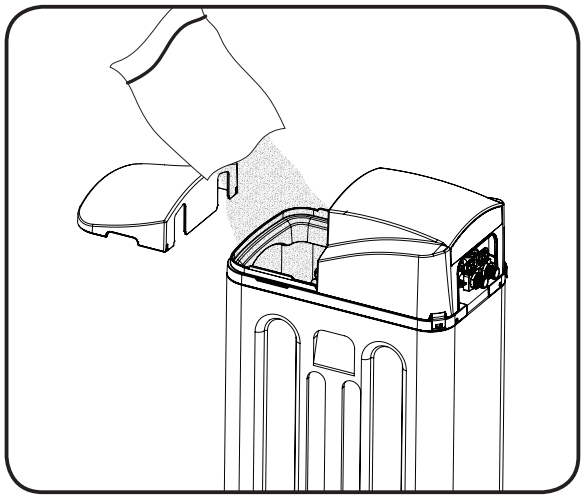
Press the Up or Down keys to adjust the **TIME OF DAY** . Press & hold the Up or Down key to quickly advance the hour & minutes. When desired time is displayed press **SETTINGS** key to advance to the **HARDNESS** setting. **HARDNESS** will flash.

Press the Up or Down keys to adjust the **HARDNESS** (Min 1/Max 199). When desired hardness is displayed press **SETTINGS** key to advance to the **PEOPLE** setting (Min 1/Max 9). **PEOPLE** will flash.

When desired number of people is displayed press **SETTINGS** key to complete programming.

5. *Add Salt to the Brine Cabinet

Put 40 kgs of crystal water softener salt in the brine tank. The unit will automatically fill the water to the correct level when it regenerates.



Start up and programming complete. Unit is now operational.

***NOTE**

Resin Cleaner
An approved resin cleaner MUST be used on a regular basis if your water supply contains iron.

See page 15 - Res-Up® Feeder Installation Instructions

DURING REGENERATION

Automatic Water Bypass

The regeneration cycle lasts approximately 1.5 hours to 3.0 hours depending on the specific model, after which treated water service will be restored. During regeneration, untreated water is automatically bypassed for use in the household. Hot water should be used as little as possible during this time to prevent hard water from filling the water heater.

IMPORTANT: This is why the automatic regeneration is set for sometime during the night and manual regenerations should be performed when little or no water will be used in the household.

New Sounds

You may notice new sounds as your water softener operates. The regeneration cycle lasts approximately 1.5 hours to 3.0 hours depending on the specific model. During this time, will be able to hear water running intermittently to the drain, depending on proximity of the unit to sleeping area and time of regeneration.

PLUMBING SYSTEM CLEAN-UP

The following procedures are guidelines only but have proven successful in most instances. Under no circumstances should any procedure outlined below be followed if contrary to the appliance manufacturer's instructions. Should there by any questions concerning the advisability of performing a procedure, it is strongly recommended the manufacturer's authorized service outlet be consulted prior to performing the procedure.

Water Heater

If the water heater has been exposed to both iron and hardness for a long period of time, replacement of the heater tank maybe the only practical solution to prevent continued staining originating from this source. After completing the installation of the conditioner, clean the water heater by following these instructions:

1. Shut off energy supply to water heater and close heater inlet water valve.
2. Drain hot water tank completely. Open inlet water valve allowing heater tank to be refilled with iron-free water. Continue flushing until water runs clear to drain.
3. If, after approximately 30 minutes flushing, water does NOT clear, terminate flushing operation. Refill hot water heater with water and pour approximately 1/2 gallon of household bleach into top of heater tank. Allow bleach solution to stand in tank for 20 to 30 minutes. Flush tank

NOTE

If water does not clear in approximately 10 minutes, water heater may need replacement.

Dishwasher

Consult owners' handbook and follow manufacturer's instructions.

Toilet Flush Tanks

Prior to commencing installation of the filter system, pour 4 to 6 ounces of resin mineral cleaner Pro-Rust Out or or other suitable cleaner such as CLR that contains a mild acid into flush tanks and bowls and let stand. When installation is completed, flush toilets several times with conditioned water. If stains or deposits return check that lines are connected to treated water. Repeat procedure until clear. again until water is clear at drain. Turn energy supply on.

MAINTENANCE INSTRUCTIONS AND SCHEDULE

Service Schedule

- The seals and spacers along with the piston assembly should be inspected/cleaned or replaced every year depending on the inlet water quality and water usage on clean municipal supplies every 2 - 3 years should be sufficient but the first check should be done after 1 year. See inspection and replacement of Piston assembly and seal and spacer kit, page 24.
- The injectors should be cleaned/inspected or replaced every year depending on the water quality and use. See Clean Injector Assembly, page 24.
- **Maintenance Kit (60010565)** should be used for servicing control on an annual basis. The maintenance kit consists of piston assembly, seals and spacers, injectors.

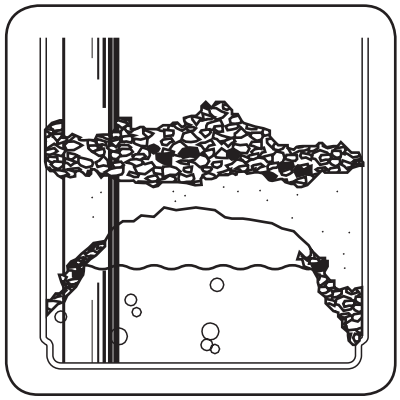
Maintenance of your new water conditioner requires very little time or effort but it is essential. Regular maintenance will ensure many years of efficient and trouble free operation.

FAILURE TO FOLLOW BASIC MAINTENANCE SCHEDULE WILL RESULT IN THE UNIT FAILING TO OPERATE PROPERLY AND VOID YOUR WARRANTY.

Bridging

Humidity or the wrong type of salt may create a cavity between the water and the salt. This action, known as "bridging", prevents the brine solution from being made, leading to your water supply being hard.

If you suspect salt bridging, carefully pound on the outside of the plastic brine tank or pour some warm water over the salt to break up the bridge. This should always be followed up by allowing the unit to use up any remaining salt and then thoroughly cleaning out the brine tank. Allow four hours to produce a brine solution, then manually regenerate the softener.



CAUTION!

Liquid brine will irritate eyes, skin and open wounds - gently wash exposed area with fresh water. Keep children away from your water conditioner.

Cleaning of your Brine / Salt tank

Salt tanks will build up sludge (undissolved salt) in the bottom of them that will continue to increase as time goes by. Every 2 - 3 years the salt tank should be cleaned out completely and re started using the original start up instructions.

CAUTION!

Never subject your conditioner to freezing, vacuum or to temperatures above 43°C (110°F).

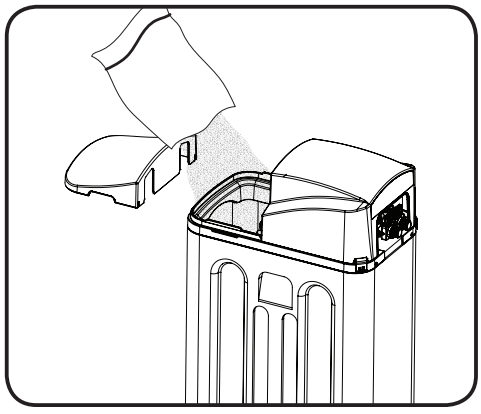
Checking the Salt Level

Check the salt level monthly. Remove the lid from the cabinet or brine tank, make sure salt level is always above the brine level.

Add Salt to the Brine Tank

Put 40 kgs of crystal water softener salt in the brine tank. The unit will automatically fill the water to the correct level when it regenerates. Use only clean salt labeled for water conditioner use, such as crystal, pellet, nugget, button or solar. The use of rock salt is discouraged because it contains insoluble silt and sand which build up in the brine tank and can cause problems with the system's operation. Add the salt directly to the tank, filling no higher than the top of the brine well.

NOTE :THE WATER LEVEL SHOULD BE BELOW THE SALT LEVEL ALL THE TIME



CAUTION!

Incorrect start up, water above the salt level, (not enough salt in tank) will both effect the units capacity and result in hardness slippage. Should either of these situations happen or the unit fails to regenerate for any other reason please first correct the problem. Then regenerate the unit manually 2 times in a row to restore the reserve capacity and bring the media bed back up to specification.

MAINTENANCE INSTRUCTIONS AND SCHEDULE

IMPORTANT WARRANTY AND MAINTENANCE INFORMATION

Please have the information below filled out and available when calling in for parts or warranty:

Model number:
Serial number:
Valve Serial number:
Date installed:

Additional notes:

_____

_____

_____

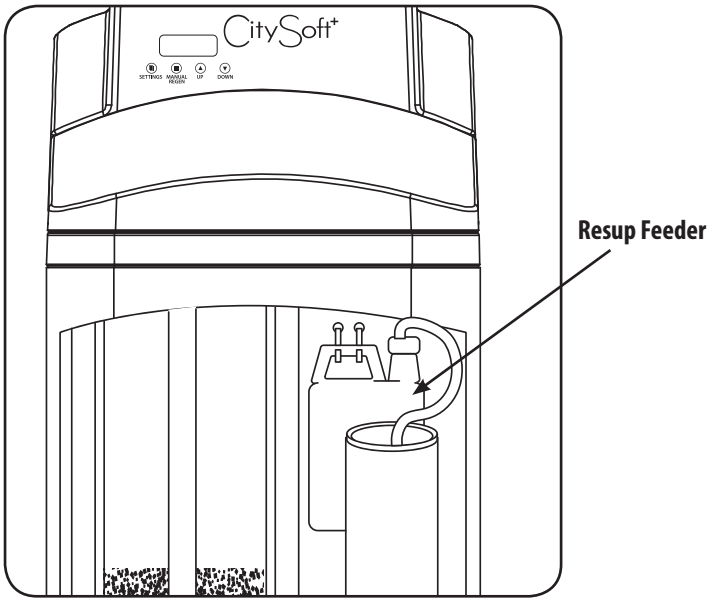
_____

_____

_____

INSTALLATION OF RESUP FEEDER IN CITYSOFT+/ COUNTRYSOFT+ CONDITIONER

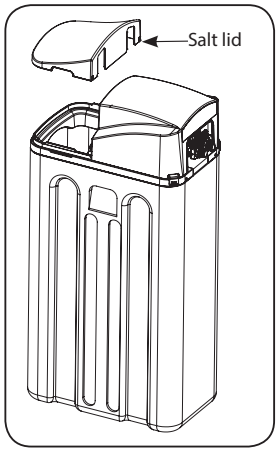
Replace the cap of the pro rescare bottle with the easy feeder and hang the pro rescare bottle on the installed bracket as shown:



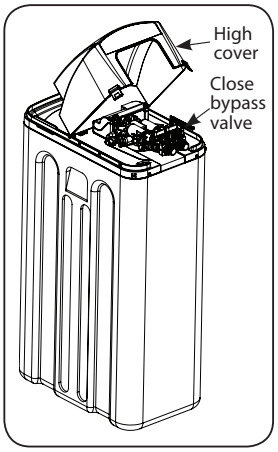
SERVICING 85 VALVE

Before Servicing

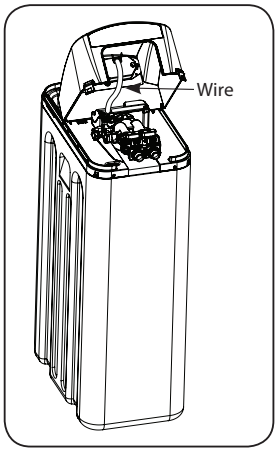
1. Turn off water supply to conditioner :
   - **a.** If the conditioner installation has a 3 valve bypass system first open the valve in the bypass line, then close the valves at the conditioner inlet & outlet.
   - b. If the conditioner has an integral bypass valve, put it in the bypass position.
   - c. If there is only a shut-off valve near the conditioner inlet, close it.
2. Relieve water pressure in the conditioner by stepping the control into the backwash position momentarily. Return the control to the In Service position.
3. Unplug Electrical Cord from outlet.
4. Disconnect drain line connection.



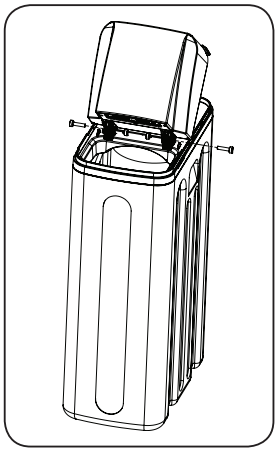
1. Remove the salt lid.



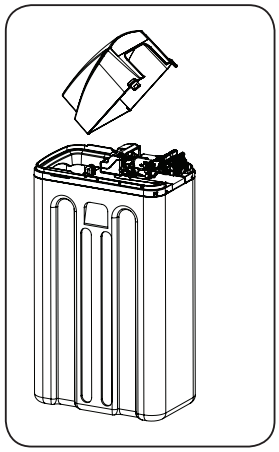
2. Rotate the high cover. Close the bypass valve and relieve water pressure.



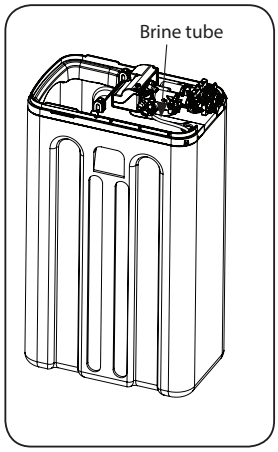
3. Disconnect the wire of display to control valve.



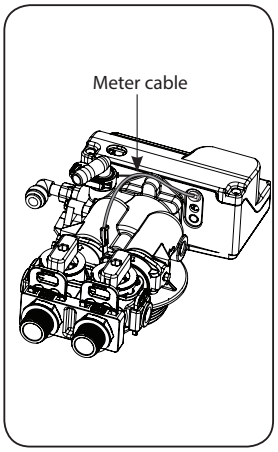
4. Remove the hinges.



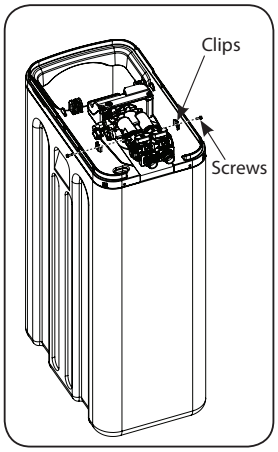
5. Remove the high cover.



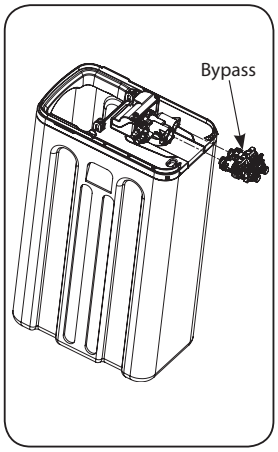
6. Disconnect the brine tube.



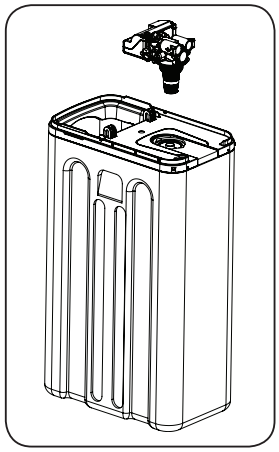
7. Disconnect the meter cable.



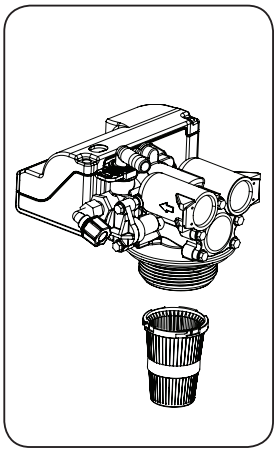
8. Remove the clips and screws.



9. Remove the bypass.

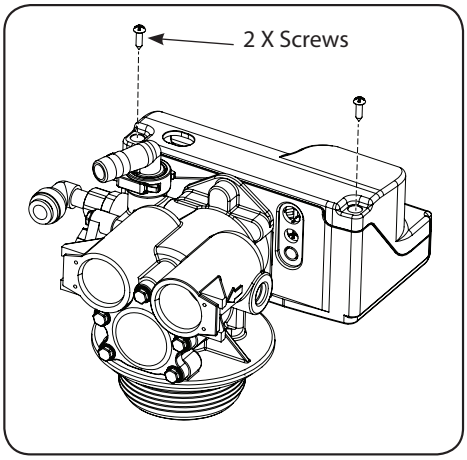


10. Screw off the control valve.

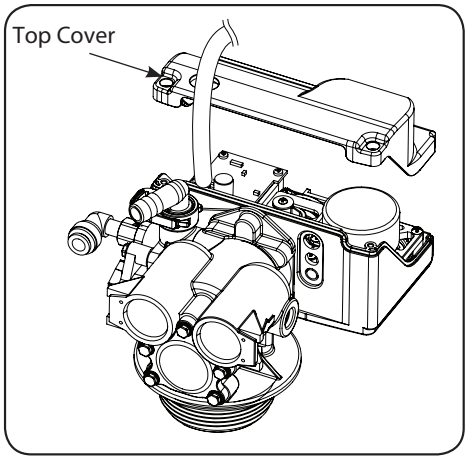


11. Remove the top cone.

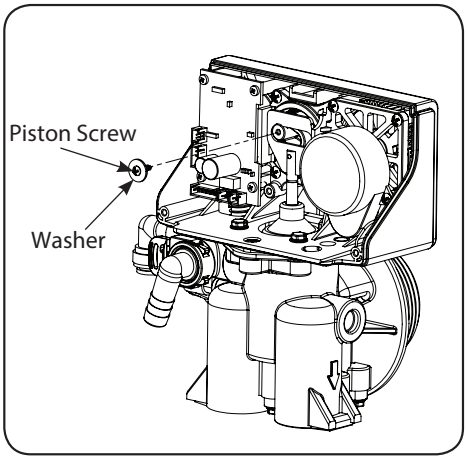
TIMER REPLACEMENT



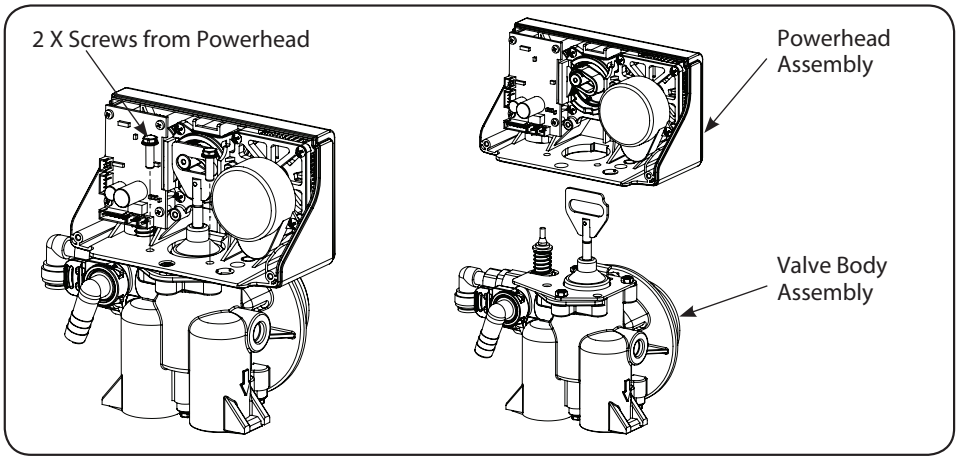
1. Remove two screws from the top of the valve cover



2. Remove top cover

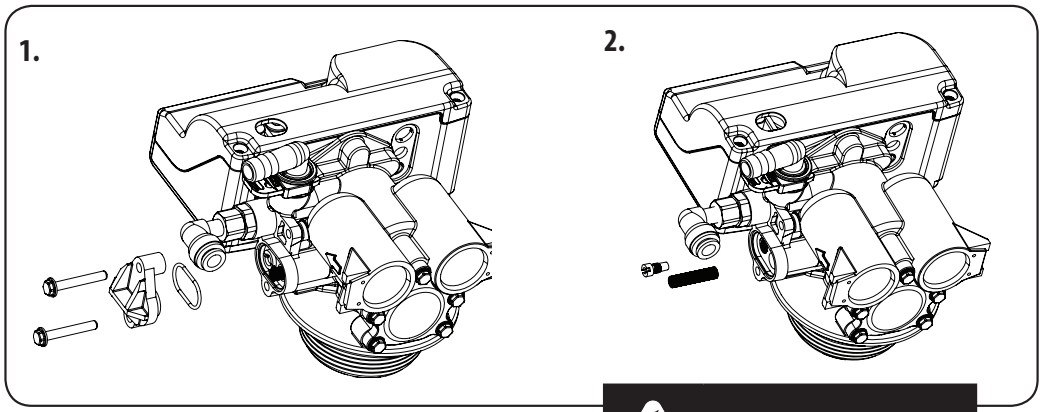


3. Remove the piston screw and washer from the piston rod.



4. Remove the two screws from the powerhead as shown
5. Life the powerhead from the valve body assembly
6. Replace the powerhead by reverse following the steps in this section

CLEAN INJECTOR ASSEMBLY



1. Remove two screws of the injector cap.
2. Pull the Injector Cap off, Remove the injector assembly, oring and screen, clean the injectors with Res Care solution, vinegar, or similar solution such as CLR. Replace the injectors , snug only do not overtighten.

WARNING!

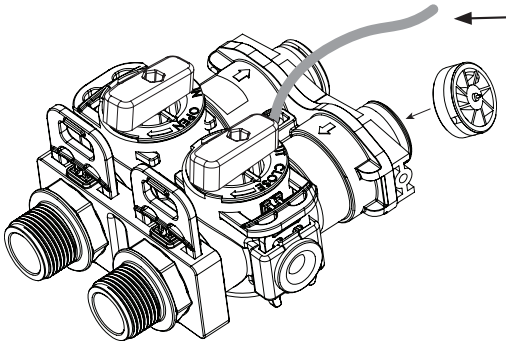
ELECTRICAL SHOCK HAZARD! UNPLUG THE UNIT BEFORE REMOVING THE COVER OR ACCESSING ANY INTERNAL CONTROL PARTS

CAUTION!

Disassembly while under pressure can result in flooding. Always follow these steps prior to servicing the valve.

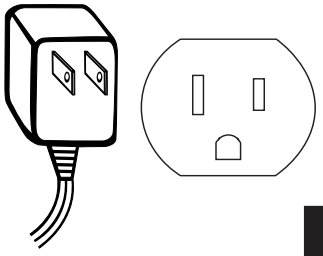
REPLACING THE BYPASS AND METER CABLE

60095101	Bypass comes with Meter and Grey Meter Cable



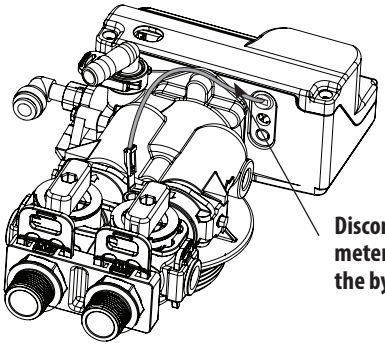
Step 1

Unplug the power from the wall socket.



Step 2*

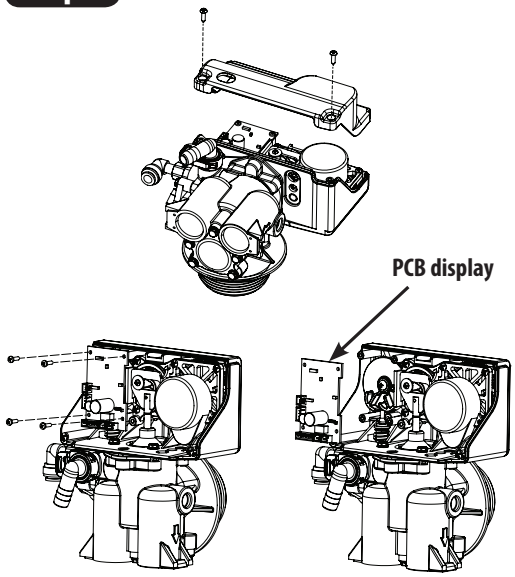
Remove 2 screws and clips from bypass.



***NOTE**

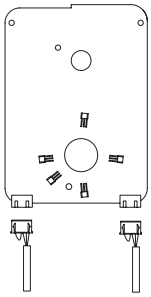
Water to the household needs to be turned off and pressure relieved before Step 2

Step 3 **Remove Cover.**



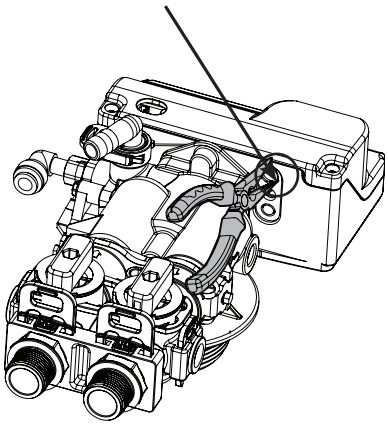
Step 4

Disconnect the cables from the front PCB display.



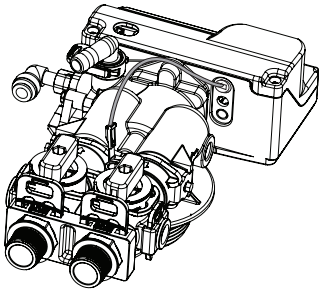
Step 5

Remove strain relief with pliers.



Step 6

Replace the old cable with the new Cable.

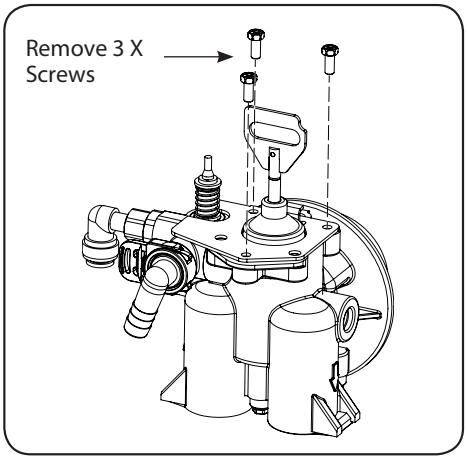


Step 7

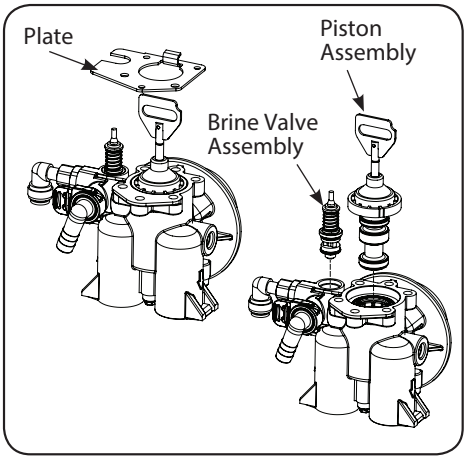
Assemble the valve. Plug the power supply back into the wall socket and follow the programming shown on right:

For 85HE Valves press MANUAL REGENT+UP+DOWN for 3 seconds to get to Factory Settings.
Or:
To enter the programming press and hold the MENU button for three seconds to unlock the screen.
When the screen is unlocked, press and hold the DOWN arrow button for 3s to enter the code entry screen.
Enter the code number 119 using the UP and DOWN arrows. Press the MANUAL/REGEN to step through the digit.
Press the SET to step through to METER RATIO and set as per chart below*:
Press the SET to step through to PROGRAMING COMPLETE and past this until TIME OF DAY screen appears.

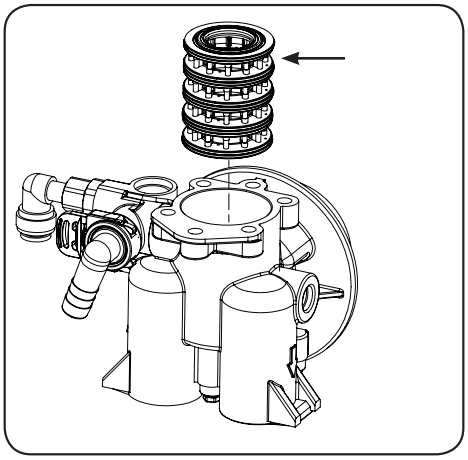
PISTON AND/OR BRINE VALVE ASSEMBLY REPLACEMENT



1. Follow steps 1 to 6 of timer /powerhead replacement.
2. Remove three screws from the plate on the valve body.

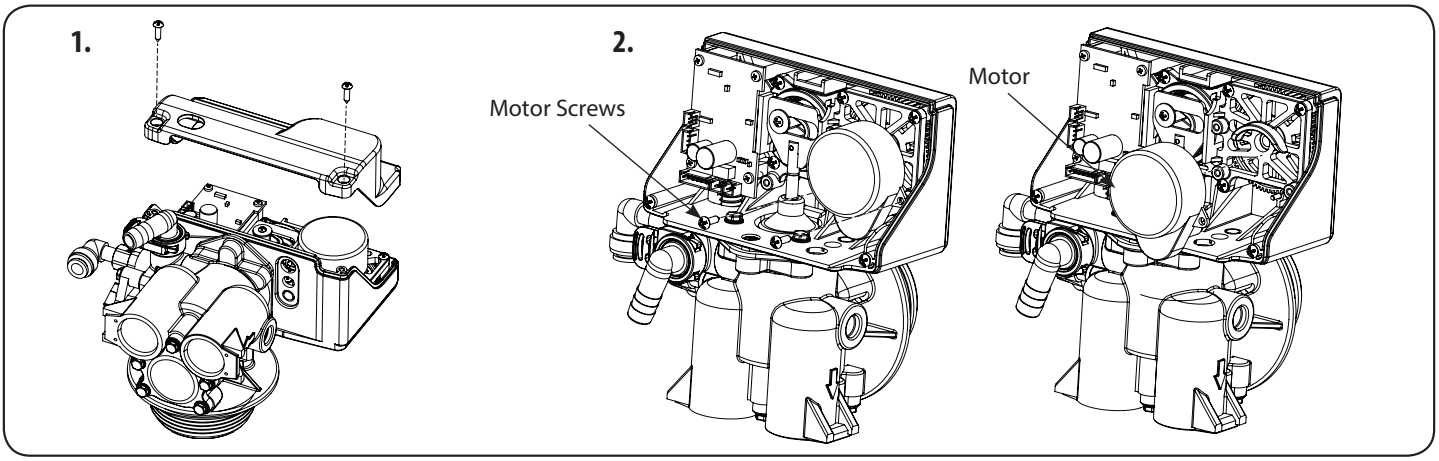


3. Remove the plate from the valve body and pull the Piston Assembly from the valve. The brine valve assembly can also be removed in this stage.
4. Remove the seal spacer assembly, grease it with silicone lubricant and put back in.



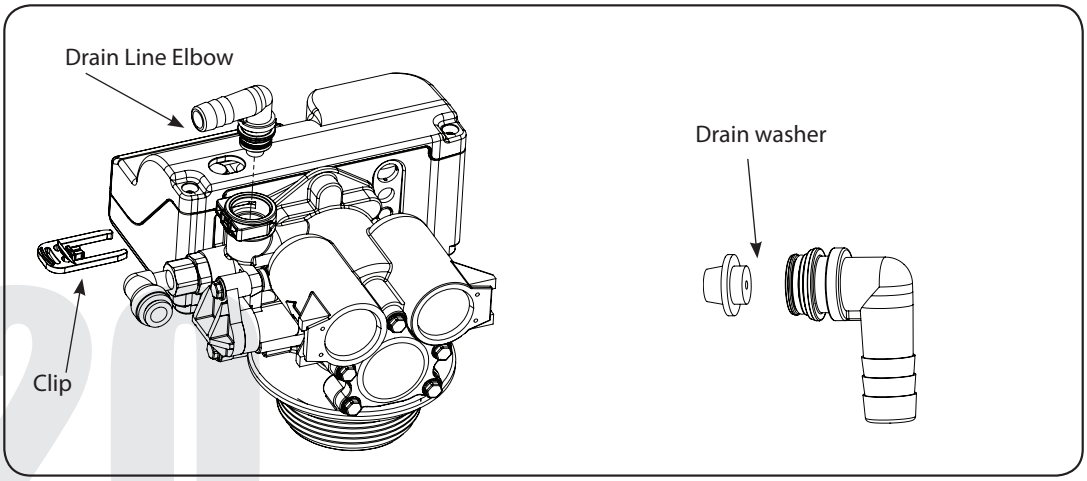
5. Replace piston assembly followed by timer assembly.
6. Replace the piston assembly and reverse following steps in this section

REPLACE MOTOR



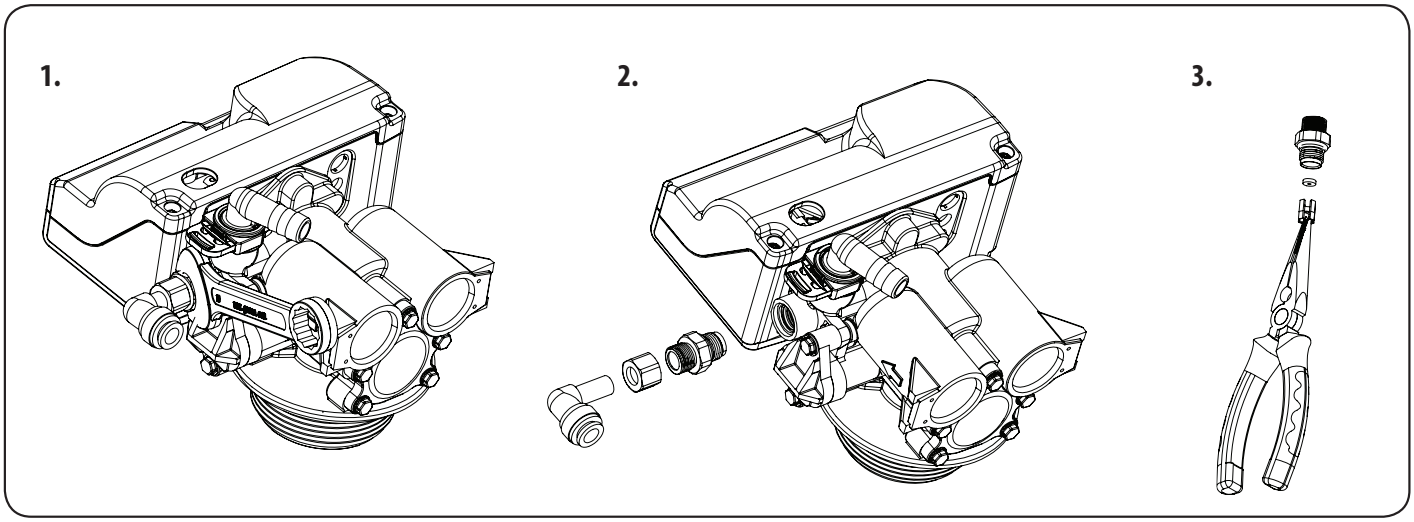
1. Remove cover by removing two screws
2. Remove motor screws as shown and pull the motor

REPLACE DRAIN LINE FLOW CONTROL



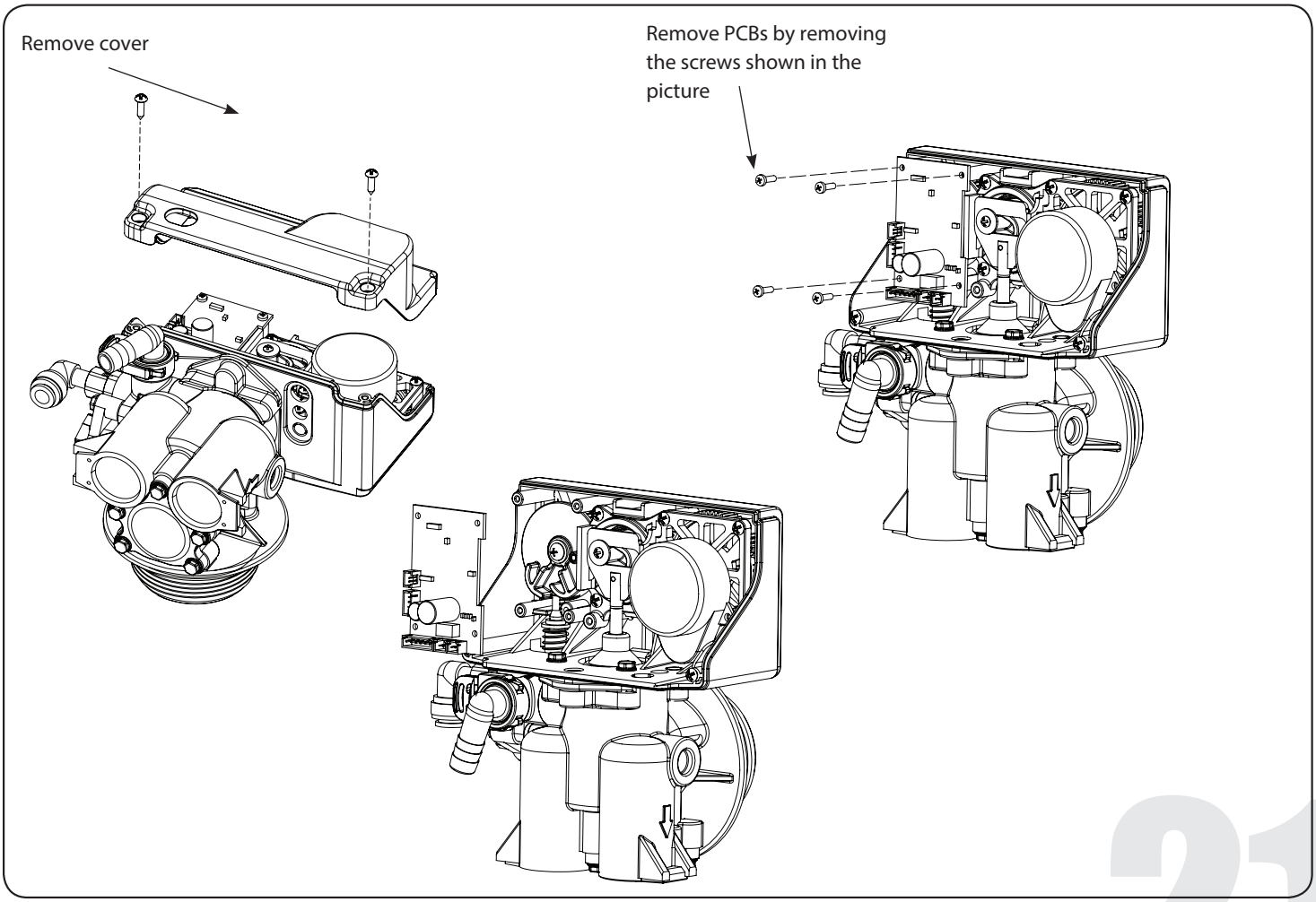
1. Pull the drain line clip and remove the drain line elbow and washer
2. Clean/replace drain line washer

REPLACE BRINE LINE FLOW CONTROL

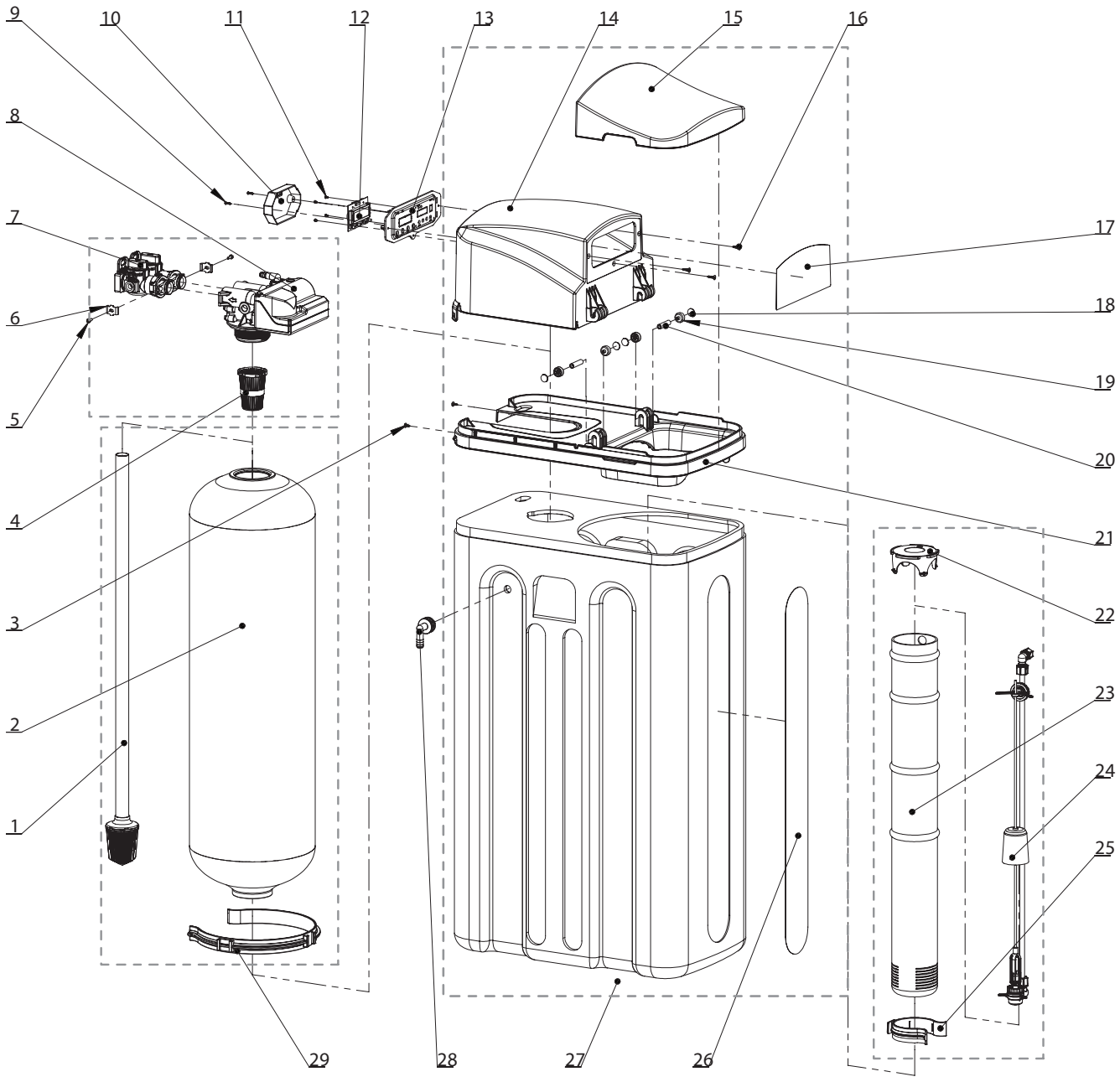


1. Loosen the brine line nut with wrench
2. Remove brine line elbow
3. Clean/replace brine line washer

REPLACING PCBS



PARTS BREAKDOWN



Cabinet Parts List

No.	Part #	Description	Qty
29	60010361	10" Pressure Tank Clamp	1
28	60010005	Overflow Adaptor Assy	1
27	60010563	Cabinet City or Country	1
26		Softener Cabinet Label	1
25	60010362	4" Brine Well Clamp	1
24	55010023	0435 Brine Valve Assembly	1
23	55010018	0435 Brine Well	1
22	60010363	4" Brine Well Cap	1
21		Softener Trim Cover	1
20	60010364	Softener Spindle	2
19	60010364	Softener Spindle Cover	4
18	60010364	Decorative Stickers	4
17	80082244	Controller Label	1
16		Screw 3.5×15	3
15	60010716	Softener Salt Lid	1

No.	Part #	Description	Qty
14		Softener Cover(Dark Grey)	1
13		Controller Panel(Dark Grey)	1
12	60010051	Controller Display PCB	1
11	60010572	Screw 2.9×6.5	4
10		Controller Back Cover(Blue)	1
9	60010099	Screw 2.9×13	2
8	60010364	Control Valve Assy	1
7	60095097-1	063-II Bypass Assy	1
6	60010046	SS Clip	2
5	60010701	Screw M4×12	2
4	18280	Top Cone	1
3		Screw 3.9×9.5	2
2	25010043	1035 Pressure Tank	1
1	50010020	Distribution Assy-1035	1

Replacement Media Beds

940027	Bed, Media,City Soft +
940425	Bed, Media,Country Soft +

TROUBLE SHOOTING

Problem	Possible Solutions
1. CONDITIONER DELIVERS HARD WATER A. Bypass valve is open B. No salt in brine tank C. Injector or screen plugged D. Insufficient water flowing into brine tank E. Hot water tank hardness F. Leak at distributor tube G. Internal valve leak H. Flow meter jammed I. Flow meter cable disconnected or not plugged into meter cap J. Improper programming	A. Close bypass valve B. Add salt to brine tank and maintain salt level above water level C. Replace injectors and screen D. Check brine tank fill time and clean brine line flow tank control if plugged E. Make sure distributor tube is not cracked. Check O ring and tube pilot F. Make sure distributor tube is not cracked. Check O ring and tube pilot G. Replace seals and spacers and/or piston H. Remove obstruction from flow meter I. Check meter cable connection to timer and meter cap J. Reprogram the control to the proper regeneration type, inlet water hardness, capacity or flow meter size.
2. CONDITIONER FAILS TO REGENERATE A. Electrical service to unit has been interrupted B. Timer is not operating properly C. Defective valve drive motor D. Improper programming	A. Assure permanent electrical service (check fuse, plug, chain or switch) B. Replace timer C. Replace drive motor D. Check programming and reset as needed
3. UNIT USES TOO MUCH SALT A. Improper salt setting B. Excessive water in brine tank C. Improper programming	A. Check salt usage and salt setting B. See #7 C. Check programming and reset as needed
4. LOSS OF WATER PRESSURE A. Iron build-up in line to water conditioner B. Iron build-up in water conditioner C. Inlet of control plugged due to foreign material broken loose from pipes by recent work done on plumbing system.	A. Clean line to water conditioner B. Clean control and add resin cleaner to resin bed. Increase frequency of regeneration C. Remove piston and clean control
5. LOSS OF RESIN THROUGH DRAIN LINE A. Air in water system B. Drain line flow control is too large	A. Assure that well system has proper air eliminator control. Check for dry well condition. B. Ensure drain line flow control is sized
6. IRON IN CONDITIONED WATER A. Fouled resin bed B. Iron content exceeds recommended parameters	A. Check backwash, brine draw and brine tank fill. Increase frequency of regeneration. Increase backwash time. B. Add iron removal filter system
7. EXCESSIVE WATER IN BRINE TANK A. Plugged drain line flow control B. Brine valve failure C. Improper programming	A. Clean flow control B. Replace brine valve C. Check programming and reset as needed
8. SALT WATER IN SERVICE LINE A. Plugged injector system B. Timer not operating properly C. Foreign material in brine valve D. Foreign material in brine line flow control E. Low water pressure F. Improper programming	A. Clean injector and replace screen B. Replace timer C. Clean or replace brine valve D. Clean brine line flow control E. Raise water pressure F. Check programming and reset as needed
9. CONDITIONER FAILS TO DRAW BRINE A. Drain line flow control is plugged B. Injector is plugged C. Injector screen is plugged D. Line pressure is too low E. Internal control leak F. Improper programming G. Timer not operating properly	A. Clean drain line flow control B. Clean or replace injectors C. Replace screen D. Increase line pressure (line pressure must be at least 20 psi at all times) E. Change seals and spacers and/or piston assembly F. Check programming and reset as needed G. Replace timer
10. CONTROL CYCLES CONTINUOUSLY A. Timer not operating properly B. Faulty microswitches and/or harness C. Faulty cycle cam operation	A. Replace timer B. Replace faulty microswitch or harness C. Replace cycle cam or reinstall
11. DRAIN FLOWS CONTINUOUSLY A. Foreign material in control B. Internal control leak C. Control valve jammed in brine or backwash position D. Timer motor stopped or jammed teeth E. Timer not operating properly	A. Remove piston assembly and inspect bore. Remove foreign material and check control in various regeneration positions B. Replace seals and/or piston assembly C. Replace piston and seals and spacers D. Replace timer motor and check all gears for missing teeth E. Replace timer

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